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DYES &

CHEMICAL MARKET

Connecting the Chemical Industry Together !

A MONTHLY MAGAZINE DEVOTED TO

DYES CHEMICALS PHARMACEUTICALS API TEXTILE AUXILIARIES PAINTS SOLVENTS COSMETICS

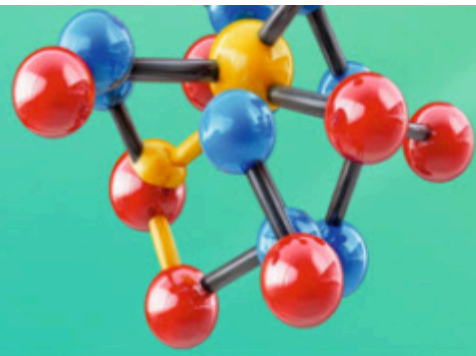
ASSOCHAM

Bharat @100

India Speciality Chemicals Conclave

23rd April 2025

Hotel Le-Meridien, New Delhi



Theme:

– Enablers to Make India a Sustainable Specialty Chemicals Hub –

Takeaways

- Knowledge-enhancing sessions
- Networking opportunities
- Interact with key government officials
- Global insights

Why to Participate?

- Gain insights into the latest market trends and advancements shaping the industry.
- Explore strategies to unlock new business opportunities and drive growth.
- Discover emerging applications and global prospects for specialty chemicals.
- Learn innovative marketing strategies to boost competitiveness.
- Engage with key government and industry leaders to address challenges and chart solutions.

Who Can Participate?

- CEOs, Engineers, Technocrats & Scientists
- Marketing Professionals, Consultants & Sourcing Heads
- Chemicals & Process Industry Professionals
- Manufacturers, Suppliers, Distributors, Retailers & Traders
- Policy Makers & Diplomats
- Head R & D Regulatory Affairs & Quality Managers
- Academic & Financial Institutions

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EDITORIAL

CHEMICAL MARKET

A MONTHLY MAGAZINE DEVOTED TO THE DYES, CHEMICALS, PHARMACEUTICALS, TRADE & INDUSTRY SINCE 1982

India's Chemical Exports to the U.S.—A Growing Strategic Trade Bond

India's chemical industry has quietly evolved into one of the country's biggest export engines, playing a critical role in India's growing trade relationship with the United States. As supply chains diversify and global companies seek more reliable and sustainable sources, India is stepping up as a preferred partner in the chemicals sector, offering a diverse range of organic, inorganic, specialty, and agrochemical products.

India's Chemical Export Landscape

India's chemical industry ranks sixth globally and third in Asia, with a market value of approximately USD 220 billion. It contributes over 7% to India's GDP and forms nearly 13% of the country's total merchandise exports. The United States is a key destination, consistently emerging as the largest importer of Indian chemical products.

According to government data, India exported chemicals worth more than ₹394.38 billion (~USD 4.75 billion) to the U.S. in FY 2022–23. These exports spanned categories such as organic chemicals, dyes, agrochemicals, essential oils, and cosmetic ingredients. The U.S. remains a major buyer not just due to price competitiveness but also because of India's increasing ability to meet stringent safety, regulatory, and sustainability standards.

Export Growth and Target for FY 2024–25

The Basic Chemicals, Cosmetics & Dyes Export Promotion Council (CHEMEXCIL) reported total chemical exports (excluding pharmaceuticals) of USD 30.29 billion in FY 2022–23. For FY 2024–25, CHEMEXCIL had set a higher export target of USD 31.53 billion, banking on rising global demand and an improvement in logistics and policy infrastructure.

From April to December 2023 alone, chemical exports grew 4.76% year-on-year to reach USD 21.20 billion, up from USD 20.24 billion during the same period in 2022. Key growth segments included agrochemicals, dyes, cosmetics, and specialty chemicals.

Why the U.S. Market is Crucial

The U.S. is the world's largest chemical market and increasingly dependent on imports, especially for commodity and specialty chemicals. India benefits from the global "China+1" sourcing strategy, which many American firms have adopted to diversify away from China. The U.S. also values India's growing adherence to international standards like REACH (EU), TSCA (U.S.), and ISO certifications.

Furthermore, with the U.S. chemical manufacturing sector facing cost pressures and ESG commitments, companies are looking for partners that can deliver sustainable, cost-effective alternatives. Indian exporters, with growing investments in green technologies and regulatory upgrades, are poised to fill this gap.

Challenges to Navigate

Despite the sector's strong performance, Indian exporters face several roadblocks that could slow momentum if not addressed:

1. **Logistics and Infrastructure Gaps**: Congestion at Indian ports and high shipping costs affect lead times, especially compared to competitors in Southeast Asia.
2. **Compliance Complexities**: Exporters must keep up with changing U.S. environmental and chemical safety regulations, requiring continuous investment in compliance systems and product traceability.
3. **Global Volatility**: Demand from the U.S. may soften in certain categories due to inflationary pressure and monetary tightening, which can impact discretionary segments like cosmetics and dyes.
4. **Tariff Uncertainty**: A potential challenge looms with the proposed **26% "reciprocal" tariff** by the U.S. on Indian chemical imports, set to take effect from **April 9, 2025**. Analysts warn this could dent India's export competitiveness and result in annual revenue losses of up to **USD 7 billion**.

Policy Support and Industry Response

The Indian government and CHEMEXCIL have launched multiple initiatives to support chemical exporters. These include:

- **Reduction of Import Duties**: On inputs like phosphoric acid, acetic acid, and sorbitol to make Indian manufacturing more cost-effective.
- **PLI Scheme for Chemicals**: Offering incentives to domestic producers for key intermediates and specialty chemicals.
- **Support for MSMEs**: Simplified SEZ procedures, faster GST refunds, and better access to export credit for small manufacturers.
- **Focus on Green Chemistry**: Encouraging the development of bio-based and sustainable chemicals to align with global ESG goals.

While CHEMEXCIL has not yet announced a formal target for **FY 2025–26**, growth is expected to continue if current conditions persist. With the sector expected to touch **USD 300 billion by 2025** and **USD 1 trillion by 2040**, the export potential remains immense. However, the industry must stay agile, continuously innovate, and lobby diplomatically to manage rising trade protectionism, especially in developed markets like the U.S.

-Rajiv Parikh

CphI - Informa Group			
No	**Exibitions**	**Date**	**Place**
1	CPhI North America	May 20-22, 2025	Pennsylvania Convention Center, Philadelphia
2	CPhI Frankfurt	Oct 28-30, 2025	Messe Frankfurt
3	CPhI Middle East & Africa	Dec 8-10, 2025	Riyadh, Saudi Arabia
4	CPhI China- Virtual CPhI	June 24-26, 2025	Shanghai New International Expo Center
5	CPhI Japan	Apr 09-11, 2025	Tokyo, Japan
6	CPhI Korea	Aug 26 - 28, 2025	COEX, Seoul, Korea
7	CPhI India	Nov 25-27, 2025	Noida, India
MECS (Coating Show)			
1	Asia Pacific Coatings Show	Sept 3-5, 2025	Indonesia
2	Saudi Arabia Coatings Show	May 13-15, 2025	Dammam Saudi Arabia
3	Middle East Coatings Show	Apr 14-16, 2026	Dubai World Trade Centre
4	Coatings For Africa	June 24-26, 2026	Johannesburg, South Africa
DYE+CHEM			
1	Dye+Chem Morocco International Expo	Nov 5-7, 2025	Morocco
2	48rd Dye+Chem Sri Lanka International Expo	March 13-15, 2025	Colombo Sri Lanka
3	Dye+Chem Bangladesh International Expo	Sept 3-6,2025	Bangladesh, Dhaka
4	50th Dye+Chem Brazil International Expo	Nov 2025	Brazil
Red Carpet Events			
1	Bangladesh Int'l Dyes, Pigments and Chemicals Expo	Sept 10-13, 2025	Dhaka, Bangladesh
Turkey (Arkim Group)			
1	InterDye Textile Printing Eurasia	TBD	Istanbul, Turkey
2	Paint Istanbul TURKCOAT	2026	Istanbul
3	Paint Expo Eurosia	Oct 01-03, 2025	Istanbul Expo Center / Istanbul Fuar Merkezi
Other Exhibitions			
1	Paint India	Jan 30-31, 2025	Bombay Exhibition Centre, Mumbai
2	Expo Paint and Coating	Jan 21-23, 2025	Dhaka, Bangladesh
3	CIPI	TBD	Mumbai, India
4	Chemspec Europe	June 4-5, 2025	Koelnmesse, Germany
5	ChemUK Expo	May 21-22, 2025	NEC, Birmingham, UK
6	American Coatings Show	May 5-7, 2026	Indianapolis
7	China Coat China	Nov 25-27, 2025	China Import & Export Complex, Guangzhou
8	Interdye China	Apr 16-18, 2025	Shanghai, China
9	Paint Expo Germany	Apr 14-17, 2026	Messe Karlsruhe Germany
10	India Chem	Oct 2026	Mumbai Exibition Centre, India
11	Water Expo 2025	Feb 26-28 2025	New Delhi
12	Inacoating 2025	July 29-31, 2025	JlExpo Kemayoran, Jakarta - Indonesia

CHENNAI PRICE TREND – 29.03.2025

Inorganic Chemicals	No/ of Units Per Pack	Price Rs.
Acid Slurry (Soft)	50Kgs	130.00
Alum- Ferric	50Kgs	23.00
Ammonium Bicarbonate	25Kgs	26.00
Ammonium Bi fluoride	50Kgs	178.00
[sugar-grade]	50Kgs	178.00
Ammonium Carbonate	50Kgs	92.00
Ammonium Chloride	50Kgs	22.00
Ammonium Nitrate	50Kgs	30.00
Ammonium Phosphate (Mono)	50Kgs	135.00
Ammonium Sulphate	50Kgs	22.00
Antimony Trioxide	50Kgs	3,800.00
Barium Chloride	50Kgs	58.00
Bleaching Powder (33% Cl)	25Kgs	14.00
Borax (Granular)	50Kgs	75.00
Boric Acid (Tech.)	50Kgs	126.00
Calcium Carbonate (Activate)	50Kgs	20.00
Calcium Carbonate (Precipitated)	50Kgs	19.00
Calcium Chloride Lump 70%	50Kgs	12.00
Calcium Chloride-Anhydrous	50Kgs	28.00
Camphor Oil	200Litrs	135.00
Caustic Potash (Flakes)	50Kgs	80.00
Caustic Soda (Flakes)	50Kgs	50.00
Caustic Soda (Prills)	50Kgs	92.00
Chromic Acid Flakes	50Kgs	280.00
Chlorinated Xylene	25kgs	85.00
Copper Sulphate	50Kgs	220.00
Di ammonium Phosphate	50Kgs	34.00
Dioctylmalite	180kgs	82.00
Ferric Chloride (Anhydrous)	50Kgs	38.00
Ferrous Sulphate – crystals	50Kgs	16.00
Hydrochloric Acid	Naked	6.00
Hydrogen Peroxide 50%	50Kgs	33.00
Hyflosupercell	22.7Kgs	138.00
Litharge	50Kgs	220.00
Lithopone B301(China)	25Kgs	124.00
Magnesium Sulphate	50Kgs	16.00
Mercury	34.5Kgs	7,200.00
Napthaline Balls	50Kgs	130.00
Nickel Chloride	25Kgs	620.00
Phosphoric Acid (85% Tech)	50Kgs	102.00
Potassium Carbonate (Powder)	25Kgs	108 .00
Potassium Carbonate (Granules)	25Kgs	85.00
Potassium Nitrate	50Kgs	115.00
Potassium Permanganate [Tech]	50Kgs	174.00
Potassium Permanganate [Pure]	50kgs.	185.00
Potassium Phosphate (Di)	50Kgs	158.00
S.L.E.S	50kgs	70.00
Soda Ash Light	50Kgs	30.00
Sodium Bicarbonate	50Kgs	33.00
Sodium Bichromate	50Kgs	165.00
Sodium Bisulphite	50Kgs	52.00
Sodium Chlorite 50% (India)	50Kgs	240.00
Sodium Chlorite 80% (India)	50Kgs	280.00
Sodium Cyanide	50Kgs	650.00
Sodium Fluoride	50Kgs	150.00
Sodium Formate	50Kgs	53.00
Sodium Hexameta Phosphate 68%	50Kgs	128.00
Sodium Hydrosulphite [China]	50Kgs	180.00
Sodium Metabisulphite	50Kgs	35.00
Sodium Nitrate	50Kgs	52.00
Sodium Nitrite (China)	50Kgs	60.00
Sodium Silicate	Naked	28.50
Sodium Sulphate (Anhydrous)	50Kgs	15.00
Sodium Sulphide 50-52% (Flakes)	50Kgs	58.00
Sodium Sulphide 58-60% (Flakes)	50Kgs	52.00
Sodium Sulphite 92%	50Kgs	50.00
Sodium Tri polyphosphate	50Kgs	92.00
Titanium Dioxide Anatase	25Kgs	202.00
Titanium Dioxide (Rutile - R-902)	25Kgs	265.00
Trisodium Phosphate	50Kgs	28.00
Zinc Chloride Powder (Tech.)	50Kgs	82.00

Above prices are given in good faith by : **MR. SUBHASH GHORAWAT**

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CHEMICAL MARKET
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HALF PAGE	**VISITING CARD SIZE PAGE**
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IMPORT EXPORT DATA:

Chemical Market Export Import Module provides authentic and updated data which is collected from Indian ports, customs, and other trusted authorities in India. Export data provided many information such as exporter and consignee details, quantity,countries etc.

1. 10 Days: | 01 month past data | 00 months present data | FREE
2. 03 Months: | 12 months past data | 03 months present data | INR 29000 plus 18% GST
3. 06 Months: | 24 months past data | 06 months present data | INR 34900 plus 18% GST
4. 12 Months: | 48 months past data | 12 months present data | INR 59900 plus 18% GST

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Thank you for your business!
Last Modified: April 2022

BUY INQUIRIES

Product	Quantity	Grade
ES-5600 Silicone Glycerol Emulsifier Details : ES-5600 Silicone Glycerol Emulsifier make : Dow sill 1 drum require CLICK HERE TO VIEW Vadgadi, Masjid Bandar West Mumbai, Maharashtra, India	1 Drums	Chemical
Myristic Acid Details : 99% min CLICK HERE TO VIEW India	8 Tonnes	Any
Distilled Sunflower Fatty Acid Details : acid value 195 min. CLICK HERE TO VIEW India	25 Tonnes	Any
3-Chloro-3-methylbut-1-yne Details : we are looking foe 3-Chloro-3-methylbut-1-yne CLICK HERE TO VIEW Hyderabad, India	2 Kg	Any
3 Methyl Benzyl Chloride Details : 3 Methyl Benzyl Chloride - 400Kg CLICK HERE TO VIEW Hyderabad, Telangana, India	400 Kg	Industrial

BUY INQUIRIES

Product	Quantity	Grade
Toluene	**21000 Kgs**	**VirginPure**

Details : Looking to establish a recurring supply arrangement for high-quality Toluene in bulk. Quantity: 21,000 kg , For trading purposes

CLICK HERE TO VIEW

Ankleshwar, Gujarat, India

Product	Quantity	Grade
Toluene	**25 Tonnes**	**Industrial**

Details : 25mt toluene industrial grade,in tanker loadex kandla 60 days credit

CLICK HERE TO VIEW

Mumbai, India

Product	Quantity	Grade
Acetone	**30 Tonnes**	**Industrial**

Details : 30 mt acetone in tanker load exkandla, 60 days credit ,delivered ghaziabad uttar pardesh

CLICK HERE TO VIEW

India

Product	Quantity	Grade
Lithium Borohydride	**500 Grams**	**Any**

Details : Lithium Borohydride CAS No:- 16949-15-8 Qty:- 500 gm Shipping location:- Sonipat, Haryana Description/Use/Application:- R&D use

CLICK HERE TO VIEW

Gaziabad, Uttar Pradesh, India

Product	Quantity	Grade
XANTHAN GUM FOOD GRADE 80 MESH	**40 Tonnes**	**Not Applicable**

Details : Shipping location:- CIF offer to Mombasa Port. Currently in need of this item to support our operations, and we would like to know if your company can supply this product. We value quality and require suppliers that can provide us with consistent and reliable products that meet our stringent standards.

CLICK HERE TO VIEW

Ellesmere Port, Cheshire West and Chester, UK

BUY INQUIRIES

Product	Quantity	Grade

Xanthan Gum

200 Kgs **None**

Details : Application - Cosmetic Use . Xanthan Gum transparent Make-Jungbunzlauer CAS No:- 11138-66-2

CLICK HERE TO VIEW

Ghaziabad, Uttar Pradesh, India

Cyanuric Acid CAS#: 108-80-5

1 Tonnes **Industrial**

Details : Need it to export to China on a repeat basis.

CLICK HERE TO VIEW

Chennai, Tamil Nadu, India

Epibromohydrin CAS No:- 3132-64-7

100 Kgs **Industrial**

Details : Please quote the best CIF Air (Shanghai, China) price, with shortest lead time & COA/MSDS

CLICK HERE TO VIEW

China

4-Piperidone Hydrochloride Monohydrate 99% CAS No:- 40064-34-4

1 Kgs **Industrial**

Details : Please share your best offer along with the COA, delivery time, packing detail and payment terms.

CLICK HERE TO VIEW

Ahmedabad, Gujarat, India

Starvis 3003F BASF CONSTRUCTION POLYMERS GmbH

200 Kgs **Chemical**

Details : Looking to buy 200kg Starvis, 1000kg Vinapor 2941 DF and 100 kg Kelco Crete DG-F of genuince BASF material

CLICK HERE TO VIEW

Melbourne

Gulbrandsen to boost Polyethylene Wax Capacity, build new Functional Polymer Facility at Dahej, India

Gulbrandsen, a global leader in the production of specialty polyethylene waxes and polymers, today announced its plans to build additional polyethylene wax manufacturing capacity and a new functional polymers plant at its site in Dahej, India.

Expected to be operational by mid-2026, this expansion will help Gulbrandsen increase its specialty polymers and wax production to meet growing global demand, ensure supply reliability, and widen its product portfolio.

Specialty polymers and waxes are building blocks for essential materials used in everyday life. End-use-related product lines include expanded polystyrene (EPS), mold release agents, personal care & cosmetics, adhesives, inks, and coatings.

"This investment underscores our commitment to serving our customers worldwide," said Ron Hatchell, Global Business Director at Gulbrandsen. "By expanding our production capacity and diversifying our product offerings, we are strengthening our ability to meet evolving customer needs and solidifying our leadership position in the industry."

In addition to this major expansion, Gulbrandsen has recently completed debottlenecking efforts that have unlocked additional capacity at its existing wax plant in Vadodara.

The new facilities in Dahej will incorporate state-of-the-art technology and adhere to the highest standards of safety and environmental sustainability, reflecting Gulbrandsen's dedication to responsible manufacturing.

Read the full report : https://gulbrandsen.com/company/news/

If you want your report abstract to be published please contact info@chemicalmarket.net

NUS physicists discover a copper-free high-temperature superconducting oxide

SINGAPORE, March 27, 2025 / PRNewswire/ -- Professor Ariando and Dr Stephen Lin Er Chow from the National University of Singapore (NUS) Department of Physics have designed and synthesised a groundbreaking new material—a copper-free superconducting oxide—capable of superconducting at approximately 40 Kelvin (K), or about minus 233 degrees Celsius (deg C), under ambient pressure. This discovery further advances NUS'

and Singapore's leadership at the forefront of high-temperature superconductivity research.

Nearly four decades after the discovery of copper oxide superconductivity, which earned the 1987 Nobel Prize in Physics, the NUS researchers have now identified another high-temperature superconducting oxide that expands the understanding of unconventional superconductivity beyond copper oxides.

The promise of superconductors

Modern electronics generate heat and consume energy during operation. Superconductors, however, possess a unique property known as the zero-resistance state, which eliminates energy loss due to electrical resistance. In theory, this makes them ideal for modern electronic applications, addressing the world's growing energy demands.

Despite the discovery of thousands of superconducting materials, the vast majority function only at extremely low temperatures near absolute zero (0 K), or about minus 273 deg C, making them impractical for widespread use.

The 1987 Nobel Prize Breakthrough

Nearly 40 years ago, physicists Johannes Bednorz and Karl Müller discovered a new class of superconductors—copper oxides—which exhibit superconductivity at temperatures above 30 K, significantly higher than any previously known superconductors.

This breakthrough, which earned them the Nobel Prize in Physics, laid the foundation for high-temperature superconductivity research. To this day, copper oxides remain the only superconducting oxides that function at temperatures above 30 K, or about minus 243 dec C, under ambient pressure, without requiring lattice compression.

A breakthrough beyond copper

In a series of studies, Prof Ariando and Dr Chow identified a direct correlation between interlayer interactions in layered systems and superconducting temperatures.

Building on this insight, the researchers developed a phenomenological model that predicted several compounds capable of high-temperature superconductivity, similar to copper oxides, but without copper.

The team successfully synthesised (Sm-Eu-Ca)NiO_2 nickel oxide, one of the predicted materials, and confirmed zero electrical resistance (superconductivity) well above 30 K in this compound.

Dr Chow stated, "As we predicted and designed, this non-copper-based superconducting oxide demonstrates high-temperature superconductivity under atmospheric pressure at sea level, without the need for additional compression—just like copper oxides. This finding suggests that unconventional high-temperature superconductivity is not exclusive to copper but could be a more widespread property among elements in the periodic table."

"This observation has profound implications for both theoretical understanding and experimental realisation of a broader scope of superconducting materials with practical applications in modern electronics," added Prof Ariando.

The research breakthrough was published in the scientific journal Nature on 20 March 2025.

Expanding the frontier of high-temperature superconductors

"This is the first time since the Nobel-winning discovery that a copper-free high-temperature superconducting oxide has been found to function under ambient pressure," emphasised Prof Ariando.

"Additionally, this new material is highly stable under ambient conditions, significantly improving its accessibility."

This discovery has sparked growing interest, not only in the material itself but also in the broader potential for a new class of high-temperature superconductors.

Further research and future implications

The research team continues to investigate the material's unique properties, exploring tuning parameters such as electronic occupancy shifting and hydrostatic pressure. These efforts aim to deepen the understanding of high-temperature superconducting mechanisms and pave the way for synthesising a broader family of superconductors with even higher operating temperatures.

Another contributor to this work includes Mr Zhaoyang Luo, an NUS PhD student with the research team, who demonstrated the high crystallinity and pure-phase nature of the synthesised material using electron microscopy.

This breakthrough represents a major step toward the development of next-generation superconducting materials, with practical applications in modern electronics and energy-efficient technologies.

Read the full report : https://news.nus.edu.sg/nus-physicists-copper-free-high-temperature-superconducting-oxide/

If you want your report abstract to be published please contact info@chemicalmarket.net

Lucas Meyer Cosmetics by Clariant introduces GlowCytocin™ to capture the science of "Love Glow"

- First-of-its-kind active cosmetic ingredient directly activates the oxytocin receptor, mimicking the dermatological effects of being in love
- Clinically proven to enhance skin luminosity, comfort, and youthful appearance
- Sourced from Dutch Hyacinth bulbs grown using the biodiversity positive 'flower strip' method

QUEBEC, March 19, 2025 - Lucas Meyer Cosmetics by Clariant is excited to announce the global launch of GlowCytocin, the first skin care ingredient that harnesses the benefits associated with the feeling of being in love. This breakthrough ingredient activates oxytocin receptors to deliver multiple scientifically proven skin benefits.

"GlowCytocin is a significant step forward in neurocosmetics and skincare, offering both immediate and long-term benefits for skin appearance and emotional well-being," says Isabelle Lacasse, Head of Global Marketing, Product Line Management and Formulation at Lucas Meyer Cosmetics by Clariant. "This innovation aligns with the growing consumer demand for multi-functional skincare products that deliver both visible results and positive emotions."

GlowCytocin (INCI: Glycerin and Water and Hyacinthus Orientalis (Hyacinth) Extract) is derived from the bulbs of white Hyacinth, a plant that symbolizes pure love, aligning its origin with its purpose.

Able to activate the oxytocin receptors in the skin GlowCytocin biomimics many of the beneficial effects of oxytocin, known as the love molecule. In vitro and organ-on-a-chip studies have shown that GlowCytocin increases the proliferation of fibroblasts and sensory neurons, promoting skin rejuvenation and heightening skin receptivity to pleasant tactile sensations. Further, this ingredient decreases nociceptive nerve sensitivity for a comforting effect.

In a placebo-controlled clinical study of 60 male and female mixed-ethnicity volunteers (between the ages of 18 and 65), twice daily application of 1% GlowCytocin for 28 days visibly and significantly enhanced the participants' skin appearance. Skin luminosity and healthy glow both increased, evaluated by clinical grading and self-evaluation to release the "Love Glow". In addition, the number of wrinkles decreased, and skin elasticity improved for a rejuvenated skin look and feel.

In the same clinical study, receptiveness to pleasant sensations of touch was measured by electroencephalogram (EEG) upon feather touch on the forearm. 30 minutes after a single product application, this showed a significant increase in frontal cortex activity, an area associated with positive mood states and higher happiness levels. This was further confirmed with a significant increase in self-reported skin comfort and pleasantness. While enhancing receptiveness to pleasant sensations, GlowCytocin simultaneously significantly decreased capsaicin-induced skin discomfort.

GlowCytocin is China compliant, COSMOS approved, vegan, and has a natural origin index of 99.6%.

GlowCytocin™ IS A TRADEMARK OF CLARIANT.

Source : Press Release

S&P GLOBAL COMMODITY INSIGHTS LAUNCHES GLOBAL SUITE OF PLATTS CAM DAILY CALCULATED CATHODE ACTIVE MATERIAL ASSESSMENTS

NEW YORK and LONDON and SINGAPORE, March 17, 2025 / PRNewswire/ -- Platts, part of S&P Global Commodity Insights, the leading independent provider of information, data, analysis, benchmark prices and workflow solutions for the metals, commodities, energy and energy transition markets, today announced the launch of a suite of new daily cathode active material (CAM) calculated price assessments for China, Europe and North America, effective March 24. The new assessments will expand downstream into the battery supply chain and complement Platts extensive suite of daily battery materials assessments.

The new offering focuses on the CAM chemistries for LFP (lithium iron phosphate), NMC622 and NMC811 (nickel-manganese-cobalt) lithium-ion batteries that are expected to hold a large market share in the coming years. LFP currently holds around 43% share of global demand, and NMC622 and NMC811 hold an estimated global demand share of around 18% combined, according to S&P Global Mobility.

CAMs are the electrochemically active components in a lithium-ion battery's cathode. CAMs are synthesized materials, typically composed of metal oxides, used to produce electrodes (or cathodes) which, alongside the anode and electrolyte, facilitate the storage and release of lithium ions during charge and discharge cycles. The specific composition of the CAM significantly influences the battery's performance - including its energy density, cycle life, and safety.

Viral Shah, Managing Editor, EMEA Low Carbon & Base Metals, at S&P Global Commodity Insights, commented, "We are pleased to announce the launch of this new suite of Platts Cathode Active Material calculated price assessments, providing the first-ever daily European and North American import price assessments alongside a crucial focus on the key China market. As production technology rapidly evolves and industry demand from the EV and Battery Energy Storage Systems (BESS) markets continues to grow, Platts CAM will bring greater transparency to the global marketplace and help quantify value for this opaque portion of the battery supply chain. At present, there is insufficient price transparency on the cost of CAMs, which are a key part of the most valuable aspect of a battery – the cathode – and make up a large portion of overall battery cost. Against this backdrop, Platts, with its extensive suite of daily spot battery materials assessments, provides market participants with comprehensive pricing information for this crucial energy transition sector."

Henrique Ribeiro, Principal Analyst Technologies & Supply Chains, ETSS, at S&P Global Commodity Insights, commented: "As battery production scales globally, supply of battery raw materials – especially Cathode Active Materials – will become a key concern for battery manufacturers. The manufacturing scale involved makes technological change more difficult and so LFP and NMC chemistries are expected to dominate for some time. Since key refining and CAM production stages are dominated by Chinese

companies, other regions are likely to remain reliant on imports for years to come."

Battery demand is expected to grow sharply in the coming years not just from the growth in adoption of electric vehicles, but also from Battery Energy Storage Systems (BESS) which are increasingly being deployed to capture energy generated from solar and wind plants, as well as use as back up sources of energy for high-energy consumption end uses such as data centers. Global BESS annual capacity additions grew 49% year-on-year in 2024 and are forecast to grow another 29% on year in 2025, according to S&P Global Commodity Insights' Clean Energy Technology team.

The new calculated CAM assessments leverage Commodity Insights research team's battery cell cost model, factoring in material intensity and proprietary processing cost estimates for the Chinese domestic market. China accounts for about 81.3% of global production, according to S&P Global Mobility.

The 24-strong series leverages Platts established daily spot assessments for lithium carbonate, lithium hydroxide, cobalt sulfate, nickel sulfate, manganese sulfate, and iron ore, as well as its weekly technical monoammonium phosphate (TMAP) assessment, while the calculated CIF assessments for Europe and North America for China-origin material also leverage Platts daily container freight price

Source : S&P Global Commodity Insights

CHINAPLAS 2025: BASF AND WAL LOW CARBON TECHNOLOGY CO-CREATE ADVANCED PLASTIC AIR TANK FOR COMMERCIAL VEHICLES

- First plastic air tank for commercial vehicles made with BASF's high-performance Ultramid® polyamide
- Air tank up to 20% lower in weight compared to aluminum alternatives

Shanghai, China – March 18, 2025 – At CHINAPLAS 2025, BASF will showcase a commercial vehicle air tank co-created with WAL Low Carbon Technology (Anhui) Co. Ltd (WAL) and made with BASF's high-performance material solution Ultramid® polyamide. The innovative solution achieves a weight reduction of 10-20% compared to aluminum alternatives and over 50% compared to steel versions.

Production of the air tank is also more energy efficient, since it only needs a one-piece injection molding process. This eliminates the need for secondary welding operations that are typically required for metal versions.

"Lightweighting of vehicles contributes to energy efficiency, which lowers fuel consumption and carbon emissions. The successful collaboration with BASF on this air tank project strengthens our position as a technology leader in the commercial vehicle components industry and enables us to better serve our customers' needs for high-performance and sustainable solutions," said Karl Song, Chief Technology Officer of WAL Low Carbon Technology.

Owing to the superior mechanical properties of BASF's innovative material solution Ultramid, the air tank exhibits exceptional rigidity, welding line strength and UV resistance. Combined with its high burst pressure resistance of above 50 bar (5MPa), the solution demonstrates consistent product quality and reliability in this demanding application.

"The co-creation with WAL demonstrates our ability to meet demanding high-pressure applications. This also validates the potential of our material solution to meet other automotive applications where high burst pressure resistance is required," said Eng Guan Soh, Vice President, Business Management Engineering Plastics, Performance Materials Asia Pacific, BASF.

Source : BASF

SK ON AND NISSAN ANNOUNCE BATTERY SUPPLY AGREEMENT TO SUPPORT FUTURE EV PRODUCTION IN AMERICA

SK On and Nissan today announced a battery supply agreement that will support Nissan's electric vehicle (EV) production in North America.

Under the agreement, SK On, a leading global battery manufacturer, will supply nearly 100GWh of high-performance, high-nickel batteries to Nissan from 2028 to 2033. These U.S.-manufactured batteries will power Nissan's next-generation EVs to be produced at its Canton, Mississippi assembly plant. This agreement reinforces both companies' commitment to electrification and sustainable mobility.

This production will support 1,700 U.S. jobs at SK On, and will involve a total investment of $661 million, including equipment purchases. This is in addition to Nissan's $500 million in investments for EV production at the Canton Assembly Plant.

"This agreement with SK On is a significant milestone for Nissan's electrification journey and supports further investment in U.S. manufacturing," said Christian Meunier, chairman, Nissan Americas. "Through this smart partnership with SK On, we can leverage their growing U.S. production capacity to deliver innovative, high-quality electric vehicles that meet the needs of our customers."

The partnership marks SK On's first supply agreement with a Japanese automaker, further expanding its global customer base. SK On, a subsidiary of South Korea's SK Group, currently operates two battery plants in the U.S. and is building four additional plants with partners. Once fully operational, SK On's annual U.S. production capacity is expected to exceed 180GWh.

"This agreement underscores the strength of our battery technology and our growing presence in the North American market," said Seok-hee Lee, SK On president and CEO. "Leveraging our production footprint and expertise, we are committed to supporting Nissan's electrification strategy and the broader transition to sustainable mobility."

Nissan is accelerating its EV strategy as part of its global long-term vision. Last year, the company announced plans to launch 30 new models over the next three years, including 16 electrified vehicles. Among those models are all-new EVs from its Canton assembly plant starting in 2028, further reinforcing its commitment to localized EV production and a sustainable future.

This collaboration between Nissan and SK On is another milestone in the evolution of the U.S. EV manufacturing ecosystem, ensuring customers benefit from advanced, high-quality EV technology backed by a reliable domestic supply chain.

Source : businesswire

CHANGAN AUTOMOBILE LAUNCHES CHANG-AN, DEEPAL, AND AVATR IN EUROPE, USHERING IN A NEW ERA OF EVS

MAINZ, Germany, March 21, 2025 /PRNewswire/ -- ChangAn Automobile ("ChangAn" or "the Company"), an intelligent low-carbon mobility technology company, officially launched its three major brands, CHANG-AN, DEEPAL, and AVATR, in Europe at its brand launch event, themed "Sharing the Future," in Germany. This milestone marks a new phase in ChangAn's "Vast Ocean Plan", reinforcing its commitment to technological innovation and sustainability. With a fully integrated European ecosystem spanning research, production, supply chain, sales, and operations, ChangAn is deepening its connection with European consumers by investing in local talent, collaborating with regional partners, and driving the future of intelligent and sustainable mobility.

At the event, ChangAn showcased the DEEPAL S07, marking its European debut, alongside the CHANG-AN E07, and DEEPAL S05, with their market launches planned for a later stage. Highlighting cutting-edge technologies in intelligence and electrification, ChangAn is meeting European demand for high-performance electric vehicles.

ChangAn's technological innovation is recognized globally, driven by a global collaborative R&D system spanning six countries and ten locations. It boasts over 18,000 R&D personnel from 31 countries and regions, with 16 technology research and product

development centres, 17 technology companies, and 180 laboratories (including national-level laboratories), positioning it as a key player in the European EV market.

As part of its European launch, ChangAn is adopting a structured market entry strategy, initially focusing on key EV markets such as Norway, Denmark, Germany, the Netherlands, and the UK. By 2028, the company plans to establish a presence across all major European markets. The European Headquarters, located in the Netherlands, will serve as the central hub for business operations. Sales companies Headquarter has been set up in Munich, Germany. With around 500 professionals currently employed across Europe, including experienced designers and engineers from Italy and the UK, the Company is committed to expanding its local talent pool to drive innovation and deepen market engagement.

"It is great to be here in Germany," stated Zhu Huarong, Chairman of ChangAn Automobile. "ChangAn is an open and collaborative company driven by a clear mission: to lead sustainable mobility and benefit human life."

"This year, we aim to achieve three million units in global sales, and one million will be electrified vehicles. By 2030, we aim to deliver five million vehicles a year, with three million being electrified. Together, we're driving innovation for a better future." Zhu continued.

ChangAn Automobile is accelerating its globalisation, with technology-driven innovation, intelligent manufacturing and sustainable development at its core, and is committed to building a world-class auto brand. This European brand launch marks a significant step in ChangAn's global presence and signals the next stage of its global vision.

Source : PRNewswire

LOHUM ANNOUNCES INDIA'S FIRST BATTERY GRADE LITHIUM REFINERY

Lohum, India's largest producer and processor of sustainable critical minerals, announced the expansion of its lithium refining capabilities with a 1000 MT/A battery-grade Lithium facility.

Lohum currently refines more than 90% of all lithium in India, making it one of the largest lithium refiners in the world outside of China. Lohum's lithium

refining operations will shore up India's energy security and make the nation competitive across global critical minerals, EV, and energy transition markets.

Having grown 20x in the last 4 years, Lohum is not only the largest lithium refiner in India but is also setting up production capabilities for value-added products like Cathode Active Materials (CAM) that go directly into Lithium-ion battery gigafactories. This will make Lohum the largest direct consumer of lithium in India by 2030, by when the world is expected to consume almost 1.5 million tons of lithium carbonate annually for 4000 GWh of cell production, with more than half of this demand coming from outside China.

Rajat Verma, Founder & CEO of Lohum Corporation, said, "Lohum's lithium refining leadership, coupled with our growing capabilities in value-added products like Cathode Active Materials, positions us as a key partner in building a Viksit and Atmanirbhar Bharat. We are sustainably producing globally competitive critical mineral products at low CapEx and OpEx, thereby reducing India's reliance on Chinese lithium imports."

The company's lithium refining capabilities, with current recovery rates of 90%+ (the industry average is 60-70%) and purity of 99.8%+, slated to reach 99.99% shortly on the back of R&D breakthroughs.

Source : Indian Chemical

BIOSURFACES AND MORPHOCELL TECHNOLOGIES ANNOUNCE COLLABORATION TO EXPLORE THERAPEUTIC APPLICATIONS OF BIO-SPUN™ MATERIAL

ASHLAND, Mass., March 14, 2025 / PRNewswire/ -- BioSurfaces, a leader in advanced nanofiber materials, and Morphocell Technologies, a regenerative medicine company, are pleased to announce a collaboration aimed at exploring the potential of BioSurfaces' proprietary Bio-Spun™ material for therapeutic applications.

The partnership will focus on leveraging Bio-Spun™'s unique properties to advance innovations in regenerative medicine. By combining BioSurfaces' expertise in biomaterials with Morphocell's deep knowledge in cell-based therapies, the companies seek to develop new solutions that address critical healthcare challenges.

"At Morphocell, we are always looking for cutting-edge technologies that can help us improve patient outcomes," said Dr. Massimiliano Paganelli, CEO of Morphocell. "BioSurfaces has developed an exciting material, and we look forward to working together to explore its potential in advancing therapeutic approaches for patients in need."

Matthew Phaneuf, President and CEO of BioSurfaces, added: "We are excited to collaborate with Morphocell, a company at the forefront of regenerative medicine. Our shared mission is to innovate and develop solutions that can ultimately improve lives. This partnership represents an important step in that direction."

The collaboration will focus on early-stage research efforts to evaluate Bio-Spun™ in various therapeutic applications, with the long-term vision of contributing to the advancement of regenerative treatments for patients worldwide.

Source : BioSurfaces, LLC

WORLD'S FIRST MEDICAL-GRADE POST-TREATMENT CARE EPICITE® CALM FOR ENERGY-BASED AESTHETIC TREATMENTS TO LAUNCH AT AMWC MONACO

World's first post-treatment dressing made from biosynthetic cellulose in medical device quality

New standard of care following laser, light, and energy-based treatments

Sterile option for treatment-prone skin to mitigate liability risks

JeNaCell, an Evonik company, will launch epicite® CALM at the Aesthetic & Anti-Aging Medicine World Congress (AMWC) in Monaco from March 27-29. Establishing a new gold standard of care in medical aesthetics, epicite® CALM provides optimal post-treatment recovery following laser, light, and energy-based treatments, including fractional CO2 lasers and radiofrequency microneedling. As the world's first medical-grade dressing made from biosynthetic cellulose, epicite® CALM will be certified under European Medical Device Regulation (MDR) standards. It offers a safe, sterile, and hypoallergenic option that promotes wound healing while improving patient safety and comfort.

"Biosynthetic cellulose is a material showing superb versatility. Drawing on the extensive clinical experience in treating burns and chronic wounds with products from the epicite® family, we are very pleased to offer epicite® CALM to medical professionals in aesthetics to improve patient outcomes," said Dr. Dana Kralisch, General Manager of JeNaCell. The Evonik company is a specialist in producing medical-grade products for advanced wound care.

A hydro-active wound dressing, epicite® CALM is designed to create a moist wound environment that promotes healing and minimizes downtime following aesthetic treatments that utilize energy-based technologies, such as CO2 lasers and radiofrequency (RF) microneedling. These procedures enhance collagen production and address signs of aging. However, their intensity can create wounds comparable to minor burns. With some technologies penetrating the dermis up to 7mm, practitioners may face liability risks when using non-medical-grade products on compromised skin.

Made in Germany under stringent cleanroom conditions, epicite® calm is a safe and sterile option for treatment-prone skin and surgical wounds. The

product is crafted from natural biosynthetic cellulose, ensuring it is non-occlusive, hypoallergenic, and free from fragrances, preservatives, and parabens.

"epicite® CALM will support medical professionals in enhancing their aftercare protocols to meet medical quality standards. We're looking forward to partnering with distributors in Europe and internationally to help us bring this exceptional product to patients," said Julia Born, Business Development & Strategic Marketing Manager at Evonik Health Care.

At AMWC in Monaco on March 27-29, Evonik will showcase epicite® CALM at booth M4 on level Pinede, where interested parties can discuss partnership options with the team.

epicite® CALM is the latest addition to JeNaCell's epicite® family of medical products for advanced wound care and builds on the company's well-known product portfolio for burn treatment as well as treatment of chronic wounds. Founded in 2012 as a spin-off of the Friedrich Schiller University Jena in Germany, JeNaCell launched its first epicite® product in 2017. Evonik acquired JeNaCell in 2021.

Evonik is a global innovation hub for next-generation biomaterials, working with customers to take their ideas from concept to market. The company provides the industry's most comprehensive portfolio of tailored materials and services for the manufacture of medical devices that open up new possibilities for patient-specific treatment.

Source : Evonik

A NEW STANDARD IN CLINICAL CARE FOR MASH PATIENTS: HISTOINDEX LAUNCHES FIBROSIGHT™

SINGAPORE, March 17, 2025 / PRNewswire/ -- HistoIndex, a global leader in stain-free digital pathology solutions for managing fibrotic diseases, has announced the launch of their first Laboratory Developed Test (LDT) FibroSIGHT™ – now available in the United States. This marks a significant milestone for HistoIndex as the company enters clinical care for patients with Metabolic Dysfunction-Associated Steatohepatitis (MASH). "I am excited to see how our core expertise in clinical trial assessments is now transcending into the realm of precise and personalized patient care," said Dr. Gideon Ho, Chief Executive Officer of HistoIndex." With FibroSIGHT, we aim to empower clinicians with a more definitive and accurate assessment of liver fibrosis."

MASH has long been a challenging and progressive liver disease, characterized by fat build-up and inflammation that, if left untreated, leads to fibrosis and, ultimately, cirrhosis. After decades of research and therapeutic development, the field reached a pivotal moment in 2024 with the approval of Rezdiffra® - the first drug for the treatment of MASH with moderate to advanced fibrosis[1,2*]. As treatment options expand, accurate fibrosis assessment becomes even more critical in guiding clinical decisions and optimizing patient outcomes. HistoIndex has been playing a key role in the development of MASH treatments and is now leading the way in this next phase of patient care with FibroSIGHT.

FibroSIGHT seamlessly integrates into routine clinical workflows, leveraging on HistoIndex's proprietary stain-free imaging technology to enhance the sensitivity of fibrillar collagens detection — key in evaluating fibrosis severity in liver biopsy samples (see Figure 1). By eliminating variability associated with traditional staining techniques, FibroSIGHT delivers reliable and precise fibrosis assessment for MASH patients.

Clinicians can now order FibroSIGHT for MASH patients, on whom liver biopsies were performed, whenever definitive and accurate assessments of fibrosis are needed[2,3]. This includes use at the time of diagnosis to determine treatment decisions, when non-invasive assessments of degree of fibrosis are either inconclusive or discordant. Additionally, FibroSIGHT can be ordered post treatment to evaluate patients' response, especially in cases where there are no apparent improvement.

"By providing more accurate and objective evaluation of fibrosis, FibroSIGHT will enable more personalized treatment strategies and better evaluations of effectiveness of treatment leading to overall better care for patients," commented Dr Naim Alkhouri, MD, Chief Medical Officer of Arizona Liver Health. "Where biopsy evaluation is needed for a MASH patient, I can see incorporating FibroSIGHT in the workup, and in doing so, benefiting the entire MASH clinical care community."

FibroSIGHT testing is performed in HistoIndex's CAP/CLIA accredited laboratory in Irvine, California. With the launch of FibroSIGHT, HistoIndex reaffirms its long-standing commitment in advancing fibrosis assessment and personalized treatment for MASH. By bridging research with clinical care, FibroSIGHT empowers informed treatment decisions, driving better patient care in the evolving landscape of liver disease management.

Source : Histoindex Pte. Ltd.

ARCHROMA AND GRADIANT PARTNER TO ADVANCE WATER CIRCULARITY WITH INNOVATIVE ZLD TECHNOLOGY IN THAILAND

Pratteln, Switzerland, March 18, 2025 - Archroma, a global leader in specialty chemicals, has successfully implemented a state-of-the-art Zero Liquid Discharge (ZLD) technology at its Mahachai plant in Thailand. The ZLD solution was designed and built by Gradiant, a global leader in advanced water and wastewater treatment. This milestone project marks a major leap forward in water circularity, enabling the recovery of 90-95% of wastewater for reuse and the extraction of valuable minerals for industrial applications.

Archroma, a global leader in sustainable specialty chemicals, partnered with Gradiant to deploy a high-efficiency, membrane- and oxidation-based ZLD solution, reinforcing its commitment to responsible water management in the textile industry. Located in a water-stressed region near Bangkok, the Mahachai plant now serves as a model for sustainable textile dye production, significantly reducing reliance on local water supplies while improving environmental resilience.

As part of its broader sustainability endeavor, Archroma addresses critical challenges within the apparel and textile industry, particularly water consumption. "We believe in reducing water use in production and home laundering. We innovate to remove toxins and contaminants from our products, making wastewater treatment easier for our plants and customers," said Dhirendra Gautam, VP Global Marketing and Strategy, Archroma. "Our goal is to require our plants to have effective water conservation facilities with special focus on water stressed areas, contributing to water conservation and helping to combat acute water scarcity worldwide."

Since 2019, Archroma has evaluated various ZLD solutions to address growing water challenges in Thailand. Gradiant's Counterflow Reverse Osmosis (CFRO) was selected as the preferred technology for its ability to treat diverse wastewater compositions with superior efficiency and minimal energy consumption. The modular system seamlessly integrates with the plant's existing wastewater treatment infrastructure, maximizing desalination capacity and water recovery while reducing the plant's environmental footprint.

In addition to CFRO, Gradiant's Free Radical Oxidation (FRO) technology has been deployed to remove color and organics from the RO concentrate, ensuring safe discharge and meeting stringent environmental regulations. The system also enables the recovery of concentrated brine, which Archroma repurposes within the dyeing process or supplies to industry partners for applications such as resin regeneration and chlorine production, further promoting a circular economy in water and resource management.

"Water-intensive industries are under increasing pressure to adopt responsible solutions, and this partnership with

Archroma demonstrates how advanced water treatment can drive sustainability without compromising operational efficiency," said Prakash Govindan, COO of Gradiant. "Our ZLD solution at Mahachai leverages innovative membrane and oxidation technologies to maximize water recovery, reduce environmental impact, and create valuable resource streams. We are proud to support Archroma's commitment to sustainable manufacturing and water stewardship."

Thailand faces mounting water stress due to climate change, extreme droughts, and aging infrastructure, making sustainable water management an urgent priority. By implementing Gradiant's ZLD solution, Archroma significantly reduces its dependence on freshwater sources, ensuring long-term operational resilience in a resource-constrained environment.

This multi-million-dollar investment underscores Archroma's dedication to water conservation and its broader mission to transform the textile industry through sustainable innovation. Beyond Thailand, Archroma continues to

expand its ZLD initiatives globally, including its Sustainable Effluent Treatment (SET) plant in Jamshoro, Pakistan, which has been providing irrigation water to surrounding communities.

By partnering with Gradiant, Archroma reaffirms its commitment to employing innovative solutions that drive economic, environmental, and industrial sustainability on a global scale.

Source : Press Release

TORAY LAUNCHES WIDE NANO-MULTILAYER FILM FOR HEAD-UP DISPLAYS THAT DELIVERS HIGH CLARITY, FREE OF DOUBLE IMAGES, EVEN FOR POLARIZED SUNGLASSES WEARERS

Tokyo, Japan, March 18, 2025 – Toray Industries, Inc., announced today that it has launched PICASUS™ VT (see note 1), a wide nano-multilayer film that reflects light only from oblique angles. Applied to head-up display (HUD; note 2) technology, the film can deliver double image-free high-definition displays across a full-screen area of windshields. These displays remain clear even when viewed through polarized sunglasses.

HUD technology helps improve driver safety by displaying relevant information on windshields, so their eyes do not stray from the road ahead. While a limited area on the windshield right in front of the driver shows such information as vehicle speed and map navigation, new projection technologies have emerged in recent years to display navigation, warnings, and other timely driver assistance information more clearly and across a wider area of the windshield. A good example is panoramic HUD, which projects information across the entire lower part of the windshield. This allows for a more compact dashboard, creating a more spacious and comfortable cockpit environment. Efforts are under way to develop technologies to simultaneously display near and far information across the whole area of the windshield.

Current HUD technology shows information by projecting S-polarized images onto the windshield because glass surfaces more easily reflect S-polarized light. Regular windshields, however, reflect images on the front and rear surfaces of the glass, causing double images. Windshields designed to prevent this issue enable clear display only in some areas. Polarized sunglasses worn widely in Europe and the United States absorb S-polarized light. The trouble is that HUD images become impossible to see when wearing such sunglasses.

Toray has endeavored to broaden the application of PICASUS™ VT for HUDs by drawing on its proprietary nano-multilayer technology and advanced optical design capabilities. PICASUS™ VT provides glass-like transparency when viewed from the front, and selectively controls reflectivity for light entering from oblique angles. Combining PICASUS™ VT with a light source emitting P-polarized images, which are not reflected by glass surfaces, can resolve these issues.

PICASUS™ VT offers the following key HUD projection features:

- Reflects images only on the film surface, enabling high-definition information display across a full-screen area
- Maintains excellent visibility even when wearing polarized sunglasses
- Supports augmented reality displays with depth perception, allowing projections from near to far distances

Toray enhanced material design, production equipment and process technologies for this film, establishing a structure to supply 1,600 mm wide film rolls compatible with almost all automobile windshields. Full-fledged customer assessments are underway.

Enabling high-definition, double image-free displays that remain visible even when wearing polarized sunglasses allows drivers to receive driving assistance information with minimal eye movement. Toray's technology also ensures visibility even in bright sunlight, helping improve driving safety. It also addresses the display quality issues of panoramic HUDs, which should contribute to more spacious and elegant vehicle interiors. The company will continue striving to realize full-screen windshield displays and augmented reality HUD displays (note 6).

Toray will keep leveraging its core technologies of synthetic organic and polymer chemistry, biotechnology, and nanotechnology to pursue R&D into groundbreaking materials that can transform the world in keeping with its enduring commitment to delivering new value and contributing to social progress.

Source : Toray

ARCHROMA LAUNCHES AVITERA® RASPBERRY SE TO EXTEND THE GENERATION NEXT PLATFORM FOR ECONOMICAL SUSTAINABILITY IN DARK SHADES

Pratteln, Switzerland, March 13, 2025 - Archroma, a global leader in specialty chemicals towards sustainable solutions, has taken sustainable and cost-effective cellulosic dyeing to the next level with the introduction of AVITERA® RASPBERRY SE.

Extending the AVITERA® SE GEN NEXT platform color of deep shades, the IP-protected brilliant trichromatic red empowers mills to achieve rich, dark and extra-dark shades while meeting the stringent fastness and sustainability requirements of leading brands and retailers. The newest element also offers significantly lower processing costs, with focus on reducing the recipe cost together with reliable right-first-time performance as well, "AVITERA® SE revolutionized the dyeing of cellulosic fibers and blends when it was introduced 15 years ago – setting a new benchmark with state-of-the-art application and fastness performance and advanced sustainability," Dhirendra Gautam, VP Marketing, Archroma said.

"Our goal was always to offer a full range of attractive colors without limits. With AVITERA® SE RASPBERRY SE as our new trichromatic red, we are now enabling fashion and textile companies to produce differentiated end articles in consistent and long-lasting dark and extra-dark shades with the same cost-competitiveness as in pale and medium shades. This is another major step forward on our PLANET CONSCIOUS+ journey to economic and environmental sustainability for our industry," he continued.

Substantial Savings on Challenging Dark Shades

Dyeing darker shades – such as black, navy and especially red – has traditionally been more challenging and costly than dyeing lighter colors. Achieving a deep, uniform color requires higher dye concentrations and more water and energy, and often also demands additional steps or re-dyeing. Dark shades, particularly red, also tend to fade more quickly than light colors, especially when exposed to sunlight and repeated home laundering.

With high-speed low-temperature wash-off, high process reliability and excellent reproducibility on dark and ultra-dark shades, the AVITERA® SE GENERATION NEXT dyestuffs allow mills to achieve water and energy savings of up to 50% compared to best available technology, and to slash CO2 emissions and effluent discharge by up to 50% as well. They can also increase mill output by up to 25% or more.

Excellent Fastness for Vibrant Colors, Wash After Wash

The AVITERA® SE GENERATION NEXT dyes offer excellent fastness properties, retaining their vibrant colors through repeated home laundering, even when exposed to chlorine and oxidative bleach. They also demonstrate good resistance to light and perspiration. This performance meets the stringent color fastness standards of leading industry standards and makes them suitable for the High IQ® Lasting Color and High IQ® Lasting Color Eco color retention programs.

Crucially, all of the AVITERA® SE dyes are free from arylamines, including pCA*, and comply with bluesign® and ZDHC Level 3.

Maximum Resource Savings, Highest Performance Levels

Under the PLANET CONSCIOUS+ framework, AVITERA® RASPBERRY SE qualifies for the IMPACT+ category on the SUPER SYSTEMS+ matrix. This indicates that it delivers maximum durability and resource savings with the cleanest chemistry and highest performance.

Wide Color Range with Top Color Consistency

AVITERA® SE RASPBERRY SE sits alongside three other deep colors in the AVITERA® SE range, providing opportunity to expand to the dark shade arena with both environmental and economical sustainability:

- **AVITERA® BLACK PEARL SE:** A strong, greenish-cast black dye that can be used to correct metamerism.
- **AVITERA® BLUE HORIZON SE:** A trichromatic, greenish-cast blue element with high resistance to nitrogen oxides (NOx) in the atmosphere.
- **AVITERA® NIGHT STORM SE:** A strong navy shade with a greenish cast, recommended for dyeing the deepest navy and combination shades.

AVITERA® SE set a new benchmark for sustainability in the textile industry when it launched in 2010. The range's color palette has been significantly expanded over the years, while performance has improved, and greater cost savings have been made possible through recipe optimization and added environmental benefits. Generation Next, the fourth generation of the revolutionary dye solution, adds dark and extra dark shades for next-level economic sustainability.

Source : Press Release

PERSTORP LAUNCHES NEPTEM™ RANGE OF EMULSIFIERS – AN INVALUABLE SOLUTION IN WATERBORNE ALKYD TECHNOLOGY

Malmö, March 12, 2025 - Perstorp, a leading global innovator in specialty chemicals and a wholly owned subsidiary of PETRONAS Chemicals Group Berhad (PCG), proudly launches the Neptem™ range for alkyds, a portfolio of emulsifier solutions enabling the next generation of high-performance, low-VOC waterborne alkyds.

In response to the coatings industry's shift towards solutions with a lower environmental impact, Perstorp has developed this portfolio to enable the reduction of the carbon footprint and VOCs of alkyd formulations by enabling a seamless transition to waterborne alkyds.

Helene Dérand, Vice President of Innovation, adds: "Our new range of Neptem products redefines what's possible for waterborne alkyds. It is well known that waterborne alkyds has a significantly lower climate footprint than solvent based. By enabling a smooth transition away from solvent-based resins, we're helping our customers future-proof their business and lead the industry toward a more sustainable future."

Key features of Neptem for alkyds:

- Uncompromised performance: Delivers high-performance emulsification, ensuring waterborne alkyds match or exceed the quality of traditional solvent-based systems.
- Sustainability: Supports the transition to low-VOC coatings, thus reducing greenhouse gas emissions compared to solvent-borne systems.
- Technical support: Backed by Perstorp's extensive technical expertise and customer support to facilitate a smooth transition.
- Extended application range: Unlock possibilities beyond the traditional applications and emulsify a broader range of alkyd resins.

"With decades of experience in specialty chemicals, Perstorp remains at the forefront of innovation," says Dr. Oliver Eyrisch, Vice President for Resins & Coatings. "This series of Neptem products for alkyds shows our commitment to driving the sustainable transformation of our industry while delivering high-performance solutions that anticipate the future needs of the coatings industry."

Further reinforcing its versatility, Neptem emulsifiers expand the potential of waterborne alkyd resins, accommodating a broader range of alkyds with different oil lengths than ever before, making it possible to formulate beyond the traditional applications.

By offering technical support Perstorp positions Neptem for alkyds as a product and as a partnership, ensuring resin producers gain access to formulation assistance and benefit from a seamless transition to waterborne technologies.

Perstorp will showcase the Neptem range for alkyds for the first time at the European Coatings Show in Nuremberg, Germany, on March 25-27 at Hall 3C, Booth 425. Visit us to learn how Neptem can transform your formulations while meeting today's sustainability standards.

Source : Press Release

LG ENERGY SOLUTION LG ENERGY SOLUTION PARTNERS WITH DOOSAN BOBCAT TO JOINTLY DEVELOP BATTERY PACK SOLUTIONS FOR CONSTRUCTION EQUIPMENT

- Companies to cooperate on standardized battery packs for construction equipment, helping accelerate major industry's electrification
- Partnership built on LG Energy Solution's technological leadership, as tough construction environments require exceptional functionality and stability
- LG Energy Solution actively expanding presence in non-EV business areas, delivering on promise to diversify business portfolio

SEOUL, March 19, 2025 – LG Energy Solution (KRX: 373220) today announced that it has signed a Memorandum of Understanding (MoU) with Doosan Bobcat (KRX: 241560) to develop battery pack solutions for compact construction equipment, with the aim of accelerating electrification in this sector.

Through this agreement, the two companies will jointly develop standardized battery pack solutions that can be applied to various construction equipment products, such as skid-steer loaders and excavators, while working together to succeed in major markets such as North America. Both companies will also actively explore new opportunities to extend this partnership to the electrification of other applications, including grounds maintenance equipment like tractors.

Additionally, the partners plan to apply LG Energy Solution's cylindrical batteries to Doosan Bobcat's flagship construction equipment models.

The major driving force behind this collaboration was LG Energy Solution's outstanding technological leadership. Since construction equipment often operates in challenging outdoor environments, sometimes exposed to snow, rain, dust, heat waves and extreme temperatures, products must boast exceptional durability and stability in extreme conditions over long periods of time. LG Energy Solution's cylindrical batteries deliver high voltage, energy density, and longevity, exhibiting excellent performance and durability in low temperatures.

Doosan Bobcat, a global leader in construction equipment, has been actively pursuing the electrification of its products. Following the establishment of its own dedicated electrification organization in January, it now plans to create an R&D center in Anyang, Gyeonggi Province in the second half of the year to conduct electrification research and verify battery pack production technology.

"We are excited to collaborate with Doosan Bobcat, a global leader in construction equipment, to develop electrification technologies and expand our business in this vitally important sector," said Yooseong Oh, Senior Vice President and Head of LG Energy Solution's Mobility & IT Battery Division. "We remain deeply committed to leading the challenge of electrifying various industries."

Hyunchul (Charlie) Park, CSO and Executive Vice President of Doosan Bobcat, stated, "We are pleased to develop battery packs for compact construction equipment on the back of excellent quality and stability of LG Energy Solution's cells," explaining the significance of the MOU. "We will standardize battery packs for compact construction equipment and provide solutions to major markets such as North America," Park added.

As with its partnership with Doosan Bobcat, LG Energy Solution is actively expanding into non-EV areas in pursuit of a balanced portfolio, a vision it announced last October. The company will seek to establish sustainable battery ecosystem in new territories, particularly the new mobility industries such as Urban Air Mobility (UAM) and vessels.

Source : LG Chem

WANHUA CHEMICAL AND IBU-TEC HAVE SIGNED A JOINT DEVELOPMENT AGREEMENT TO DEVELOP A EUROPEAN LFP BATTERY MATERIAL, LAYING THE FOUNDATION FOR A EUROPEAN BATTERY VALUE CHAIN.

WEIMAR, Germany , April 1, 2025 /PRNewswire/ -- On March 26, Wanhua Chemical Group Battery Technology Co., Ltd. ("Wanhua Chemical") and IBU-tec ("IBU-tec"), Europe's leading lithium iron phosphate materials manufacturer, held a Joint Research and Development Agreement (JRA) signing ceremony in Weimar, Germany. The partnership with IBU-tec does not affect the progress of concrete discussions Wanhua Chemical is currently holding with other companies for in-depth cooperation.

As part of this partnership, IBU-tec and Wanhua Chemical will carry out an industrial scale-up in the coming months. The partners expect to obtain conclusive results in the third quarter of this year to determine whether the joint development will meet market requirements in Europe and North America. If so, this will offer significant opportunities for the production of LFP cathode material in Germany as part of a European value chain in the battery sector.

Dr. Hua Weiqi, Executive Vice President of Wanhua Chemical, Mr. Wang Xiaoxing, General Manager of Wanhua Battery Industry Company Limited, Mr. Jörg Leinenbach, CEO of IBU-tec and Mr. Ulrich Weitz , Managing Director of IBU-tec, attended the signing ceremony. This event marks the official opening of in-depth cooperation between the two parties in the field of LFP (Lithium-Iron-Phosphate) materials.

In the field of battery materials, lithium iron phosphate has gradually become a mainstream product in the automotive new energy and energy storage markets, as it boasts advantages of high safety and long service life. In recent years, Wanhua Chemical has established a technology

platform integrating battery material technology development, equipment technology development, and power application technology research, and its lithium iron phosphate products have undergone continuous improvement. As part of this cooperation, the company will establish a local supply chain to provide LFP materials to European customers.

Dr. Hua Weiqi said: LFP occupies a dominant position (nearly 80% of electric vehicles in the Chinese market) and is practically the only commercially available energy storage solution. Wanhua Chemical adheres to the globalization strategy and has set up 7 R&D centers in Beijing, Shanghai , Hungary, Spain, etc., 9 production bases and more than 10 overseas sales organizations, and IBU-tec, as a German local Li-ion materials factory, focuses on the R&D and production of LFP, and has a mature R&D and production system.

In the future, the two sides will also discuss the establishment of a joint laboratory in Europe , in order to initiate cooperation in the field of innovation and research and development, and to ensure strong local support for research and development for the benefit of the European battery industry.

Source : PRNewswire

NEW NIPAGUARD™ SCE VITA: CLARIANT'S LATEST FULLY NATURALLY DERIVED PRESERVATION BLEND FOR COSMETICS

- Nipaguard SCE Vita delivers comprehensive antimicrobial protection for personal care formulations
- Designed for formulations without controversial preservatives
- With a 100% Renewable Carbon Index, it offers a more natural alternative to synthetic-based preservatives for effective beauty protection

MUTTENZ, March 11, 2025 - As the personal care industry prepares for in-cosmetics Global, the world's premier launchpad for new ingredient innovations, Clariant unveils Nipaguard SCE Vita, its naturally derived preservation solution for formulations without controversial preservatives.

In today's conscious beauty landscape, consumers are increasingly aware of the ingredients in their personal care products and their impact on both human health and the environment. This is driving demand for the cosmetics industry to do "more with less", delivering high-performance products while minimizing the use of controversial ingredients.

Nipaguard SCE Vita offers a powerful, modern solution that enhances product protection while aligning with consumer expectations for safety and sustainability. Based on 100% renewable Sorbitan Caprylate, it is synergistically combined with naturally derived, rather than fossil based, benzoic acid.

This new blend represents an innovative modern preservation system to create next-generation formulations that strike the perfect balance between efficacy, safety, and environmental responsibility. It is ideal for customers looking to develop 100% Renewable Carbon Index (RCI) formulations.

Besides offering broad-spectrum protection to a broad range of applications and formats Nipaguard SCE Vita is easy to use, safe and effective at low concentrations. Extensive testing shows that the new formula meets the highest standard on the market, giving formulators complete confidence in its effectiveness to deliver the same performance as traditional preservatives.

"At Clariant we are proud to be a market leader in solutions for the preservation of cosmetics. Nipaguard SCE Vita contains no controversial preservatives and marks a significant step in our broader commitment to address the needs of health- and sustainability-conscious consumers and brands at the same time as creating value for customers with renewable-carbon, high-performance products," said Karolina Scierski, Clariant's Portfolio Manager for Preservation.

As the environmental, health, and social impacts of purchasing decisions come to the forefront, customers increasingly seek products that align with their own commitments to sustainable practices. Clariant's innovations in the personal care and cosmetics industries reflect these values, addressing both market demands and sustainability goals.

Source : Press Release

LG CHEM TO SHOWCASE ECO-FRIENDLY BEAUTY PACKAGING SOLUTIONS AT COSMOPROF WORLDWIDE BOLOGNA 2025

SEOUL, March 14, 2025 – LG Chem announced today it will showcase its eco-friendly packaging solutions for the beauty industry at Cosmoprof Worldwide 2025, from March 20-23 in Bologna, Italy, reaffirming its commitment to environmental responsibility and innovation.

Cosmoprof is the world's largest trade fair for the cosmetics and beauty industry, attracting nearly 3,000

companies worldwide.

LG Chem will display its extensive portfolio of sustainable materials, from containers to packaging films made of eco-friendly raw materials, at the Eco Zone prepared by COSMAX, a leading original design manufacturer (ODM) in the cosmetics field and a partner of LG Chem in developing sustainable materials.

At the booth, LG Chem will showcase cosmetic containers made of bio-circular balanced (BCB) materials, drop-in solutions customizable to the desired content using renewable plant-based sources, such as used cooking oil, and circular balanced (CB) materials chemically recycled from plastic waste. These materials are expected to significantly contribute to solving the environmental challenges the beauty industry faces, such as reducing carbon emissions and plastic waste.

Samples of mask pack pouches made of UNIQABLE™, a mono polyethylene (PE) material developed exclusively by LG Chem's technology, will also be on display. Packaging films made of UNIQABLE™ are 100% recyclable and deliver excellent barrier performance and transparency, while maintaining the same durability as those made of composite materials.

"We aim to showcase our sustainable materials and customized solutions for the beauty industry and solidify our position in the global cosmetics market," said an LG Chem official.

LG Chem plans to respond promptly to the sustainability needs of beauty customers and markets by offering eco-friendly raw materials and products. Additionally, LG Chem will start operating Asia's first supercritical pyrolysis oil plant in the first half of this year to internalize the supply of feedstocks needed to produce chemically recycled materials.

Leveraging the research capabilities of the Color Design Center within its Customer Solutions (CS) Center, LG Chem will support the development of products that align with sustainable practices. It will achieve this by implementing designs that use eco-friendly materials, with colors and textures that beauty brands pursue.

Moreover, LG Chem will strengthen its customer relationship management (CRM) system to analyze the sustainability needs and interests of various customers in the beauty sector, ensuring that its eco-friendly packaging materials align with the beauty brands' identities.

SYENSQO UNVEILS RYTON® PPS M2000 FP FOR HIGH-PERFORMANCE COATINGS IN INDUSTRIAL AND ENERGY MARKETS

Brussels, April 2, 2025 - Syensqo, a leading global provider of advanced performance materials and chemical solutions, has introduced a new Ryton® polyphenylene sulfide (PPS) coating grade, custom-engineered to resolve unmet needs in ease of application and achieving strong coat performance at lower builds. This coating grade offers an efficient coating process that allows for better deposition per pass. As a result, it reduces the time and resources required for coating, while maintaining high throughput of coated articles.

"With this innovative Ryton® solution, we are responding to an industry trend that focuses on more easily applied high-performance coatings with a smaller health, safety and environmental (HSE) footprint," explained Hong Chen, Principal Research Scientist at Syensqo. "Building on our proven PPS chemistry, it delivers high barrier properties, provides excellent resistance to corrosive chemicals, demonstrates good adhesion to metals, and can operate at temperatures up to 200°C."

Ryton® PPS M2000 FP supports clients who seek a sustainable, low-volatile powder coating solution that combines high molecular weight with safe application, optimized coating build and minimal post-curing after film formation.

Boris Makhinson, Syensqo Americas Market Manager for Energy concluded: "The new Ryton® grade extends our PPS chemistry to powder coatings for use in demanding environments, such as the oil and gas industry. It makes the coating job easier and safer for applicators and is commercially available worldwide."

Source : Press Release

From ₹100 Crore to ₹12,000 Crore The Remarkable Growth of Berger Paints

Vinodhini Harish

Introduction:

Colours bring life and add emotions and joy. Berger Paints has been transforming spaces with its pioneering innovations, redefining the way we experience colour and coatings. From the colour bank tinting system to weather coat Anti-dust paint, express painting, and advanced waterproofing solutions, the company has continuously set new industry standards. They stand at the forefront of innovation, and making revolutions in the paints and coatings industry. In this article, we have taken a deep dive into their growth, expansions, and strategies and explored their new headquarters and business operations. Thus this article is a great read for someone interested in learning about the paints and coating industry and the strategies of leaders in the sector. Let's begin.

Berger paints' new headquarters and business growth:

Berger Paints has designed its new headquarters to be an innovative and creative space. It reflects its brand identity and commitment to colour. The design of the building, colour scheme and features highlight their leadership in the paint industry.

Colour and innovation: The new office is designed using a rainbow-inspired colour scheme. Each floor of the building represents a different colour of the rainbow, reinforcing Berger Paints' identity as a leader in paints and coatings. The aesthetics are modern and dynamic emphasizing their focus on creativity, branding and innovation. The building also features a museum, and an art gallery showcasing exceptional artworks. There is also an interactive zone for Berger Paints' My Color app which helps the users to explore and select paint shades effortlessly. Such modernized thoughts have inspired creativity and encouraged employees and visitors to think beyond their limits.

Green and sustainable building: The new headquarters is powered largely by solar energy and it makes it an environmentally friendly one. It has received LEED Platinum certification, which is one of the highest ratings for green buildings which proves the company prioritizes sustainability.

Berger Paints also held a nationwide competition for fine arts students, and the winning artworks now decorate the interiors of the building.

A new manufacturing plant is set to open in Panagarh, West Bengal. The existing Howrah Factory, which is India's longest-running paint manufacturing plant, will be converted into a world-class Research and Development Center to focus on new product innovations.

Berger Paints, India's second-largest paint company has announced a major expansion plan worth INR 2000 crore over the next three years. This is great news. Recently though the company celebrated their century-long legacy and relocated its headquarters within the new town, Kolkata.

Hon'ble Chief Minister for Industries, commerce and Enterprises and the Department of Women and Child Development and Social Welfare of the Government of West Bengal, Dr. Shashi Panja along with the senior management of Berger Paints officially inaugurated the new headquarters in a new town.

The facility is an eight-storeyed office building that spans approximately 190,000 square feet and it resembles the shape of a paint can. The company aims to focus on creating an agile and future-ready workspace, therefore they have converted this idea and given it a building form. Although the organization started with a modest facility in Howrah in 1923, they have incorporated several strategies and became the second largest player in Bengal by market capitalization.

In recent times, several companies relocated, however, Berger Paints has certainly embedded itself in Bengal's socio-economic fabric. Berger Paints has three manufacturing units in operation. Out of these, one from ICI India in Rishra and another from STP were purchased by Berger Paints as a part of their growth strategy. After acquiring them, the company has modernized the factories by upgrading them with advanced technologies and upgrading the production capacity to meet the growing demand.

Operating from Bengal, they have successfully entered the global markets and established themselves as the 7th largest architectural coatings company across the globe. In the past 100 years, they have been able to secure their space

by taking part in some of the prestigious projects of the country.

Some of their well-known projects include:

- **Indian Parliament House**
- **Vande Bharat Train**
- **Kolkata Metro**
- **Wankhede Stadium**

Indian Parliament House: The Indian Parliament House is one of the most significant and historically rich buildings in the country and stands as a testament to India's democratic values. Berger Paints has taken the responsibility of preserving the grandeur of this iconic structure by providing high-performance coatings that protect the building from harsh weather conditions, pollution and wear over time. The paints used are designed to enhance the aesthetic appeal while ensuring durability and longevity thereby helping in maintaining the building's rich heritage.

Vande Bhart Train: The Vande Bharat train is India's first semi-high-speed train that represents a major leap in the country's railway modernization efforts. The train is capable of reaching up to 180 km/h and thus demands high-quality, durable and weather-resistant coatings. Berger paints has contributed cutting-edge protective coatings that not only provide aesthetic appeal but also provide long-lasting protection against rust, corrosion and extreme weather conditions. This contribution highlighted their expertise in industrial and automotive coatings, thereby reinforcing their position as a leader in the coatings industry.

Kolkata metro- emphasizing the significance of urban mobility and durability:

The Kolkata metro is India's first metro rail system that is a lifeline for millions of commuters. This metro network is built to operate in a humid climate, metro trains and stations demand high-performance coatings that withstand constant wear, moisture, and exposure to dust and pollutants.

Berger Paints has worked on specifications such as sleek appearance and structural integrity over the years.

Wankhede stadium- preservation of sports legacy:

The Wankhede Stadium is one of India's most famous cricket stadiums and has been home to legendary cricketing moments that include India's 2011 World Cup victory. Berger paints has worked both for high-performance, weather-resistant paints and protective coatings for seating areas, exterior walls and steel structures. The durability was tested and still, they remain vibrant and durable despite Mumbai's heavy monsoons and high humidity.

Can Berger Paints maintain its position as India's second-largest paint manufacturer?

Latest Stock performance:

Last Tuesday, the shares of Berger Paints India Ltd. rose to INR 507.60 per share and that is with a 2.8% increase from the previous closing price of INR 502.65. However, after reaching its peak during the intraday tradition, the stock dropped slightly and settled at INR506.30 per share by the end of the trading session.

There was a slight decline, yet the stock still closed higher than the previous day's price showing that the investor confidence remains strong. Berger Paints has delivered a 35% return over the past five years and that means that if an investor had purchased Berger Paints shares five years ago, the value of their investment would have grown by 35%. This growth is significant, because, a 35% return over five years indicates that Berger Paints has consistently grown and generated profits for its investors. Such returns attract long-term investors as they see the company as a stable and reliable investment option. If Berger Paints' return is higher than the other similar companies, it shows that the company is outperforming the market.

Another factor to consider is that the paint companies depend on crude oil prices and crude oil-based raw materials. If the crude oil prices drop, costs decrease which leads to higher profits and a possible rise in the stock price.

Overall the company's stock movement on Tuesday was a positive sign as the share price increased during the day and remained higher than its previous closing price. Additionally, the 35% return over the five years shows the company's strong financial health and long-term growth potential. However, there are factors like competition, raw materials costs, and overall market conditions that determine the stock's performance in the future.

What to expect in the future?

Berger Paints is confident that it will perform better in the fourth quarter as

the company is expecting higher sales and profits in Q4.

Berger Paints uses crude oil-based raw materials to manufacture paints and recently the price of crude oil materials has gone down, which means that the company is spending less on the raw materials. However, Berger Paints has not reduced the prices of their paints which show that they are confident that their business will continue to grow.

Take away:

Berger Paints is not just a market leader but also a pioneer in the paints and coatings industry, blending innovation, sustainability, and strategic growth. Its vibrant new headquarters with an integrated art gallery, museum and interactive paint selection experience reflects its commitment to creativity and excellence. From a modest INR 100 crore company to an INR 12,000 crore multinational powerhouse, Berger Paints now sets its sights on an INR 20,000 crore milestone by 2030. It holds a strong 22% market share in India and ranks as the 7th largest architectural coatings company across the globe. The good news is they are expanding, with their 29 manufacturing plants, employing 4000+ professionals and 5 lakh painters.

Egypts Green Hydrogen Revolution A Power Play for Global Energy Leadership

Vinodhini Harish

Introduction:

The green hydrogen revolution is gaining momentum, sweeping across nations that are eager to embrace a cleaner, more sustainable energy future. Egypt is standing at the crossroads of Africa, Europe and the Middle East. Egypt is thus harnessing this powerful wind of revolution to position itself as a global leader in green hydrogen production and export. With mega investments, strategic partnerships, and groundbreaking policies, Egypt is not simply participating in the hydrogen revolution, it is shaping it. Thus in this article, we have discussed the investments flowing into hydrogen electrolyzers, ammonia production and pipeline infrastructure. If you are eager to know how Egypt is going to turn its vision into a global reality, then you should read the article. Let's begin.

The big news: the EU and Egypt conference had an impressive set of hydrogen deals!

Egypt- EU investment conference witnessed an impressive set of green hydrogen deals where the European Commission President Ursula Von der Leyen spoke about the massive potential of Egypt as a clean energy hub. Now, Egypt is strategically positioned as a potential clean energy hub that leverages geographical advantage at the crossroads of Africa, the Middle East, and Europe. Egypt is uniquely positioned to act as a bridge between the energy-producing Gulf nations and energy-consuming European markets. With the growing EU demand for clean hydrogen, Egypt could play a crucial role in supplying green energy via pipelines, maritime routes or electricity interconnections.

The agreement with EDF renewables and zero wastes also emphasizes Egypt's ambitions not just to produce green hydrogen but also to develop an integrated supply chain. This integrated supply chain is capable of creating new industries, jobs, and export opportunities in several sectors such as hydrogen storage, electrolyzers and renewable technology manufacturing.

Egypt's energy transition policies include the push for renewable energy projects such as Benban Solar Park and wind farms. The goal is to position it as a regional hub and to attract more foreign investments and strategic partnerships, especially in Europe, which is seeking to reduce reliance on fossil fuels and diversify energy imports.

The Ras Shukair Project – EDF renewables and Zero waste:

The project is budgeted for an investment of 7 billion euros for three phases. The first phase requires about 2 billion euros that is to produce 1 million tons of green ammonia every year. Now this massive investment is one of the largest green hydrogen projects in the region, which reinforces Egypt's renewable energy strategy and their ambition to supply clean hydrogen across Europe and other markets.

Belgian Company DEME agreement with Egyptian government:

DEME's green hydrogen facility signed an agreement with the Egyptian government to establish a green hydrogen production facility in Egypt's western desert. The first phase aims to produce about 320,000 tonnes of green ammonia annually. The project is located in the Port of Gargoub, which is a newly developed commercial and industrial zone on the Mediterranean coast. DEME will use solar and wind energy to power the facility ensuring fully green hydrogen production.

Yara Clean Ammonia signed an agreement to support the production of renewable ammonia:

Yara Clean Ammonia has signed an agreement to support the production of renewable ammonia in Egypt. The group of companies includes Norway's Scatec, the Egyptian Petrochemicals Holding Company (ECHEM), and Misr Fertilizers Production Company (MOPCO). The goal is to produce 150,000 tonnes of renewable ammonia annually.

The project will use green hydrogen, which uses renewable energy. A special facility will be set up with a 480 MW renewable energy system and a 240 MW electrolyzer to generate the required hydrogen to support the production of ammonia.

The European Investment Bank has shown interest in supporting the project and they have issued a letter of intent to show their willingness to provide long-term financing to help with development. The project is a part of Egypt's broader plans to become a major player in renewable energy and clean ammonia production, which can be used in fertilizers as an alternative fuel.

Advancements in jet speed, a great news for decarbonizing industries:

International companies such as BP, Masdar, and Voltalia are actively involved in Egypt's renewable energy sector. Additionally, the successful shipment of green ammonia from Egypt to India proves that these projects are also creating impact, they are simply in the planning stage. On complete establishment of these plans, these projects could potentially reduce carbon emissions, create jobs, and boost Egypt's economy while supporting the global transition to cleaner energy sources.

Egypt has signed 32 agreements to develop green hydrogen projects with an investment of around $175 billion and about half of these agreements have advanced to the next stage including projects by Voltalia and TAQA Arabia near Ain Sokhna Port in the Suez Canal Economic Zone.

Another major project led by BP in partnership with Masdar, Hassan Allam Utilities, and Infinity Power, was also confirmed at the conference.

Some of these projects have already started operating. Fertiglobe's shipment of green ammonia from the Egypt green pilot facility near the Suez Canal to Unilever in India last year. This has marked an important milestone in Egypt's journey toward becoming a leader in green hydrogen and ammonia production.

Modernized electricity infrastructure of Egypt and How bold is the push?

Egypt is making a bold push into green hydrogen initiative and the reasons are crystal clear. The country has strongly developed their renewable energy potential and has modernized the electricity infrastructure under the leadership of Dr. Mohamed Shaker, Egypt's Minister of Electricity and Renewable Energy. Alongside these developments, Egypt has a clear plan to become a major player in the global green hydrogen race.

Egypt has a population of over 110 million and already the country consumes a lot of grey hydrogen for its fertilizers and petrochemical industries. Therefore the need to make their industrial sector more sustainable, they are pushed to adopt green hydrogen and ammonia. Egypt is also Africa's largest steel producer, therefore they have a massive opportunity to produce green steel, a sector that is expected to grow as industries, push for low-carbon materials.

Egypt is strategically located thus making it an ideal exporter while serving as a gateway to Europe. The majority of green hydrogen projects are designed with an export to Europe and countries like Germany need imports to meet their industrial green hydrogen demand.

Challenges:

Despite the potential, Egypt faces some of the major challenges in establishing a strong green hydrogen industry. Many countries are competing to attract green hydrogen investments, Egypt has high debt, rising inflation, and a weak currency that limits its ability to finance large projects.

There are massive investments made in renewables, however, most of Egypt's electricity comes from natural gas, and recent gas shortages have led to frequent power cuts and other energy-related issues.

How is Egypt attracting investment?

Public spending is capped at 1 trillion Egyptian pounds ($20.7 billion) this fiscal year. In addition to that, Egypt has introduced fiscal incentives to attract investors such as tax credits green hydrogen producers get 33-55% tax breaks. VAT exemptions that help in equipment for green hydrogen production are exempted from value-added tax.

In addition to these, the Egyptian government now offers a single approval process that is issued directly by the Cabinet to establish, operate and manage green hydrogen projects without much hassle.

The Egyptian government has introduced a hydrogen incentives law that offers tax breaks of up to 50% for green hydrogen investors. VAT exemptions on imported hydrogen equipment. Fast-track approvals for renewable energy projects in the Suez

canal economic zone.

The European Bank of reconstruction and Development (EBRD) supports clean energy infrastructure. The world bank and African Development Bank are providing concessional loans for green energy transition. The EU and Germany H2 Global Program facilitates Egypt's hydrogen exports to Europe. Scatec (Norway) and Masdar (UAE) are investing in green hydrogen and ammonia plants.

Siemens Energy is assisting Egypt's first pilot hydrogen project. ACWA Power is partnering on hydrogen-to-ammonia conversion facilities.

Egypt has also set some conditions for the companies that are willing to invest in their green hydrogen projects:

The country is concerned or focused on improving local employment, therefore the company that is interested in investing in the hydrogen projects must bring in at least 70% of the workforce from Egypt.

The developers must secure 70% of the project funding from outside Egypt.

The projects must start operating within 5 years of the agreement.

Companies that are signing the agreement must utilize locally made components whenever possible and therefore the condition states that a minimum of 20% local content requirement.

Egypt's renewable energy goals:

In 2024, the Egyptian government revised their target downward to 40% emphasizing the continued role of natural gas in its energy mix. The adjustment was announced by Petroleum Minister Karim Badawi, who highlighted the need for increased gas exploration and investment.

Previously the goal was to reach 42% renewable energy by 2035, which later moved o 2030. Despite these goals, the country is still heavily dependent on fossil fuels, with renewables contributing only about 12% of its power supply.

The Zohr Gas field, located in the Mediterranean Sea, was once Egypt's largest natural gas producer, reaching a peak output of 3.2 billion cubic feet per day in 2019. However, production has significantly declined, dropping to around 1.9 bcf/d in early 2024. This decline has forced Egypt to increase gas imports and liquefied natural gas (LNG) shipments to address domestic power shortages.

To counter this, Egypt has partnered with Eni, the Italian energy company, to restart drilling operations at Zohr. A specialized drilling vessel, Saipem 10000, is expected to arrive soon to use advanced technology to boost gas production. The effort is crucial for Egypt, which had aimed to become a major gas exporter but is now struggling with reduced domestic production.

The Egyptian government has announced and accepted that the green hydrogen sector along with the country's ability to balance between attracting investments and reaching final investment decisions faster is benefitting the country both socially and economically from the green hydrogen sector.

Low and middle-income countries can learn from Egypt and share their experiences at this early stage of the sector's development. Additionally, the role of multilateral development banks is also becoming a major aspect of the success of this green hydrogen sector.

GH2 Cairo center – expected to become a regional hub in Africa's green hydrogen sector:

GH2 Cairo Centre is a key part of this initiative and its partnership with the Africa Green Hydrogen Alliance (AGHA) – a coalition of ten African governments that are committed to advancing green hydrogen projects.

As a part of the project, the center's first major activities include a Green hydrogen policy accelerator Training course. This is scheduled for next month. The program is organized in collaboration with the International Solar Alliance through its Green Hydrogen Innovation Center.

This highlights the GH2 Cairo Center's Strong focus on education, capacity building and stakeholder engagement.

Importance of GH2 Cairo center:

Africa's green hydrogen boom is remarkable, in that it has over 5,000 GW of renewable energy potential thereby makes it a major player in the green hydrogen revolution. On the other hand, economic growth and energy security ensures green hydrogen benefits to their economies. GH2 cairocenter can help African nations to develop policies, attract investment, and build expertise that ensures the benefits associated with it.

By fostering knowledge-sharing and innovation, the GH2 Cairo Center is poised to position Africa as a global leader in green hydrogen production and export, ensuring long-term economic and environmental benefits for the continent.

Some interesting insights on the context:

Egypt's role in Africa's green hydrogen leadership: Egypt's ambitious push into green hydrogen places it at the forefront of Africa's clean energy transformation. Whereas south Africa, Namibia, and Morocco are also advancing in their hydrogen projects. The geographical

advantage and infrastructure readiness of Egypt give it a competitive edge. Likewise, the Suez canal economic zone is rapidly emerging as a hydrogen export hub, linking Africa to Europe and Asia.

With the Europe's Repower EU plan aiming to import 10 million tonnes of green hydrogen 2030, Egypt stands as a key supplier. In the recent times, the EU-Egypt agreements emphasize the growing cooperation in energy security as the continent seeks alternatives to Russian fossil fuels.

Key takeaways:

There were solid hurdles on the path of Egypt in working towards their ambition, innovation and strategic partnerships and in their path of unlocking a sustainable hydrogen future. The bold policy incentives, international funding, and private-sector engagement, the country is laying the foundation for a thriving hydrogen economy. However, global investments, carbon credits, concessional loans and other aspects are favouring Egypt in turning obstacles into opportunities. Therefore the road ahead is challenging, but with stronger financial mechanisms and global cooperation, the country has the potential to not only overcome its hurdles but to lead the hydrogen revolution in the MENA region. The question is if Egypt will succeed and emerge as a powerhouse in the green hydrogen race.

Covestro Presents Forward-Looking Solutions for the Coatings and Adhesives Industry at European Coatings Show 2025

- **Covestro as an inventive partner for hands-on coatings and adhesives solutions**
- **Automated laboratory and digital lifecycle analyses**
- **Direct coating for automotive industry**
- **Focus on sustainability and circular economy**

Covestro, one of the world's leading manufacturers of high-quality polymer materials and their components, presents its comprehensive portfolio of innovative and sustainable solutions for the coatings and adhesives industry at the European Coatings Show (ECS) 2025 from March 25-27 in Nuremberg. Under the motto "Your Inventive Partner for Hands-On Coatings and Adhesives Solutions," the company will in Hall 4A, Booth 438, showcase developments that support customers to master tomorrow's challenges with a mix of ingenuity and direct applicability.

Special focus is placed on technologies that increase productivity while promoting circular economy. These include an automated laboratory for formulation development, material screening, and polymer analytics; an innovative Direct Coating process for the automotive industry, and a TÜV-certified, cloud-based solution for product-specific lifecycle analyses (LCA).

"Our customers' and partners' challenges are becoming increasingly complex. Be it accelerated development cycles, ever-higher product requirements, or circularity and recyclability. We offer innovative solutions that not only convince technologically but also make an important contribution to greater sustainability," explains Martin Merkens, Head of Sales & Market Development EMLA in Covestro's Coatings and Adhesives business entity. "At ECS 2025, we demonstrate how we make customers and partners successful and can accompany them every step of the way. We look forward to personal meetings and discussions!"

Automated Laboratory Revolutionizes Application Development

At ECS, the company will announce an automated laboratory for optimizing formulations with Covestro's binders and crosslinkers for coatings and adhesives. With this, Covestro sets new

standards in the productivity of its application development. The new facility can operate 24 hours a day, 7 days a week. The goal is to conduct tens of thousands of tests annually. This sets a new benchmark in terms of quantity, variety, precision, and testing speed. Another advantage: The automated laboratory generates a large amount of structured data. The knowledge about formulation possibilities and influencing factors thus will grow rapidly. The collected data, combined with measurement data from existing trials, is evaluated using special machine learning algorithms to further improve formulations. Application development experts and specialists from segments such as automotive, printing & packaging, or construction & architecture will be present at ECS to discuss new collaborative approaches now made possible by the laboratory.

Digitalized Lifecycle Analyses for Greater Transparency

As a pioneer in the digital transformation of the chemical industry, Covestro announced in January the use of a new cloud-based solution for product-specific lifecycle analyses (LCA). The TÜV Rheinland-certified software solution not only enables significantly faster and more precise calculation of a products' environmental footprint but also identifies concrete approaches to reducing the CO2 footprint, thus supporting Covestro's customers in their sustainable transformation.

Direct Coating: Solutions for the Automotive Industry

With the innovative Direct Coating technology, Covestro presents a pioneering solution for the automotive industry that fundamentally simplifies the coating process while making it more sustainable. This technology enables direct coating of plastic components in the injection molding machine without pretreatment or separate painting and drying. At ECS, Covestro will display products that were manufactured using this process.

Focus on Sustainability

Covestro aims to fully align itself with the circular economy. This includes

using alternative raw materials, transitioning to green energy, and developing recycling technologies and recyclable products. To make sustainable products more easily identifiable, the company has introduced the "CQ" label, which stands for "Circular Intelligence." Products labeled this way contain at least 25% alternative raw materials. Several examples used in coatings and adhesives will be exhibited at ECS. For example, food packaging coated with fully recyclable, partially bio-based resins, or water-based polyurethane dispersions for textile printing.

Source : Covestro

Hubergroup Chemicals Presents Bio-Based UV Oligomers At The European Coatings Show 2025

Hubergroup Chemicals, specialist for resins and chemicals used in the coatings industry, is set to unveil its latest innovation at this year's European Coatings Show: sustainable, bio-based UV oligomers for advanced coatings. These groundbreaking resins, designed for wood and plastic surfaces, offer excellent reactivity and stain resistance while containing an impressive 50% bio-based carbon.

The use of monomer acrylates is facing increasing regulatory restrictions, while demand for sustainable, bio-based raw materials in the paints and coatings industry continues to grow, as demonstrated by companies like IKEA. In response, hubergroup is utilizing sugar alcohols such as sorbitol and xylitol as building blocks. These materials are not only readily available in large quantities but also offer advantages over traditional bio-based polyols due to their high functionality and rigidity. This enables the development of high-performance coatings that meet modern sustainability requirements. Justus Back, Innovation Manager at hubergroup, will present this advancement in his talk, **"Sugar Alcohol Building Blocks for Sustainable and Regulatory-Compliant UV Oligomers with a Superior Bio-Based Carbon Content" at the European Coatings Show on March 24, 2025, in Nuremberg. Justus Back has been with hubergroup since 2017 and assumed the role of Innovation Manager in 2024. He studied chemistry and physical chemistry at the University of Regensburg and later worked as a research associate at the University of Stuttgart.**

Source : Indian Chemical News

LANXESS presented its sustainable aroma chemicals portfolio at FAFAI International Convention and Expo 2025

- **Sustainable high-purity and nature-identical aroma ingredients**

- **Introduction of new Kalama® benzyl benzoate Ultrapure grades with reduced carbon footprint**

New Delhi, 6 March, 2025 – Specialty chemicals company LANXESS presented its comprehensive portfolio of flavor and fragrance applications at XXVI FAFAI International Convention & Expo on March 6 and 7 in New Delhi. The Flavors & Fragrances (F&F) business unit showcased its finest aroma chemicals range in Hall 2, booth no: F3-2.

At the exhibition, LANXESS displayed its new grades of Kalama® benzyl benzoate, including the Ultrapure Scopeblue® variant, which is ISCC PLUS certified and offers a reduced carbon footprint. In addition, the business unit exhibited a wide range of aroma ingredients, including Kalama® Florosol, a rich lily-of-the-valley note with rose and lilac nuances, ideal for fine fragrances, personal care & home applications. Another highlight was Kalama® Azuril, a powerful, citrus-ozone-linen fragrance that provides long-lasting freshness across floral, citrus, and marine compositions. Visitors had the opportunity to sample selected aroma chemicals at the LANXESS booth.

Benzyl benzoate in various quality grades

Benzyl benzoate grades from LANXESS are used in various applications from flavors and fragrances to pharmaceuticals and textiles. Their high molecular weight and nearly odorless nature make them the fixative of choice.

LANXESS offers different quality grades. This makes it possible to select the most suitable option for specific applications. "Regular" grade is appropriate for industrial applications, "Performance" when a standard odor profile is required and "Ultrapure" for applications where an excellent odor profile and a very high purity are desired.

The new Ultrapure grade takes olfactory performance, purity and sustainability to the next level. It is the benzyl benzoate of choice for products like deodorants, candles and as a solvent for fragrances such as artificial musk. This can reduce costs, as it is not necessary to mask the typical sweet balsamic note of benzyl benzoate. The "Ultrapure Scopeblue®" variant will be showcased for the first time and is the particularly sustainable version of the Ultrapure grade, based on renewable mass balance feedstock (ISCC PLUS certified) and reduced product carbon footprint.

Focus on Sustainability

LANXESS is committed to support its customers in achieving their sustainability goals – whether in the manufacturing process or in the end consumer products themselves. The company offers sustainable alternatives based on renewable raw materials and renewable energies for each of its aroma chemicals. With our Scopeblue® label and the introduction of ISCC PLUS-certified products based on the mass balance approach, we are responding to the demand for gentle, effective, and environmentally friendly fragrances, aroma chemicals and preservatives for the cosmetics and perfumery industry.

LANXESS uses the Scopeblue® label to identify its own products that enable climate-friendly solutions and contribute to the circular economy. They are either based on more than 50 percent sustainable raw materials, or their CO2 footprint is less than half that of conventional products. They are classified according to the mass balance approach and are chemically identical.

24 nature-identical Aroma Chemicals

The LANXESS Flavors & Fragrances business unit is one of the world's leading suppliers of high-purity, nature-identical aroma chemicals. Divided into the four classes Floral, Earthy, Spicy and Fruity, its aroma chemicals provide the olfactory appeal that plays a central role in fine fragrances, personal care, home care, food & beverage and animal feed. In addition to environmentally friendly aroma chemicals, LANXESS also offers sustainably produced benzyl alcohol, which is used as an aromatic coalescing agent, solvent, preservative, and fixative.

From its strategically located production sites in India, USA and Europe, LANXESS serves customers around the world – setting the highest standards for safety, quality, responsibility, and sustainability. Thanks to this unique and secure supply network, products can be sourced locally almost anywhere in the world.

LANXESS is truly committed to the growth and development of the Indian flavors and fragrances industry. The company's manufacturing site in Nagda

ensures a reliable local supply of high-purity aroma chemicals to its customers in the Indian market while maintaining global quality standards.

Speaking at the event, Anand Karaka, Senior Sales Director, Head of Sales APAC - Business Unit Flavors & Fragrances, LANXESS India, said, "We are delighted to participate once again in the FAFAI International Convention & Expo. At LANXESS, we prioritize sustainability and innovation in the development of our products. By combining our technical and regulatory expertise with environmentally responsible solutions, we strive to provide the industry with high-performance and sustainable formulations. FAFAI 2025 presented an excellent opportunity for us to engage with our customers and showcase our latest advancements in aroma chemicals and fragrance solutions."

Source : Lanxess

Agilyx Launches Plastyx Ltd. to Source and Supply Feedstock for the European Advanced Plastic Recycling Industry

OSLO, Norway, March 24, 2025 / PRNewswire/ -- Agilyx ASA (OSE: AGLX) (OTCQX: AGXXF) ("Agilyx" or "the company") announces the launch of Plastyx Ltd. in collaboration with Carlos Monreal. Plastyx aims to be Europe's leading feedstock supplier to the advanced plastic recycling market. Plastyx Ltd. is a 60:40 joint venture between Agilyx and Circular Resources SARL. Mr. Monreal will serve as Chairman.

While advanced plastic recycling technologies are scaling industrially and complementing mechanical recycling, the industry's growth remains constrained by the availability of consistent, high-quality feedstock. Plastyx is designed to bridge this gap by developing partnerships and material processing capabilities to ensure a reliable supply of high-quality polymers for food-grade and other high-performance packaging applications. The company's near-term objective is to source and execute MOUs for 200,000 metric tons of waste plastic by the end of 2025.

"I am excited to start this new phase. After developing advanced recycling facilities as chairman and CEO of Plastic Energy and investing in recycling collection programs through my investment in GreenDot, the natural, next step is to focus on feedstock sourcing. Partnering with Agilyx provides a unique opportunity to scale our joint vision," said Carlos Monreal.

"Agilyx is committed to building an international sourcing platform to support our interests in Cyclyx," added Ranjeet Bhatia, Chief Executive Officer of Agilyx. "Carlos is a leader in our field and has unparalleled understanding of the advanced recycling industry. By linking Cyclyx's industry-leading feedstock management capabilities with Plastyx, through Agilyx's shared ownership interest, we are launching an exciting first mover in this critical market segment."

Source : PRNewswire

Clariant Climate Campaign winner GNFC cuts 44,000 tons/month CO2e emissions with EnviCat N2O removal catalyst

Gujarat Narmada Valley Fertilizers & Chemicals Limited (GNFC) implemented Clariant's EnviCat N2O-S catalyst for nitrous oxide (N2O) abatement

The catalyst installation at GNFC's nitric acid plant in Gujarat demonstrates exceptional performance, reducing N2O emissions by 44,000 tons per month of CO2e

EnviCat N2O-S, a well-established, drop-in solution capable of removing more than 95% of N2O from the off-gas of nitric acid plants proves highly efficient

MUNICH, March 25, 2025 - Clariant, a sustainability-focused specialty chemical company, today announced remarkable results from its Climate Campaign for nitrous oxide abatement at Gujarat Narmada Valley Fertilizers &

Chemicals Limited's (GNFC) facility in Gujarat, India. The installation of Clariant's EnviCat N2O-S catalyst has shown outstanding performance since October 2024, with monitoring data demonstrating significant reduction in N2O emissions equivalent to 44,000 t/ month CO2eq.

Xaver Karsunke, Head of Specialty Catalysts at Clariant, commented, "Our partnership with GNFC, a pioneering force in India's fertilizer and chemical industry, marks a significant milestone in industrial decarbonization efforts. The exceptional performance of EnviCat N2O-S at GNFC's facility demonstrates how our sustainable catalyst solutions can help industry leaders achieve substantial greenhouse gas reductions."

Mr. M. I. Shamsi, Executive Director, Gujarat Narmada Valley Fertilizers & Chemicals Limited, stated, "As a company committed to environmental stewardship since our establishment in 1976, this collaboration with Clariant aligns perfectly with our sustainability goals. The impressive performance of the N2O abatement system not only showcases our dedication to reducing environmental impact but also strengthens our position as an industry leader in sustainable chemical manufacturing."

The implementation at GNFC's facility has demonstrated strong and consistent performance in CO2e reduction. Based on the initial four months of operation, the projected annual CO2e reduction is expected to reach approx. 520,000 metric tons, with further improvements anticipated following a planned catalyst addition during the next maintenance shutdown.

Prakash Babu, CEO of Süd-Chemie India Pvt Ltd (SCIL), added, "We are delighted to see such encouraging results at GNFC's facility. The successful implementation of EnviCat N2O-S and its remarkable performance in reducing CO2e emissions reinforces our commitment to providing high-quality products, services, and innovative solutions that support India's fertilizer and chemical manufacturers in achieving their sustainability goals. This project exemplifies the significant impact our technologies can have in industrial decarbonization."

While nitric acid is essential for manufacturing fertilizers, its production process emits N2O, which is almost 300 times more harmful to the climate than CO2. The EnviCat N2O catalyst series effectively removes N2O and other nitrogen oxides, designed as a drop-in solution that can be easily installed without disrupting manufacturing processes. With over 50 successful installations globally and 20 years of market presence, EnviCat N2O continues to demonstrate its effectiveness in industrial applications.

Clariant initiated the Climate Campaign to offer producers an economical way to reduce emissions and inspire them to transition towards climate neutrality. From November 2021 to March 2022, winners were selected to receive a complimentary load of the EnviCat N2O-S catalyst. All selected companies had no existing N2O abatement systems in place, representing a significant opportunity for reducing greenhouse gas emissions in the nitric acid production sector.

Source : Press Release

How Chinas RudongEVx Battery is Transforming Electric Vehicle Charging Solutions

Vinodhini Harish

Introduction:

The global shift to electric transportation is not as simple as it may sound, there are several critical challenges on that road, ensuring efficiency, sustainable charging infrastructure, and so on. To address these issues, China has partnered with a Swiss energy storage company named Energy Vault to develop a revolutionary gravity-based energy storage system. This cutting-edge technology, featuring massive concrete block batteries as large as buildings, could be a transformative solution for the growing demand for electric vehicle charging and grid stability. Do you know that China leads the EV market producing over 60% of global car sales up from 14% in 2022? China is certainly up against strong competition in the sector. Thus in this article, we have explored China's gravity battery project, RudongEVx, which is the world's first large-scale commercial

implementation of this technology. We have taken a deep dive to help the readers understand how the country is reshaping the future of sustainable energy! Let's begin.

China is constructing a battery as large as a building A revolutionary method for recharging electric vehicles.

RudongEVx Battery: integrating into China's electric grid. The first successful implementation of this technology is the RudongEVx project, located in eastern China. Completed in December 2023, this massive battery system has a capacity of 100mWh and is already integrated into the Chinese electric grid, delivering clean, reliable electricity to the region. With this pioneering technology, China is not just contributing to the future of electric mobility but also solidifying its role as a leader in energy sustainability. As the world looks to decarbonize and shift to green energy, the gravity energy storage solution could be the key to making that vision a reality.

In the race to reduce greenhouse gas emissions and combat climate change, china's investment in these giant, building-sized batteries could provide a much-needed solution. If the project proves successful, it might inspire other nations to adopt similar technologies, advancing the global transition toward a more sustainable and efficient future.

The technology behind the gravity battery:

China's rapid advancements in renewable energy and electric vehicle infrastructure have positioned it as a global leader in sustainable technology. RudongEVx is one such groundbreaking project since it is the country's first large-scale gravity energy storage battery.

The RudongEVx project operates on gravity-based energy storage, which is considered a revolutionary approach that was developed by Energy Vault. The system stores energy by using surplus electricity from renewable sources such as wind, and solar to lift massive concrete blocks. There are multiple advantages to this system over conventional battery storage.

For instance, lithium-ion batteries degrade over time and require rare earth materials to construct them. Whereas gravity batteries use durable and easily sourced materials such as concrete thereby reducing environmental impact.

The gravity-based energy storage has good grid stability, as it efficiently manages power fluctuations and thus the system ensures a steady supply of electricity. Now this factor is crucial for integrating intermittent renewable energy sources.

The modular nature of the technology allows easy expansion, making it ideal for large-scale energy storage.

Why RudongEVx is a game-changer?

The integration of the RudongEVx into China's national grid represents a significant milestone in the country's commitment to clean energy. The project is one of the world's first gravity energy storage systems that has been deployed at a commercial scale.

China has been aggressively expanding its renewable energy capacity and intermittency of solar power and wind power has been one of their significant challenges. The traditional battery storage solutions help but there are limitations such as limited lifespan, high costs, and environmental concerns. The RudongEVx offers an efficient, long-lasting alternative that ensures a continuous power supply even when renewable energy generation fluctuates.

The RudongEVx project is more than just a technological innovation as it represents a strategic move toward a more resilient and sustainable energy grid. By leveraging gravity-based energy storage, China is demonstrating its ability to tackle one of the biggest challenges in the clean energy transition.

China's First large scale gravity battery, a revolutionary step up:

The market is loaded with conventional energy storage solutions and they rely on chemical batteries or pumped hydroelectric storage, unlike these the energy vault's energy storage uses giant concrete blocks to store and release electricity. This process mimics the function of hydroelectric dams but without the need for water reservoirs or specific geographical conditions. The system lifts heavy blocks using renewable energy sources such as wind or solar when the electricity demand is low and releases stored energy by lowering these blocks when the demand surges.

Due to advanced technology and immense size, the battery can store vast amounts of energy, ensuring reliable power availability. The system can quickly respond to fluctuating energy demands, thereby improving grid

stability.

Unlike chemical batteries that degrade over time and rely on scarce materials, such as lithium and cobalt, gravity batteries offer a more sustainable and long-term storage solution.

This innovative solution aligns with China's broader ambitions that lead to green energy technology. If this technology is established successfully, the gravity energy storage system could set a precedent for other nations seeking large-scale energy storage alternatives to support EV infrastructure and renewable energy integration.

Final thoughts:

China's RudongEVx gravity battery marks a significant leap toward sustainable energy storage and EV infrastructure. By eliminating reliance on scarce materials such as lithium and cobalt, this innovative system provides long-lasting, cost-effective and environmentally friendly energy storage. The success of gravity-based energy storage could become a global precedent and therefore present it as a model for other nations to adopt scalable and sustainable energy solutions. The world is moving towards electrification and other renewable integration, and China's commitment to cutting-edge energy innovations positions it as a leader in the clean energy revolution.

Freen OUS 10KWH Sodium-Ion Home Battery A Game Changer for Renewable Energy Storage

Vinodhini Harish

Introduction:

The transition to renewable energy has been hindered by energy storage limitations and does that mean solar panels are just expensive sun catchers? Jokes aside. The innovations in the battery technology are reshaping the landscape. Estonian renewable energy company Freen OU is taking a bold step forward with its newly launched 10kWh sodium-ion home battery- a sustainable alternative to lithium-ion storage. While lithium ion bas dominated the market for years, sodium-ion technology is emerging as a cost-effective, safer, and more environmentally friendly solution. However the challenges such as energy density, supply chain constraints, and production scalability remains. Thus we have explored the recent advancements in this article. Can Freen OU's sodium-ion home battery pave way for widespread adoption and disrupt the existing energy storage market? Please read the article to explore the context!

Estonian renewable energy company Freen OU has launched a 10kWh Sodium-ion home battery designed for use with solar panels and small wind turbines. This system offers a safe, sustainable and efficient way for home owners to store and use renewable energy. Sodium-ion home batteries are not yet widely available in the market due to several factors such as technological limitations, production challenges, cost concerns and supply chain constraints. Whereas lithium ion batteries have been in mass production for decades and sodium ion technology is still in its early stages.

Consider these instances:

- Home energy storage solutions demand compact designs, however the sodium-ion batteries generally have a lower energy density than lithium-ion batteries and this makes them bulkier for the same storage capacity.

- Sodium-ion batteries can reach 4000+ cycles and researchers are still working on improving their longevity, efficiency and performance stability over time.

- Lithium-ion industry has a well-established global supply chain and manufacturing ecosystem, but sodium-ion technology is still catching up. There are a few significant challenges, like, sodium is abundant, the key materials such as hard carbon for anodes and specialized cathode materials such as Prussian white and layered oxides are still in the early stages of large-scale production.

- Only a handful of companies such as CATL, Faradion, Natron Energy and HiNa Battery have developed sodium-ion technologies, however their focus has mostly been on smaller-scale applications such as grid-storage, e-bikes, industrial power backups, but they have not tried working on developing home batteries.

- Manufacturing processes still rely on lithium-ion infrastructure, but they require different materials and modifications and this leads to higher production costs.

- Lithium-ion batteries benefit from mass production as they are utilized in EVs, consumer electronics, energy storage. However the sodium-ion production is still limited and the costs are higher.

- There are some supply chain inefficiencies because of higher procurement and processing costs.

- Despite all these challenges, Freen OU has developed 10kWh sodium-ion home energy storage system:

Freen OU has developed a 10kWh sodium-ion home energy storage system and designed it with some desirable features such as storage and efficient energy management for residential usage. The system is specifically designed for residential usage and integrate renewable energy sources such as solar panels, wind turbines into electricity supply. This ensures energy independence by storing excess power when there is higher demand for energy and reducing reliance on traditional power grids.

The storage system is optimized to work effortlessly with solar panels and small wind turbines. Since there is higher demand for electricity during night time and during cloudy conditions, the system is designed to store surplus power for night and cloudy conditions. Similarly, wind turbines generate electricity when the wind is strong and storage system ensures a steady flow of power when the wind stops blowing. This hybrid approach enables reliable and sustainable energy solution.

The battery features with excellent characteristics such as non-toxic, non-flammable nature and stability. the lithium batteries can be hazardous or flammable, but the sodium-ion batteries are safer and more environmentally friendly as they don't impose risk of catching fire or toxic chemicals leaking. Therefore, they are ideal ones for residential usage.

The battery operates at rated voltage of 48V and the operating range between 40V and 60V. the voltage range ensures compatibility with various inverters and electrical systems.

The depth of discharge is 90% and this term refers to how much the battery's stored energy can be used before recharging. A 90% DOD means that almost the entire battery capacity can be utilized with maximized efficiency.

The battery is built for longevity, and capable of enduring more than 4000 charging and discharging cycles. This translates to a lifespan of over 10 years under normal use. This development aligns with the growing interest in alternatives to lithium-ion batteries which face supply chain constraints and environmental concerns. Sodium-ion technology is attracting increasing interest in the recent times due to its potential advantages, such as lower costs, improved safety and battery sustainability compared to lithium based solutions.

Integration of major inverter brands benefits energy storage sector:

Freen OU 10kWh sodium-ion home energy system integrates with widely used inverters from SMA, Sungrow, Growatt, Deye and Goodwe. This collaboration brings in several benefits to the energy storage sector as the home owners and businesses are able to efficiently install sodium-ion batteries into existing solar setups, without replacing inverters.

The systems can be easily updated and this encourage early adoption of sodium-ion technologies, expanding market penetration.
Users can eliminate additional inverter purchases and thereby reduce the overall costs for transitioning to sodium-ion storage. This also encourages competition between lithium-ion and sodium-ion solutions, potentially lowering the battery prices.

Seamless integration supports smart energy management in homes and small businesses. Compatible systems help in improving grid stability and enabling distributed energy storage.

The inverter brands also gets benefited from a broader consumer base due to compatability with new energy storage solutions and installers can offer more battery options, fostering innovation and increased adoption.

Broadening of opportunities:

Consumers are presented with an opportunity with shift toward non-lithium batteries, greater compatibility encourages further R&D in sodium-ion and alternative chemistries.

There has been a sustainable energy growth, recyclable and non-toxic batteries such as sodium-ion improve the environmental footprint of battery storage.

Energy independence shall be obtained. Diversified storage options reduce the dependence on lithium supply chains which generally faces geopolitical and mining challenges.

Overall, the integration with existing inverters and predominant market players helps in removing significant entry barrier for sodim-ion batteries and thereby making them a viable alternative to lithium-ion in the residential energy storage market.

How well does this technology stand against lithium-ion home storage solutions?

Well, it all begins with the material costs. Sodium carbonate is the key raw material required for sodium-ion batteries that costs around $290 per metric ton, whereas battery-grade lithium carbonate is significantly expensive and comes approximately $35,000 per metric ton. This cost difference makes sodium-ion batteries more attractive in the cost-sensitive applications and in overall market.

Another important aspect is comparison of performance. Sodium-ion batteries have specific energy of 120-190Wh/kg which is comparable to lithium iron phosphate(LFP) batteries that are used in many EVs and energy storage applications. They also perform better in lower temperatures that retains over 90% of their capacity at -20 degrees Celsius, compared to lithium-ion batteries, which retain about 70% at the same temperature. Additionally, sodium-ion batteries offer a longer cycle life, with potential ranges from 2000 to 6000 cycles.

Above all these aspects, sodium-ion batteries are adopted for their sustainability. For instance, Sodium is abundant and can be extracted from sea water and thereby making the entire raw material obtaining process environmentally friendly. Moreover the lower costs of the raw materials means sodium-ion battery packs are expected to become even more affordable as production scales up. The challenges remain the same, especially with the energy density and commercial-scale production.

While sodium-ion batteries may not replace lithium-ion batteries any time sooner, in higher performance applications, nevertheless, they are well-suited for stationary storage, industrial vehicles, and other applications where cost and sustainability are the key factors. In this technology and sector, specific further developments such as anode-free sodium metal batteries could enhance their competitiveness in the future.

The recent launch by Freen OU, a 10kWh sodium-ion home energy storage system, designed to integrate with solar panels and wind turbines. The battery features a Battery Management system for uninterrupted power supply with depth of discharge of 90% and is rated for 4000+ charge and discharge cycles. The system operates

How home energy storage systems are evolving?

Although in recent times, several technologies and advancements have arrived, that includes advancement in battery technology, smart energy management, and growing demand for renewable energy integration.

For instance, lithium-ion dominance has been there always in the sector, as these batteries are preferred due to higher energy density, long lifespan, and fast charging. The advent of next-gen batteries such as solid-state batteries, sodium-ion batteries, and lithium sulfur batteries offer greater safety, longevity, and sustainability.

The used EV batteries are repurposed for stationary storage and reducing waste and costs.

The integration of renewable energy with the battery systems have upgraded the sector. For instance, home owners are now able to pair batteries with solar panels to maximize self-consumption and reduce reliance on the grid. Small wind turbines with battery storage are becoming viable options for rural and off-grid homes.

Similar advancements and how they are also economical?

CATL's sodium-ion battery for home and industrial storage:

Chinese battery giant CATL developed commercial sodium-ion batteries as a low-cost alternatives to lithium-ion. The sodium-ion batteries use abundant raw materials making them cheaper, safer and better suited for stationary storage.

In 2023, the company deployed Na-ion batteries in China's grid and home energy storage systems thereby demonstrating their viability.

The potential to reduce battery costs by 30-50% compared to lithium-ion makes them attractive for developing nations and off-grid applications.

OXIS energy's lithium-sulfur batter for sustainable storage:

OXIS energy is an UK based company that has developed lithium-sulfur batteries, which offers 5x the energy density of lithium-ion. The advancement in Li-S batteries use sulfur reduces the reliance on expensive raw materials such as cobalt and nickel.

The company has conducted trials for aerospace, defense, grid energy storage and thereby demonstrating high energy density but challenges in cycle life.

Future outlook:

Sodium-ion batteries are still in their early stages of adoption, nevertheless their potential for long-term cost savings and sustainability can't be overlooked. The research on this context progresses and production scales up, we may witness a shift in the energy storage market, thereby offering consumers more choices beyond lithium-ion technology. Freen OU's 10kWh sodium-ion home battery represents a significant step towards sustainable and decentralized energy solutions. Furthermore, the integration with solar panels and wind turbines the storage system enhances energy independence,

affordability, and safety thereby reducing reliance on lithium-ion technology. Overall, in the recent times, with the continuous improvements and increasing industry interest, sodium-ion batteries could soon become a mainstream option for home energy storage. Innovations in the materials, and manufacturing will further bridge the gap between sodium-ion and lithium-ion solutions, driving the clean energy transition forward.

Rosnefts Dilemma and Global Energy Ripple Effects Selling Key Assets in the Face of Western Economic Pressure

Vinodhini Harish

Introduction:

Sanctions don't just hurt governments- they reshape entire global markets. That's a big true statement there! Rosneft is Russia's largest oil producer and finds itself at the center of a worldwide geopolitical and economic storm. With Western sanctions tightening around Russia's energy sector following the 2022 invasion of Ukraine, Rosneft faces significant operational and financial hurdles. In this article. We have explored the recent sanctions and restrictions imposed by the US and EU on other countries. As nations like India and China adjust to shifting oil supply dynamics, and Western allies continue their efforts to curb Russia's economic influence, the future of Rosneft remains uncertain with far-reaching consequences for the global oil trade. Please take time for this quick read as we have explored how effective these Western sanctions on Russian oil are and the unintended consequences such as rising global energy prices.

The big news: Rosneft's struggle under sanctions and its global impact

Rosneft is Russia's largest oil producer and a key player in the global energy market. The company is majority-owned by the Russian government and has been significantly affected by Western sanctions. Due to that Rosneft decided to sell its stake in a major energy project, which has secured global attention due to its implications for Russia's economy, international energy markets, and geopolitical dynamics.

Rosneft's decision to sell the key assets is not just an isolated business strategy, but it also reflects the growing economic and operational struggles that are caused due to Western sanctions. The combination of restricted financial assets, technological challenges, and price caps has made it more difficult for the company to sustain their operations.

If Rosneft is exiting key projects, then it could be a sign that it is losing its competitive edge on the international edge.

The United States and European Union have imposed sanctions after Russia invaded Ukraine in 2022 and this has affected Rosneft significantly and created financial difficulties. These sanctions have restricted Rosneft's access to Western financial markets, technology, and equipment making it harder for the company to operate internationally. Some of the key measures such as:

Banking restrictions: The US and EU have banned Russian banks from using SWIFT (Society for Worldwide Interbank Financial Telecommunication) which is a secure messaging system that banks worldwide use to send and receive payment instructions. It also allows banks in different countries to transfer money efficiently. The banning of SWIFT made it difficult for Rosneft to receive or send international payments. Therefore Rosneft struggles to get paid by international buyers and cannot easily pay for imports such as oil extraction equipment or services. If an Indian oil company buys oil from Rosneft, it cannot easily transfer the payment through regular banking channels.

Asset freezes and trade bans: several Western countries froze Russian assets, meaning Russian companies and individuals cannot access their money or properties held in Western banks or institutions. Several countries such as the US, EU, UK and Japan banned the imports of Russian crude oil and refined products such as gasoline, diesel and jet

fuel. Rosneft's earnings abroad are blocked, and this has made it difficult for the company to reinvest in new projects. On the other hand, there are only fewer buyers for Russian oil which means Rosneft must sell its oil to limited markets, often at lower prices.

Technology restrictions: the US and EU banned exports of advanced oil drilling and refining technologies to Russia. This includes usage of specialized equipment for deep-sea drilling, shale oil extraction and arctic oil exploration. Now, this is another significant obstacle, as Russia relies on Western technology for efficient oil production. Without these technologies, Rosneft faces higher costs and lower production efficiency over time. Some Russian oil reserves such as Arctic and shale oil cannot be developed without Western expertise. For instance, Russia's Arctic oil projects are delayed or cancelled because it cannot get the necessary drilling equipment.

Price cap on Russian oil($60 per barrel)

Countries like the US, UK, Canada, Germany, France, Italy, Japan and the EU set a limit of $60 per barrel on Russian crude oil. If any country wants to buy Russian oil above $60 per barrel, it cannot use Western shipping companies, insurance or financial services.

Most oil is transported by Western-owned ships and insured by European and US firms so the countries must follow the cap to avoid penalties. Russia must sell oil at discounted prices to countries such as India and China. Rosneft earns very little commission compared to other oil producers selling at the market rates. For instance, if global oil prices rise to $80 per barrel, Rosneft can still only sell at $60 or less, reducing its profits.

Overall these sanctions: struggles to receive international payments, sell oil at competitive prices, buy advanced equipment for production, and access to its profits held in foreign banks have made it difficult for Rosneft and therefore they are considering selling its stake in Nayara Energy, as it struggles to operate under these restrictions.

How other countries are reacting to the latest US sanctions on Russian oil exports in varied ways: India nd China: Both India and China are major buyers of Russian crude and therefore they are also facing potential supply disruptions. These sanctions target Russian oil producers, and 183 tankers and affect shipments to these nations. This may force them to seek alternative oil sources, even leading to higher prices and increased freight costs. Indian refiners are considering boosting imports from the Middle East and the US.

India bought 1.764 million bpd of Russian oil from January to November last year which is 4.5% more than the previous year. This has made up 36% of India's total oil imports.

China has imported 2.159 million bpd which is 99.09 million metric tonnes of Russian oil, which was 2% more than before. Russian oil accounted for 20% of China's total oil imports.

If the sanctions continue to strictly apply, then Russia may not be able to export ESPO Blend crude at all, and this will cause India and China to buy more oil from the Middle East, Africa and the US instead. This shift is already making oil from these regions more expensive.

Recently, an Indian oil official said they have no choice but to buy more oil from the Middle East. They might also start buying more oil from the US.

Russia: Moscow is expected to lower their oil prices below $60 per barrel to continue accessing Western insurance and shipping services. This will help maintain exports despite restrictions. The sanctions affect 143 ships that carried a huge amount of Russian oil last year which is over 530 million barrels. This is almost half 42% of all the oil Russia sells by sea. Out of this, about 300 million barrels went to China, and most of the rest was sent to India.

A trader in Singapore said that Russian ships delivered about 900,000 barrels of oil per day to China last year. Nevertheless, due to sanctions, this trade could drop significantly.

Middle Eastern and African oil producers: As India and China seek alternative suppliers, these regions are likely to benefit from higher demand and potentially boost their revenues.

US and Western allies: The sanctions are part of more expansive efforts to cut Russia's revenue streams that fund its war in Ukraine. By disrupting Russia's trade routes, western nations aim to limit Moscow's economic resilience.

Global market impact: Brent crude prices have already risen above $81 per barrel in response to these sanctions signalling tighter global supply.

Final Thoughts:

Rosneft is Russia's largest oil producer and is being forced to retreat, it raises a crucial question: Can Russia's energy sector survive long-term isolation from the Western financial and technological ecosystem? The sanctions imposed by the US and EU have left the company in a precarious position, limiting its ability to access financial markets, technology, and international buyers. While Russia attempts to navigate these restrictions by offering discounted oil to nations like India and China, the long-term sustainability of such a strategy remains questionable. The future will determine whether Russia can sustain its energy dominance or if these sanctions will permanently shift the balance of power in the global oil industry.

Dahsheng Chemical Celebrates 80th Anniversary with the Launch of DURAPONTEX® eN35, a Revolutionary Supercritical Fluid Foaming Insole

PORTLAND, Ore., March 27, 2025 / PRNewswire/ -- Dahsheng Chemical (DSC®), a global leader in performance foam manufacturing, marks its 80th anniversary with the debut of its latest insole innovation: DURAPONTEX® eN35. Utilizing DSC's advanced supercritical fluid foaming technique, the cutting-edge DURAPONTEX® eN35 is engineered to withstand the demands of high-impact and jump-dominant sports while delivering ultra-lightweight performance. With the launch of DURAPONTEX® eN35, DSC continues its 80-year legacy of innovation, pushing the boundaries of material science to redefine what's possible in athletic footwear.

"We designed the DURAPONTEX® eN35 for the athlete who demands high-energy return in a lightweight package," said Fennie Wei, COO of Dahsheng Chemical (DSC®). "By leveraging our own proprietary DURAPONTEX® N-Series supercritical fluid foaming technology and specialized formulation, the DURAPONTEX® eN35 exhibits a significant advancement in lightweight technology. This new material offers powerful energy rebound, yet in an even lighter form, which the elite athlete craves."

DSC was the first brand to utilize supercritical fluid foaming technology in the development of an insole at scale with its DURAPONTEX® N-Series. Supercritical fluid foaming has revolutionized performance footwear, offering superior energy return, lightweight comfort, and durability. Through rigorous testing and precision engineering, DSC has optimized its supercritical fluid foaming technique to deliver an insole that provides a balance of resilience, responsiveness, and comfort—setting a new benchmark in performance footwear. DSC's supercritical fluid foaming process has redefined what performance and support underfoot feels like, and is one of the most sought-after technologies for the elite athlete.

DURAPONTEX® N-Series is DSC's specialized closed-cell foam compound, crafted with DSC's unique supercritical fluid foaming technology, infused with carbon dioxide (CO2) or nitrogen (N2). The sophisticated process requires consistent high temperature and pressure control. Carbon dioxide or nitrogen gas emissions are infused, leading to an innovative transformation. As a result, a soft foam cell is made with evenly spaced microscopic bubbles and air pockets, creating an ultra-lightweight insole that delivers unparalleled resiliency and responsiveness.

As part of the DURAPONTEX® N-Series, DURAPONTEX® eN35 is designed to deliver resiliency and rebound for high-impact and jump-dominant sports including basketball, volleyball, and tennis, among others. DURAPONTEX® eN35 is ultra-lightweight with a low-density performance and 100% recyclable foam. The high-rebound insole is designed to adapt to a wide range of stresses without compromising its structural integrity and deliver consistent high energy return.

DSC's proprietary supercritical fluid foaming compound was tested, refined, and optimized last year through DSC's

EVENTS AND CONFERENCES

CHEMSPEC EUROPE

Date : June, 4-5, 2025

City : Koelnmesse, Germany

Country : Germany

Website :https://www.chemspeceurope.com/#/

Description : Chemspec Europe is a key event for the fine and speciality chemicals industry. With a highly specialised profile, the exhibition is the place to be for purchasers and agents to meet with manufacturers, suppliers and distributors of fine and speciality chemicals to source specific solutions and bespoke products.
The event appeals to an international audience and Chemspec Europe is therefore a powerful gateway to global business and industry knowledge. The exhibition features the full spectrum of fine and speciality chemicals for various applications and industries.
In addition, a wide range of free conferences provides excellent opportunities to network with industry colleagues and exchange competencies on the latest market trends, technical innovations, business opportunities, and regulatory issues in an evolving market.

CPHI CHINA - VIRTUAL CPHI

Date : June.24-26, 2025

City : China, Shanghai, Shanghai New International Expo Center

Country : China

Website : hhttps://expopromoter.com/events/178656/?gad_source=1&gclid=CjwKCAjwvr--

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Description : CPHI & PMEC China 2025 is Asia's premier pharmaceutical event for sourcing, networking, learning and innovation with over 20 years' experience of bringing together Chinese and global pharma professionals. In 2025, CPHI & PMEC China will be held in 24-26 June 2025 at SNIEC (Shanghai New International Expo Centre), Shanghai, China. CPHI & PMEC China 2025 will cover more than 230,000 square meters of exhibition area, attract over 90,000 global attendees and 3,500 exhibitors, and hold more than 100 conferences during the exhibition. CPHI & PMEC China 2025 showcases a wide range of pharmaceutical products and services, including: active pharmaceutical ingredients, Intermediates & fine chemicals, excipients, finished dosage formulation, biopharmaceuticals, natural extracts, CMO & CRO, machinery & equipment, packaging & drug delivery, laboratory equipment, cleanroom & pollution control and etc. The event brings together prominent domestic and international suppliers, international companies include: Biocon, Datwyler, Dishman Carbogen, EUROAPI, IFF, Merck Chemicals, OLON SPA, SHL Medical, Stevanato Group, Terumo, TEVA API, United States Pharmacopeia; Leading domestic pharmaceutical companies include: Acebright, FOSUN PHARMA, Huahai, Jiangsu Hengrui, North China Pharmaceutical, QILU PHARMACEUTICAL, Shanghai Pharmaceuticals Holding, SINOPHARM, Yangtze River Pharmaceutical, ZHEJIANG HISUN; as well as machinery companies such as Bio-Link, Canaan, Hanbon Sci.&Tech., HIGHFINE ENGINEERING, Pharma United, SeTAQ•, Shandong Shinva Medical Instrument, Tofflon, Tosoh Bioscience, Welkin Industry, Zhejiang Cosmos and etc.

INACOATING 2025

Date : July. 29-31, 2025

City : JIExpo Kemayoran, Jakarta

Country : Indonesia

Website : https://www.inacoating-exhibition.net/

Description : INACOATING 2025 is the specialized event for coating & paint industry, including paint products, raw materials, resin, composite, manufacturing equipment, environment protection, technology and services, etc. This B2B event offers a comprehensive showcase of the latest paint and coating technologies for the region environmental manufacturing and industrial needs. This annual event presents a prime opportunity to network and form new global partnerships with local and international professional buyers. The 13th edition of INACOATING will be held on 29 – 31 July 2025 and co-located with Chemical Indonesia 2025, Inamarine 2025, and RailwayTech Indonesia 2025 at Jakarta International Expo (JIExpo), Kemayoran, Jakarta-Indonesia. INACOATING 2025 will serve as Indonesia's most prospective one-stop coating and painting exhibition for maritime, eco-building, industrial, automotive, furniture, and related paints & coating industries.

SAUDI ARABIA COATING SHOW

Date : May 13-15, 2025

City : Dhahran Expo, Dammam, Saudi Arabia

Country : Saudi Arabia

Website :https://www.saudiarabiacoatingsshow.com/

Description : The Saudi Arabia Coatings Show is the only dedicated coatings trade exhibition in Saudi Arabia that brings the coatings industry together. The event creates the perfect environment for manufacturers, raw materials suppliers, distributors, buyers and technical specialists like formulators and chemists from the coatings industry to meet face-to-face and do business. That's not all, the event offers the opportunity to gather insight into the latest processes, exchange ideas with industry leaders and build a strong network in the region. For three days, the trade exhibition facilitates serious business and networking opportunities for the coatings community.

CPHI NORTH AMERICA

Date : May 20-22, 2025

City : Pennsylvania Convention Center, Philadelphia

Country : North America

Website : https://www.cphi.com/americas/en/home.html

Description : Whether you want to exhibit or visit, our post-show report will help you discover our show's key figures, gain insight into our audience and learn what they look for when doing business at our event.

Athlete Engagement Program at the Portland Track Festival. Participants tried on the DURAPONTEX® N-Series and DSC received positive feedback on the foam's lightweight comfort, durability, and powerful energy return. This valuable feedback drives DSC's commitment to continuous innovation, ensuring that every product meets the demands of high-performance athletes. Since its founding in 1945, Dahsheng Chemical (DSC®) has been a leader in foam innovation for the sports and bedding industries. Known for its premium comfort and performance foam DURAPONTEX® and DREAMCELL®, DSC partners with top brands and footwear manufacturers worldwide. By advancing innovation and pushing the limits of foam manufacturing, DSC® is dedicated to creating eco-friendly and advanced foam solutions that set new standards in the industry.

Source : Dahsheng Chemical

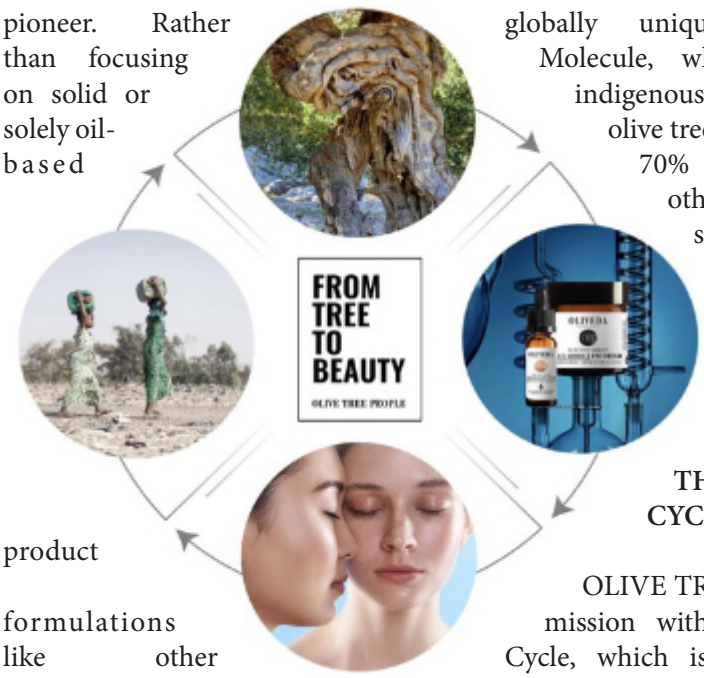
The Next Big Thing in Clean Beauty this Earth Month is Waterless

LOS ANGELES, March 28, 2025 / PRNewswire/ -- The beauty industry relies heavily on water, with traditional skincare products containing up to 90% water as a filler. Waterless beauty is currently the fastest growing segment within the beauty industry, and is expected to grow to 17.21 billion U.S. dollars by 2028, according to Grand View Research. OLIVE TREE PEOPLE is pioneering the waterless beauty movement as the fastest growing waterless beauty brand in the US – outperforming clean beauty brands like Beautycounter by growing 600% faster in its second year, and popular celebrity beauty brands like JLO Beauty by Jennifer Lopez (which averages sales of $75 million per year compared to OLIVE TREE PEOPLE'S $105 million second year).

WHAT IS WATERLESS BEAUTY?

In a world that is still learning what exactly waterless beauty is, OLIVE TREE PEOPLE strives to educate – leading to more that 50,000 women joining the brand as waterless beauty consultants to educate the 168.6 million women in the US on the beauty choices they are making.

If a formula contains water as its first ingredient, it comes with preservatives and filler oils. That's why waterless beauty is the way forward – and compared to other waterless beauty brands, OLIVE TREE PEOPLE is a true pioneer. Rather than focusing on solid or solely oil-based product formulations like other waterless brands, OLIVE TREE PEOPLE is leading the next chapter in clean beauty by replacing water with its potent formulations powered by liquid olive leaf extract and hydroxytyrosol—a groundbreaking antioxidant that replaces the water phase in skincare.



Founded by olive tree farmer and entrepreneur Thomas Lommel, OLIVE TREE PEOPLE cultivates and eco-certifies wild mountain olive trees to produce its exclusive Holistic Beauty Molecule (hydroxytyrosol), delivering skincare that is 70% more effective than conventional water-based products. This globally unique Holistic Beauty Molecule, which is only found indigenously in their mountain olive trees, replaces 100% of the 70% water phase that is otherwise common in skin care products. This commitment goes beyond sustainability—it's a necessity for the future of beauty.

THE BEAUTIFUL CYCLE

OLIVE TREE PEOPLE started its mission with a holistic Beautiful Cycle, which is also the messaging behind its slogan "From Tree To Beauty". As well as transforming skincare, OLIVE TREE PEOPLE is actively addressing global water scarcity through its OLIVEDA for Africa initiative as the last stage in the Beautiful Cycle.

FROM TREE…

The brand's Beautiful Cycle mission starts with acquiring land with wild mountain olive trees, which are then cultivated and eco-certified.

…TO FORMULA…

These trees then supply the unique Holistic Beauty Molecule hydroxytyrosol found in olive leaf extract, which can protect the cells of the trees for up to 4000 years and has wonderful antioxidant benefits for humans.

… TO BEAUTY…

This Beauty Molecule replaces the 70% water found in conventional beauty products, making them 70% more efficient.

… TO AFRICA.

The water not used in products are brought to the people of Africa by building water wells, in an effort to counteract the 4.4 billion people globally who have no access to clean drinking water*.

For every 100 hectares of olive trees grown in Spain, OLIVE TREE PEOPLE funds the construction of a well in Africa—providing clean water to over 15,000 residents in Senegal and beyond. With 31,000 eco-certified olive trees thriving on OLIVEDA land, this initiative has provided clean water access to around 15,000 residents across Senegal and other nations.

As Earth Month approaches, the conversation around sustainability in beauty is more important than ever. With water scarcity on the rise, OLIVE TREE PEOPLE is leading the charge in a waterless beauty revolution, proving that skincare can be both high-performance and planet-friendly. Now is the time to rethink what's in your beauty products—not just for your skin, but for the future of our planet.

Source : Olive Tree People

Exploring the Cyanoacrylate Adhesives Market Innovations Applications, and its Remarkable Journey

Vinodhini Harish

Introduction:

When was the last time you read about Cyanoacrylate adhesives? They are commonly known as super glue, but do you know that Cyanoacrylate adhesives were originally discovered during World War II while searching for a material to make clear plastic gun sights? They ended up becoming the superglue that we use today! They are everywhere in every industrial sector! They are in your smartphone, and your car, and they are everywhere, from fighter jets to artificial limbs. If you want to learn more about the cyanoacrylate adhesives market and recent developments in the industry, you have come to the right page. Please take time to read the article as we have covered some recent developments in the industry and presented them cohesively. Let's begin!

The cyanoacrylate adhesives market is ever expanding – why?

The primary component, cyanoacrylate monomer is a fast-acting acrylic resin that undergoes rapid polymerization and forms a strong and durable bond within seconds when exposed to moisture either in air or on surfaces. The chemical reaction forms long polymer chains and thereby creates a rigid and durable adhesive layer.

Cyanoacrylate adhesives due to their unique properties are extensively utilized in bonding rigid plastics, and metals, used in the place of general-purpose adhesives, medical applications, electronics, automotive and medical devices.

In automotive and aerospace, these cyanoacrylate adhesives are used in bonding rubber seals, gaskets, plastic components, and lightweight structures. They are employed in the construction sector in bonding flooring, tiles, and lightweight structural bonding. In electronics, they are essential for PCB assembly, wire tackling, and component encapsulation. They are utilized for quick bonding of wood, MDF and Veneers.

They are also utilized in other sectors such as medical applications and healthcare, for temporary tooth repair and bonding dental appliances, they are also used as biodegradable carriers for controlled drug release, and utilized in wound closures and surgery as tissue adhesives.

They are utilized in consumer applications such as ceramics, plastics, metal and leather. They are also used in jewelry and crafts.

Therefore, the global cyanoacrylate adhesives market is ever-expanding as there is impressive growth in the end-user industries and critical applications.

Cyanoacrylate adhesives hold things together beyond earth!

In space, astronauts use cyanoacrylate adhesives as traditional fasteners can loosen due to microgravity and super glue is used as it cures faster than other glues. Adhesives play a critical role in space applications as they are expected to withstand extreme conditions such as radiation, vacuum, temperature fluctuations and atomic oxygen exposure.

NASA uses cyanoacrylate adhesives in space missions for emergency repairs and temporary bonding of non-structural components. Since these cyanoacrylate adhesives cure rapidly without additional curing agents, they are perfect for zero-gravity environments.

Cyanoacrylates are utilized in assembling satellite components such as securing installation materials, and electronic parts and they bond metals, plastics, and rubber effortlessly.

Mars rovers and spacecraft assembly – NASA has utilized cyanoacrylate in assembling Mars rovers and other spacecraft components, ensuring strong bonds that are capable of withstanding harsh space environments that include extreme temperatures and radiation.

Spacecraft and space stations are highly exposed to extreme temperatures (-250°F to 250°F) and intense radiation, these conditions cause materials to degrade and fail. On the other hand, the vacuum of space also accelerates outgassing which is the loss of volatile compounds from materials this can weaken the adhesives and sealants.

Moving parts in the robotic arms, hatches, and docking mechanisms experience mechanical stress in microgravity and this can lead to unexpected malfunctions. There are other challenges such as assembly and operational errors that can lead to unintentional damages. Likewise life supporting systems, airlocks, astronauts suits may require urgent repairs that can potentially prevent life-threatening situations or mission failures.

Some of the recent achievements in the sector:

3M's Scotch-Weld™ Cyanoacrylate Adhesives:

3M continues to be a leader in cyanoacrylate adhesive production that offers a range of instant adhesives that possess features such as fast curing, and strong bonding across various materials such as metals, plastics, elastomers and even low-surface energy (LSE) plastics. These adhesives cure rapidly as they react well with moisture and are widely used in several industrial sectors such as automotive, electronics, healthcare, manufacturing and construction.

3M has recently come up with Scotch-Weld™ Cyanoacrylate Adhesives that provide high-strength, quick bonding solutions for small bond areas and tight-fitting joints, this makes it ideal for applications that require minimal clamping time.

3M has also integrated these adhesives into structural bonding and assembly processes that improve efficiency and product durability.

3M has been involved in producing cyanoacrylate adhesives that offer improved impact resistance thereby making it more suitable for applications requiring durability under mechanical stress. Now, Scotch-Weld™ Cyanoacrylate Adhesives CA8 provides stronger bonds with better shock resistance compared to the traditional cyanoacrylates.

The company was also working on developing modern formulations that can cure more quickly at room temperature, thereby reducing processing time in industrial applications. These adhesives can

achieve handling strength in as little as 5-40 seconds.

Another critical challenge in cyanoacrylate adhesives is storing it by keeping the product intact and effective. Cyanoacrylate adhesives are highly reactive and begin to polymerize when exposed to moisture in the air. The traditional formulations tend to have shorter shelf life, especially when they are stored at room temperature, this is due to environmental factors such as humidity and temperature fluctuations.

Therefore 3M has come up with advanced storage methods such as refrigerated storage, which is storing it at temperatures between 0 to 4°C helps in slowing down the chemical reaction with ambient moisture. With proper storage methods, these adhesives are now able to perform well for significantly longer methods, reducing waste and manufacturing costs. Refrigeration helps in avoiding unintended curing inside the bottle and thereby ready to use when required.

This improved method of storing helped industries such as automotive, electronics, medical devices and aerospace as there is a higher demand for high-performance adhesives in bulk, while they should be intact with their efficiency for a longer period.

3M is now operating in over 70 countries has built a strong international

Mumbai Market Price as on 10/04/2025

Name of Chemical	Current Price	Location
Acetic Acid-Imported Repack	41	Mumbai
Acetic Acid-Imported Repack	46	Mumbai
Acetic Acid-Domestic Intact	60	Mumbai
Acetic Acid-Domestic Repack	47	Mumbai
Acetone-Imported Repack	82	Mumbai
Acetone-Domestic Intact	93	Mumbai
Acetone-Domestic Intact	82	Mumbai
Acetonitrile-Imported Intact	147	Mumbai
Acetonitrile-Domestic Intact	160	Mumbai
Acetonitrile-Domestic Repack	135	Mumbai
Acrylonitrile-Imported Intact	169	Mumbai
Acrylonitrile-Imported Repack	170	Mumbai
Aniline-Imported Intact	150	Mumbai
Aniline-Domestic Intact	153	Mumbai
Benzene-Domestic Repack	83	Mumbai
Cyclohexane-Imported Intact	104	Mumbai
Cyclohexane-Domestic Intact	103	Mumbai
Cyclohexane-Domestic Repack	99	Mumbai
Cyclohexanone-Imported Intact	140	Mumbai
Cyclohexanone-Imported Repack	121.5	Mumbai
Cyclohexanone-Domestic Intact	150	Mumbai
Cyclohexanone-Domestic Repack	137	Mumbai
C9 Solvent (99.99% purity)-Imported Repack	100	Mumbai
C9 Solvent (Arham Petrochem)-Imported Repack	99.75	Mumbai
Dibutyl Phthalate-Domestic Intact	121	Mumbai
Dioctyl Phthalate-Domestic Intact	121	Mumbai
Ethyl Acetate-Domestic Intact	78	Mumbai
Ethyl Acetate-Domestic Repack	74	Mumbai
Formaldehyde(37%)-Domestic Repack	22	Mumbai
Methanol-Imported Repack	39	Mumbai
Methyl Ethyl Ketone-Imported Intact	118	Mumbai
Methyl Ethyl Ketone-Imported Repack	104	Mumbai
Methyl Isobutyl Ketone-Imported Intact	145	Mumbai

Methyl Isobutyl Ketone-Imported Repack	134	Mumbai
Methyl Methacrylate-Imported Intact	144	Mumbai
Mixed Xylene-Imported Repack	76	Mumbai
Mixed Xylene-Domestic Repack	78	Mumbai
Monoethylene Glycol-Imported Repack	58	Mumbai
Monoethylene Glycol-Domestic Intact	61	Mumbai
Monoethylene Glycol-Domestic Repack	59	Mumbai
Iso propyl Alcohol-Imported Repack	103	Mumbai
Iso propyl Alcohol-Domestic Intact	116	Mumbai
Iso propyl Alcohol-Domestic Repack	103	Mumbai
nButanol-Imported Repack	89	Mumbai
nButanol-Domestic Intact	104	Mumbai
nButanol-Domestic Repack	89	Mumbai
Ortho Xylene-Imported Repack	106	Mumbai
Phenol-Imported Repack	96	Mumbai
Phenol-Domestic Intact	108	Mumbai
Phenol-Domestic Repack	99	Mumbai
Phthalic Anhydride-Imported Intact	104	Mumbai
Phthalic Anhydride-Domestic Intact	104	Mumbai
Styrene Monomer-Imported Repack	107	Mumbai
Toluene-Imported Repack	76	Mumbai
Toluene-Domestic Repack	78	Mumbai
Vinyl Acetate Monomer-Imported Repack	88	Mumbai

Note-Above prices have been collected from experts and experienced outsources of the industry.Kindly verify from your end as well.

International market prices as on 10/04/2025

Product	Regions	Current prices
Feedstock Prices $/unit		
Crude Oil ($/barrel)	WTI CRUDE	71.73
	BRENT CRUDE	64.72
	MARS US	72.9
	OPEC BASKET	66.54
Natural Gas	New York	3.69
Gasoline	RBOB	2.02

Heating Oil	US	2.1
Ethanol	US	1.78
Naphtha	FOB Singapore	595
	European	490
	CFR Far East Asia	519
Propane	New York	0.74
Aromatics prices $/MT		
Benzene	FOB Korea	700
	CFR Japan	720
Styrene	CFR Japan	860
	CFR South East Asia	975
	CFR China	860
	FOB Korea	850
Toluene	CFR China	655
	CFR South East Asia	745
	FOB Korea	610
	CFR Japan	655
Iso-Mix Xylene	CFR South East Asia	635
	CFR Taiwan	640
	FOB Korea	615
MEG	CFR China	465
	CFR South East Asia	475
Methanol	CFR China	263
	CFR Korea	349
	CFR South East Asia	352
	CFR Taiwan	344
Solvent-MX	CFR South East Asia	735
	FOB Korea	635
	CFR China	705
Ortho Xylene	CFR South East Asia	925
	FOB Korea	975
	CFR China	915
Para Xylene	CFR South East Asia	800
	FOB Korea	675
	CFR Taiwan	695

Propylene	FOB Japan	785
	FOB Korea	775
	CFR China	810
	CFR South East Asia	845
Propylene Glycol	FOB Korea	820
	CFR China	850
Ethylene	CFR North East Asia	810
	CFR South East Asia	895
	FOB Japan	795
	FOB Korea	800
EDC	CFR Far East Asia	220
	CFR South East Asia	215
Butadiene	CFR China	1295
	CFR South East Asia	1245
	FOB Korea	1265
Benzene	FOB Rotterdam	640
Methanol	FOB Rotterdam	295
Ortho Xylene	FOB Rotterdam	1135
Para Xylene	FOB Rotterdam	735
Solvent-MX	FOB Rotterdam	710
Styrene	FOB Rotterdam	1290
Toluene	FOB Rotterdam	810
Benzene C/G	FOB US Gulf	225
Toluene C/G	FOB US Gulf	269
Styrene C/LB	FOB US Gulf	50.8
Para Xylene $/MT	FOB US Gulf	750
Mix Xylene C/G	FOB US Gulf	266
Methanol C/G	FOB US Gulf	93
Intermediates prices $/MT		
Acrylonitrile	CFR Far East Asia	1245
	CFR South East Asia	1245
	CFR South Asia	1225
VCM	CFR Far East Asia	520
	CFR South East Asia	545
MTBE	FOB Singapore	741

	FOB US Gulf	720
Phenol	CFR China	890
	CFR South East Asia	1025
	FOB US Gulf	1146
	FOB Rotterdam	803
Acetone	CFR China	780
	CFR South East Asia	780
	CFR Far East Asia	735
	FOB US Gulf	1047
	FOB Rotterdam	811
Caprolactum	CFR Far East Asia	1415
	CFR South East Asia	1405
Caustic Soda	FOB North East Asia	440
	CFR South East Asia	505
Ethyl Acetate	FOB US Gulf	1543
	FOB Rotterdam	1070
	FD North West Europe(Euro/mt)	1090
Butyl Acetate	FOB US Gulf	1738
	FOB Rotterdam	1254
	FD North West Europe(Euro/mt)	1260
MEK	FOB Rotterdam	1351
	FD North West Europe(Euro/mt)	1350
IPA	FOB US Gulf	1300
	FOB Rotterdam	1124
	FD North West Europe(Euro/mt)	1140
NBA	CFR China	940
	CFR South East Asia	950
	CFR Far East Asia	945
Octanol	CFR China	1015
	CFR South East Asia	1045
	CFR Far East Asia	1025
DOP	CFR China	1140
	CFR South East Asia	1145
	CFR Far East Asia	1135
Phthalic Anhydride	CFR China	1010

	CFR South East Asia	1025
	CFR Far East Asia	995
PTA	CFR Far East Asia	540
	CFR South East Asia	560
Acetic Acid	CFR Far East Asia	403
	CFR South East Asia	407
	CFR South Asia	380
	FOB China	318
VAM	CFR China	845
	CFR South East Asia	795
	CFR South Asia	850

Shipping term		Description
FOB	Free on Board	The seller quotes a price including the cost of delivering goods to the nearest port. The buyer bears all the shipping expenses and is responsible to get the products from that port to its final destination. In simple terms, FOB price means the buyer has to bear the shipping costs completely. This is one of the most used shipping terms by international buyers and sellers.
EXW	Ex-Works	The seller has no involvement with the transportation costs and risks. The buyer has to collect the goods from the seller's site and get them to the final destination. All the costs and risks are borne by the buyer. It is advisable that the buyer purchases insurance since the goods can get damaged in transit. EXW is ideal when the buyer and seller are in the same country or region.
CFR	Cost and Freight	The seller pays the loading and freight costs from his premises up to the destination port. Then, the buyer has to arrange for the goods to be transported from the port to his premises. The seller is only responsible for the cost of shipping the products to the destination port. CFR is used for products transported by sea or inland waterways only. The seller does not bear the risk of loss or damage during transit.
CIF	Cost, Insurance, and Freight	If the buyer opts for CIF price, the seller pays for the loading and freight costs right from his premises up to the destination port as well as insurance. In the case of damage or loss, the seller bears the risk completely. The buyer has to arrange for transportation of the goods from the port to his premises. CIF is a safer option than CFR since the goods are insured by the seller up to their arrival at the destination port.
DAP	Delivered at Place	It was previously known as DDU, Delivery Duty Unpaid. In this case, the seller is responsible for getting the goods from his own factory up to the premises of the buyer. He also bears the risk in the case of loss or damage of the goods right until the products are delivered to the buyer. The buyer only has to pay the import duties or custom clearance charges.
DDP	Delivery Duty Paid	The seller is responsible for shipping the goods from his factory to the destination address provided by the buyer, usually his factory or warehouse and is also liable for any damage or loss of goods during transit. The seller also takes care of the customs, VAT, or import duties levied on the products. The buyer only has to receive the products at the destination. In most cases, most sellers only offer DDP for small shipments.

FD North West Europe	**Free Delivered**	**Free Delivered North West Europe**	**Free Delivered North West Europe**	**Free Delivered North West Europe**
Countries Groups	Southeast Asia is composed of eleven countries: Brunei, Burma (Myanmar), Cambodia, Timor-Leste, Indonesia, Laos, Malaysia, the Philippines, Singapore, Thailand and Vietnam.	Far East Asia:The following countries are considered to be located in the Far East: China, Hong Kong, Macau, Japan, North Korea, South Korea, Mongolia, Siberia, Taiwan, Brunei, Cambodia, East Timor, Malaysia, Laos, Indonesia, Myanmar, Singapore, Philippines, Thailand, and Vietnam.	South Asia: The region consists of the countries of Afghanistan, Pakistan, India, Nepal, Bhutan, Bangladesh, the Maldives, and Sri Lanka	Northwestern Europe usually consists of the United Kingdom, the Republic of Ireland, Belgium, the Netherlands, Luxembourg, Northern France, Northern Germany, Denmark, Norway, Sweden, and Iceland.

Opening Ports Price (Rs/kg) of Chemicals as on 10/04/2025

USD Exchange Rate: 86.04 INR

Products	Current Prices (INR/kg)	Prices in USD/mt Equivalent to INR/kg	Location
Acetic Acid	36	412.94	Ex-Kandla
Acetic Acid	39.5	459.09	Ex-Kandla
Acetic Acid	37.75	438.75	Ex-Mumbai
Acetonitrile-imported intact	147	1708.51	Ex-Bhiwandi
Acetone	74	860.07	Ex-Mumbai
Acrylic Acid	88	1022.78	Ex-Mumbai
Acrylonitrile	111	1290.10	Ex-Kandla
Adipic Acid	115	1336.59	Ex-Bhiwandi
Aniline Oil	130	1510.93	Ex-Kandla
Benzene	76.75	892.03	Ex-Vizaz
Butyl Acetate	81.5	947.23	Ex-Kandla
Butyl Acrylate Monomer	119	1383.08	Ex-Kandla
Butyl Glycol	102	1185.50	Ex-Kandla
C10	103	1197.12	Ex-Kandla
C9	76	883.31	Ex-Kandla
Carbon Black-regular grade	60	697.35	Ex-Mumbai
Caustic Soda Lye	40.5	470.71	Ex-Dahej
Chloroform	12	139.47	Ex-Dahej
Citric Acid-ANHYD	75	871.69	Ex-Bhiwandi
Citric Acid-Mono	66	767.09	Ex-Bhiwandi

Cyclohexane	94	1092.52	Ex-Hazira
Cyclohexanone	110	1278.48	Ex-Kandla
DMF Drum	68	790.33	Ex-Bhiwandi
DEG	67.5	784.52	Ex-Hazira
EDC	23	267.32	Ex-Kandla
Epoxy Resin	188.5	2190.84	Ex-Nhava Sheva
Ethyl Acrylate	129	1499.30	Ex-Kandla
Formic Acid	65	755.46	Ex-Bhiwandi
Glycerine	82	953.05	CIF Nhava Sheva
N-Heptane	204	2370.99	Ex-Bhiwandi
Hexane	76.5	889.12	Ex-Kandla
Hydrogen Peroxide-50%	23	267.32	Ex-Bhiwandi
Isobutanol	81.5	947.23	Ex-Kandla
IPA	91	1057.65	Ex-Kandla
IPA	92.5	1075.08	Ex-Mumbai
LAB	130	1510.93	Imported
Maleic Anhydride-Drum	89	1034.40	Ex-Mumbai
MDC	28	325.43	Ex-Dahej
MEG	53	615.99	Ex-Mumbai
MEK	94	1092.52	Ex-Kandla
Melamine	77.5	900.74	Imported
Methanol	29.75	345.77	Ex-Kandla
Methanol	29.5	342.86	Ex-Mumbai
MIBK	118	1371.46	Ex-Hazira
Mix Xylene-Solvent Grade	65	755.46	Ex-Kandla
Mix Xylene-Solvent Grade	66.5	772.90	Ex-Mumbai
MMA	138	1603.91	Ex-Hazira
N-Butanol	81	941.42	Ex-Kandla
N-Propanol	96	1115.76	Ex-Kandla
NPAC	90	1046.03	Ex-Kandla
Octanol	103.5	1202.93	Ex-Kandla
Ortho Xylene	93	1080.89	Ex-Kandla
Phenol	84	976.29	Ex-Kandla
Phenolic Resin	165	1917.71	Ex-Indore
Phthalic Anhydride	104	1208.74	Ex-Mumbai

Propylene Glycol	82	953.05	Ex-Kandla
Sodium Nitrate (50Kg Bag)	61	708.97	Ex-Make-Lasons
Soda Ash Light	35	406.79	Ex-Bhiwandi
Styrene Monomer	92.5	1075.08	Ex-Kandla
Styrene Monomer	94	1092.52	Ex-Mumbai
Sulphuric Acid	15	174.34	Ex-Vapi
Tio2 (Anatase Grade)	190	2208.28	Ex-Bhiwandi
Tio2 (Rutile Grade)	212	2463.97	Ex-Bhiwandi
Toluene	63.75	740.93	Ex-Kandla
Toluene	65	755.46	Ex-Mumbai
VAM	74.75	868.78	Ex-Kandla
VAM	76.5	889.12	Ex-Hazira

Producer Prices (Rs/kg) of Chemicals as on 10/04/2025

Producers	Current Price	Import parity	Location
	(Rs/kg)	Price in	USD/MT
Accord-Ethyl Acetate	64.5	749.65	Ex-Maharashtra
Arham Petrochem-C9	75.75	880.40	Ex-Kandla
Arham Petrochem-C9	76.75	892.03	Ex-Ahmedabad
Arham Petrochem-C10	102.5	1191.31	Ex-Kandla
Arham Petrochem-C10	102	1185.50	Ex-Ahmedabad
Arham Petrochem-C10 (Imported Repack)	108.75	1263.95	Ex-Bhiwandi
Arham Petrochem-MTO/White Spirit (KL)	59.65	693.28	Ex-Kandla
Arham Petrochem-MTO/White Spirit (KL)	60.65	704.90	Ex-Ahmedabad
Arham Petrochem-De-Aromatised D40	130	1510.93	Ex-Kandla
Arham Petrochem-De-Aromatised D40	131	1522.55	Ex-Ahmedabad
Arham Petrochem-De-Aromatised D60	139	1615.53	Ex-Kandla
Arham Petrochem-De-Aromatised D60	140	1627.15	Ex-Ahmedabad
Andhra Petrochemicals-Iso-Butanol	85	987.91	Ex-Vishakhapatnam
Andhra Petrochemicals-N-Butanol	83	964.67	Ex-Vishakhapatnam
Andhra Petrochemicals-Octanol	99	1150.63	Ex-Vishakhapatnam
BASF-Adipic Acid	134	1557.42	Imported
BPCL-2-Ethyl Hexanol (B)	96	1115.76	Ex-Kochi
BPCL-2-Ethyl Hexanol (P)	106.87	1242.10	Ex-Kochi
BPCL-2-Ethyl Hexyl Acrylate (B)	133.35	1549.86	Ex-Kochi

BPCL-2-Ethyl Hexyl Acrylate (P)	143.35	1666.09	Ex-Kochi
BPCL-Acrylic Acid (B)	86.95	1010.58	Ex-Kochi
BPCL-Acrylic Acid (P)	95.95	1115.18	Ex-Kochi
BPCL-Benzene	75.95	882.73	Ex-Mumbai
BPCL-Butyl Acrylate (B)	111.75	1298.81	Ex-Kochi
BPCL-Butyl Acrylate (B)	114.25	1327.87	Ex-Kandla
BPCL-Butyl Acrylate (P)	121.75	1415.04	Ex-Kochi
BPCL-Hexane (KL)	78.75	915.27	Ex-Mumbai
BPCL-Hexane (MT)	118.6	1378.43	Ex-Mumbai
BPCL-Iso-Butanol (B)	74.34	864.02	Ex-Kochi
BPCL-Iso-Butanol (P)	91.45	1062.88	Ex-Kochi
BPCL-MTO (KL)	85.5	993.72	Ex-Mumbai
BPCL-N-Butanol (B)	75.25	874.59	Ex-Kochi
BPCL-N-Butanol (B)	83.66	972.34	Ex-Kandla
BPCL-N-Butanol (P)	92.56	1075.78	Ex-Kochi
BPCL-Paraffin Wax	105	1220.36	Ex-Delhi
BPCL-Sulphur (Molten)	21.27	247.21	Ex-Mumbai
BPCL-Toluene	77.25	897.84	Ex-Mumbai
Deepak Phenolics-Acetone	72	836.82	Ex-Dahej Gujarat
Deepak Phenolics-IPA	90.5	1051.84	Ex-Dahej Gujarat
Deepak Phenolics-Phenol	82.5	958.86	Ex-Dahej Gujarat
GACL-Caustic Soda Lye	38.5	447.47	Ex-Dahej Gujarat
GACL-MDC	27	313.81	Ex-Bharuch Gujarat
GNFC-Acetic Acid	41.5	482.33	Ex-Bharuch Gujarat
GNFC-Aniline Oil	133.5	1551.60	Ex-Bharuch Gujarat
GNFC-Ethyl Acetate	66	767.09	Ex-Bharuch Gujarat
GNFC-TDI Drum	195	2266.39	Ex-Bharuch Gujarat
Grasim-MDC	27	313.81	Ex-Gujarat
GSFC-Cyclohexane	87.5	1016.97	Ex-Gujarat
HOCL-Acetone	95.5	1109.95	Ex-Kochi
HOCL-Phenol	103.5	1202.93	Ex-Kochi
IOCL-Banzene	75.95	882.73	Ex-Vadodara Gujarat
IOCL-DEG	NA	Not Available	Ex-Odisha(Paradip)
IOCL-DEG	NA	Not Available	Ex-Panipat
IOCL-LAB	160	1859.60	Ex-Gujarat

IOCL-MEG	55.9	649.70	Ex-Odisha(Paradip)
IOCL-MEG	57.4	667.13	Ex-Panipat
IOCL-Paraffin Wax	105	1220.36	Ex-Delhi
Jubilant-Ethyl Acetate	68.5	796.14	Ex-Maharashtra
Laxmi-Ethyl Acetate	64.75	752.56	Ex-Maharashtra
Meghmani-Caustic Soda Lye	39.5	459.09	Ex-Bharuch Gujarat
Meghmani-MDC	27	313.81	Ex-Ankleshwar Gujarat
NIRMA-LAB	150	1743.38	Ex-Vadodra
Reliance-Caustic Soda Lye	38	441.66	Ex-Gujarat
Reliance-DEG	NA	Not Available	Ex-Jamnagar
Reliance-LAB	160	1859.60	Ex-Vadodra
Reliance-MEG	52.5	610.18	Ex-Jamnagar
Reliance-Mix Xylene	67	778.71	Ex-Jamnagar
Reliance-PTA	72.6	843.79	Ex-Dahej Gujarat
Reliance-Toluene	68	790.33	Ex-Jamnagar
SI GROUP-Phthalic Anhydride	103	1197.12	Ex-Navi Mumbai
TATA Chemicals-Soda Ash light	34	395.17	Ex-Bhiwandi

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or call us on +91-877-9830-330

presence and has been frequently listed among the world's most ethical and admired companies, as recognized by organizations such as Forbes, Fortune, and Ethisphere Institute.

Henkel's New Cyanoacrylate Adhesives:Loctite 4011S & Loctite 4061S: New cyanoacrylate adhesive formulations designed for medical applications:

Henkel AG & Co. KGaA is a well-established German multinational company known for its innovative products across multiple industries such as adhesives, sealants, and consumer goods. Henkel AG was founded in 1876 and is known for its leadership in the adhesives solutions sector, as they have demonstrated cutting-edge technologies and products in its industrial front.

They are known for their broad portfolio of well-known brands such as Loctite, which is intensively used in both industrial and consumer applications.

Loctite 4011S & Loctite 4061S: Impressive Advancements:

In February 2024, Henkel introduced Loctite 4011S and Loctite 4061S this is marked as a significant development in cyanoacrylate adhesive technology, specifically targeting medical device applications.

These products offer special characteristics such as stronger bonding, biocompatibility, reliability and performance.

Loctite 4011S & Loctite 4061S are new formulations and are known for their superior bonding strength and on a range of materials such as plastics, rubbers, and metals and are commonly used in medical devices.

Cyanoacrylate adhesives are often favoured in medical settings for their ability to bond with biological tissues and the new formulations are designed to meet strict medical standards that ensure safety in wound closure, surgical devices and other medical applications.

Both Loctite 4011S and 4061S are tailored to meet the high-performance demands of critical medical applications that offer reliability even in complex and demanding conditions such as surgical procedures and medical device assembly. These advancements are so impressive in the sector as they enhance the capabilities of cyanoacrylate adhesives in medical fields where precision, safety and biocompatibility are of utmost importance.

Henkel has increasingly prioritized the medical industry by developing adhesives that are not only effective but also safe when come in contact with human skin. Furthermore, since there is a growing demand for minimally invasive surgeries and advanced wound care products, the company has increased their focus on medical applications.

Key takeaways:

We don't think cyanoacrylate adhesives aren't going anywhere from the market, because they always find a way to stick around! Jumping to the serious part now, the cyanoacrylate adhesives market is expected to grow at a rapid pace, as they are driven by their versatility, and essential role in a wide range of industries. From high-performance solutions in space to life-saving medical applications, they never fail to demonstrate their resilience and importance. Innovations from major players like 3M and Henkel are pushing the boundaries further as they never cease to offer products with enhanced properties thereby expanding their uses in critical sectors. The demand on the other hand is growing stronger and the future of cyanoacrylate adhesives looks promising with exciting developments yet to unfold.

Clariant launches Ceridust™ 1310 to address carnauba wax supply chain volatility in printing inks

- Ceridust 1310 provides formulators with a reliable alternative amid growing carnauba wax supply chain challenges
- New solution helps stabilize production planning by reducing dependency on seasonally harvested raw materials
- Delivers consistent quality and performance while complementing existing natural wax solutions

MUTTENZ, April 1, 2025 - Clariant announces the launch of Ceridust 1310, an innovative wax solution designed to address the increasing supply chain complexities facing formulators who rely on carnauba wax for printing ink applications. This development demonstrates Clariant's understanding of market challenges and commitment to providing reliable solutions for its customers.

Addressing market volatility with innovation

While carnauba wax remains a valuable renewable resource, its supply chain faces multiple challenges including seasonal harvesting limitations, climate dependencies, and labour-intensive collection processes in northeastern Brazil. These factors, combined with growing global demand across various industries, create significant supply and price volatility for formulators[1].

"The printing ink industry needs reliable solutions that can ensure consistent production schedules," explains Ray Gonzales, Clariant's Head of Global Marketing Coatings & Adhesives. "Ceridust 1310 offers formulators the stability they need, reducing their vulnerability to carnauba wax supply fluctuations while maintaining high performance standards."

Superior performance through controlled manufacturing

As part of Clariant's ambition to serve the coatings and ink industry the company has extend its RBW based portfolio to with the new Ceridust 1310. This micronized rice bran wax blend is manufactured through controlled industrial processes, ensuring consistent quality that helps formulators avoid the production adjustments often needed with naturally sourced waxes.

The product features:

- A high melting point of 125°C
- Excellent rub resistance in printing inks
- Superior matting properties
- Versatile application at 0.2 - 1% dosage levels for printing ink systems and max 4% for wood coating formulations

This innovative bio-based wax delivers outstanding performance across a range of high-end applications, including premium packaging with premium matte finishes, glossy magazines, specialty labels, and water-based topcoats that demand superior scuff resistance and clarity.

Building on sustainable innovation

The launch of Ceridust 1310 marks a significant step in Clariant's broader commitment to addressing the needs of sustainability-conscious consumers and brands. As sustainability becomes a key priority, Ceridust 1310 provides formulators with a reliable alternative that meets these shifting demands while maintaining production excellence. This innovative product builds on Clariant's proven expertise in developing solutions that support consumer health and environmental stewardship, following on from the success of innovations like Licocare™ RBW Vita rice bran waxes and PFAS-free additives.

Meeting industry needs

"Today's formulators need options that can help them navigate supply chain uncertainties while maintaining product quality," adds Gonzales. "Ceridust 1310 isn't about replacing carnauba wax, it's about giving our customers the flexibility they need to maintain consistent production despite market volatility."

The growing complexity of global supply chains has highlighted the importance of having reliable alternatives to Carnauba-based materials. Ceridust 1310 represents Clariant's response to these challenges, offering formulators a reliable solution that helps stabilize their production planning while delivering the performance that customers expect.

Discover how Clariant is advancing solutions in the coatings and adhesives space segment, join the upcoming webinar series. Full details and registration available at: Coatings and Adhesives hub.

Source : Clariant

MRPLs Milestones Achievements Challenges and Future Aspirations in the Energy Sector

Vinodhini Harish

Introduction:

Does MRPL's transition from a basic refining unit to a global-scale refinery impact India's energy security? There were several challenges in balancing crude oil imports, refining efficiency, and profitability. MRPL was also involved in green hydrogen and carbon capture to redefine sustainable refining in India. The story of the company's evolution is impressive, and it certainly transformed India's refining landscape. It all began with modest beginnings in 1988 as a joint venture to become a high-capacity refinery with

cutting-edge technology. In this article, we have explored their recent achievements, records, financial achievements, and financial challenges. Let's begin.

Mangalore Refinery and Petrochemicals Limited (MRPL) is a large oil refining company in India that is operating under ONGC (Oil and Natural Gas Corporation). It processes crude oil to produce fuels like petrol, diesel, and aviation turbine fuel. Mangalore Refinery and Petrochemicals Limited(MRPL) has played a crucial role in India's energy sector and has evolved from a basic refining unit into a complex refinery with advanced technologies. Now the facility is known for its high production efficiency and global fuel standards.

The early years of oil processing were limited to the basic refining and foundation stage, where MRPL was incorporated in 1988 as a joint venture between Hindustan Petroleum Corporation Ltd and AV Birla Group. In 1996, the refinery started operations with a 3 million tonnes per annum capacity and processed most light and sweet crude oils. They were focused only on domestic fuel supply and refining low-complexity petroleum products such as diesel, kerosene, petrol and LPG.

Between 2000 and 2010, MRPL was acquired by ONGC thereby bringing expertise in upstream crude sourcing and processing. The capacity expanded to 9.69 MTPA and that was intended to meet rising domestic demand for fuels. Their increased ability to process heavier and high-sulfur crude oils reduced their dependence on light crude. The ONGC's acquisition has created an impressive impact as the acquisition provided MRPL with direct access to crude oil sources from ONGC's oil fields, improved MRPL's technical abilities in processing crude oil, and strengthened MRPL's financial position and allowed for further expansion and modernization.

The capacity expansion was from 3.0 MTPA to 9.69 MTPA, which ensured enough supply of petrol, diesel and LPG for India's rising energy consumption. The expansion also helped reduce the dependence on imported refined fuels while improving the country's energy security and meeting transportation and industrial fuel needs.

Furthermore, the expansion also helped the company in refining varieties of crude oil from light crude oil to heavy and high-sulfur crude oil. The processing of heavy crude oil requires advanced technology to process and the expansion has upgradation of refining technologies to handle the refining of heavy crude oils and high-sulfur crude oils.

MRPL has been upgraded to Euro-III and Euro-IV compliant fuels after its capacity expansion to 9.69 MTPA. This expansion has allowed MRPL to process more crude oil while the fuel quality upgrade was a part of the country's broader environmental strategy to reduce pollution. European emission standards regulate harmful pollutants in fuels such as sulfur and nitrogen oxides. The standards help in reducing air pollution by lowering the sulphur content in petrol and diesel. The Euro-III requires lower sulphur content than their previous fuel grades and Euro-IV brought in even stricter emission limits than Euro-III.

After the expansion, MRPL has invested in upgrading its fuel quality to comply with the country's stricter environmental policies, which reduced pollution, improved fuel exports and strengthened the country's energy sector.

Due to these stricter restrictions and international quality, Indian fuel has now become export-ready for international markets, which has also made MRPL a leading supplier of low-emission fuels.

Modernization and petrochemical focus (2010-2020):

Post capacity expansion to 15 MTPA, MRPL was recognized as India's largest refinery and therefore they introduced high-value petrochemicals such as polypropylene, which are used in plastics, packaging and automotive industries and Benzene and Xylene that are used for feedstocks for manufacturing of polyester, resins and rubber industries.

Especially after 2012, the company was upgraded to incorporate hydrocracking and cocking units that improve yield efficiency and enable the production of low-sulphur diesel, aviation turbine fuel, and high-octane gasoline.

They have also focused on developing catalytic reforming units(CRU) that specialize in increased production of high-value aromatic products.

At present, after 2020, the company has been focusing on improving its operational efficiency, which includes increasing the processed record crude volumes, they have also adopted energy-efficient and environmentally friendly refining methods and increased their focus on biofuel integration and chemical recycling that supports the country's sustainability goals. They have also increased their investments in green hydrogen and carbon capture technologies to work towards their goals related to decarbonization.

Remarkable achievements- MRPL achieved record crude processing and fuel production:

MRPL is known for its achievements in efficient oil production and refining initiatives. In 2022, the company successfully processed a record of 16.14 MTPA crude oil, surpassing the installed

capacity.

This achievement is considered the most impressive one in history, considering the installed refining capacity was officially set at 15 MTPA and with the aid of remarkable operational feat, the company has managed to process about 16.14 MTPA of crude oil which is more than its designed capacity. This achievement proves that the company has efficiently managed its refinery operations to handle more crude oil than expected thereby increasing their fuel production and efficiency.

Apart from this annual refining capacity that has been exceeded – 16.14 MTPA vs. 15 MTPA, the company has also achieved a quarterly record which is 4.51 MT in Q4 2023-2024 vs. 4.42 MT in Q4 of 2015-2016. MRPL has achieved this record of processing 4.51 million tonnes (MT) of crude oil in a single quarter in the last quarter of 2023-2024. Previously the company surpassed their previous best processing of 4.42 MT in 2015-2016. To achieve this record, the company has been focusing on investing in advanced technologies, that help in processing heavier, and high-sulfur crude oils and thereby reducing the dependency on costlier light crude. The refinery has thus secured a steady supply of crude oil from various sources, ensuring no shortages or delays.

They have worked on its investments in hydrodesulfurization, catalytic cracking, and other refinery upgrades that enhanced its ability to extract more useful products from the same volume of crude.

Record fuel and chemical production: MRPL has also achieved new records in producing key fuels and petrochemicals, surpassing previous records and thereby reinforcing its position as a leading refinery in India. The advanced refining technology and strategic operational planning, MRPL delivered exceptional output across key products such as jet fuel, polypropylene and reformate. These set multiple records in the process.

Jet fuel -Aviation turbine fuel:

In January 2024, MRPL achieved a historic milestone in the production of Aviation Turbine Fuel (ATF), the fuel is considered the lifeblood of the aviation industry and about 222.69 thousand tonnes of ATF were produced setting an all-time high for the refinery.

The story didn't end there, MRPL set another record the next month, February 2024, by dispatching 227.52 thousand tonnes of ATF, which is considered the highest-ever shipment made in history. This achievement ensured that the airlines had a steady and reliable supply of high-quality jet fuel, that supports both domestic and international aviation.

Polypropylene: strengthening India's plastics industry:

The very next month, March 2024, MRPL made headlines by setting a new record in the production of polypropylene by manufacturing 43.73 thousand tonnes, which is the highest-ever production made in history.

Polypropylene is a versatile plastic polymer that is used in everything from automotive parts and packaging materials to household goods and medical supplies. MRPL's record-breaking helps in meeting rising demand in Indian industrial and manufacturing sectors.

This impressive production has opened up new export opportunities for MRPL in the global polypropylene market.

Reformate: the power behind premium petrol:
Reformate is a high-value petroleum product that is used to produce high-octane petrol and petrochemicals and thereby saw record production levels at

MRPL in early 2024.

In January 2024, MRPL produced a record-breaking 104.23 thousand tonnes of reformate and in February 2024, the refinery dispatched the produced reformate of about 130.43 thousand tonnes, which is the highest ever.

This achievement is considered significant as it marks the company in global competitiveness by supplying high-value petroleum products and it supported the country's energy security by reducing dependence on imported petrochemical feedstocks.

Impact and benefits of record crude processing:

India has been dealing with increasing energy demand and more availability of refined fuels helps in meeting the country's growing energy demand. The higher throughput means, increased sales of fuel and this has helped to increase the financial performance and improved profitability.

MRPL has also strengthened their position in the refining sector due to this record crude processing and their ability to supply more refined fuels for both domestic and international markets has also increased.

MRPL made INR 3596 crore in net profit in 2023-2024 and this was an increase from INR 2638 crore in 2022-2023.

However, in Q4, there was a dip in the net profit which was INR 1,137 crore whereas the net profit in Q4 of 2022-2023 was INR 1908 crore.

Apart from these financial performances, there were also some financial challenges, especially in Q3 FY 2024-25: revenue fell from INR 28, 364 crore in Q3 2023-2024 to INR 25,601 crore. This has also impacted the profit before tax, which is from INR 591 crore to INR469 crore. The net profit fell from INR 387 crore to INR 304 crore.

Conclusion:

Can MRPL sustain its remarkable growth while adapting to a rapidly changing energy landscape? India is pushing for cleaner energy, and sustainable refining and MRPL is standing at the crossroads of innovation and expansion. By leveraging advanced refining technologies, enhancing petrochemical production, and investing in green energy, MRPL is not only reinforcing its leadership in the refining sector but also shaping the future of the country's energy independence.

As U S Tariffs Hit China Indian Solar Manufacturers See a Golden Opportunity

Vinodhini Harish

Introduction:

Here is a pivotal move in the global solar energy industry, the US has decided to continue and potentially expand- its tariffs on imported Chinese solar panels under section 201 of the Trade Act. The tariffs were initially imposed by former president Donald Trump and are now extended by the Biden Administration. This policy shift doesn't just China, and the US, it also opens up a bright opportunity for Indian solar manufacturers. While there are a few advantages like export boost for companies like Reliance and Waaree, there are also some concerns about the potential for cheap Chinese panels flooding the Indian market. In this article, we have explored different perspectives and case studies to analyze the situation deeply. Please enjoy this short read!

The Big news: Trump's Tariffs are staying and going nowhere.

The U.S. placed special taxes called tariffs on imported solar panels and solar cells to protect American solar companies from cheap foreign competition, especially from China. The law Section 201 of the U.S. Trade Act of 1974 allows the U.S. government to put temporary tariffs on imports if they are harming the U.S. industries. In 2018, when President Donald Trump used this law to introduce a 30% tariff on imported solar modules, it helped the US industries to flourish and grow. Although the tariffs were reduced over the four years to 15% the goal remained solid, which is to give U.S solar companies time to grow without being crushed by cheap imports.

Now the Big news is "The US is continuing and possibly expanding tariffs on Chinese solar products".

The Biden administration has extended the tariffs and may continue to maintain or expand them, especially as U.S.-China tensions remain high. Recently, Donald Trump reaffirmed that if he returned to power, he would reimpose or increase the tariffs across several sectors, such as solar to promote "Made in America" goals.

China has been dominant in solar manufacturing, especially in manufacturing low-cost solar modules and cells. This causes harm to manufacturers in other countries, especially in the U.S. and India. These manufacturers are not capable of competing with the massive scale and subsidies that Chinese companies enjoy. Therefore Trump imposed tariffs

in 2018 on imported solar panels and modules, where the tariffs start at 35% and it gradually reduced over time.

While the tariffs are still in place and expected to increase in the future, Chinese solar manufacturers are struggling to sell bulk volume to the U.S. in large volumes, there are two possible shifts. Other countries like India, Vietnam and Malaysia are being eyed as alternative manufacturing hubs for US and European markets. There is a risk that China will try to offload its excess supply and dumping into the open markets like India, selling at ultra-low prices.

The news affects India in two conflicting ways:

1. Opens a huge opportunity – boost for Indian manufacturing:

The U.S. and other Western countries are growing in demand for non-Chinese products, and non-Chinese solar panel suppliers, with a strong domestic market, skilled labour and supportive government policies. Therefore they are in a good position to scale up and export.

India's solar module capacity is rising and the country also benefits from Production Linked Incentive (PLI) scheme and Basic Customs Duty (BCD) on Chinese imports.

- Reliance acquired Norway-based REC Solar and invested in building a fully integrated solar gigafactory in Jamnagar, Gujarat. This factory is a part of their vision to become a global leader in green energy. Now considering the situation, Reliance is targeting exports, especially to the markets that are moving from Chinese imports like the U.S. and Europe. Reliance is now positioning itself as a non-Chinese, credible alternative for global buyers. Certainly, U.S. tariffs are making space in the export market for companies like Reliance to fill the gap.

- Waaree is one of India's largest solar module manufacturers that has recently doubled its capacity from approximately 2GW to 5 GW and is expected to expand further. It has already exported solar modules to the US and other countries, especially after the anti-China sentiment that rose in the West. Additionally, Waaree is also on the ALMM- ALMM-approved list of Models and Manufacturers for Indian government projects. Waaree leveraged India's PLI scheme and favourable export sentiment. The global shift away from China is helping Indian firms to grow internationally.

2. Threat: Risk of Chinese dumping:

Due to higher tariffs and other concerns, Chinese companies shut out of the U.S. market and they may flood India with cheap solar panels. This could lead to the dumping of Chinese solar products in India and can hurt Indian solar manufacturers. They are still trying to ramp up and compete on price and efficiency. The Chinese companies couldn't export to the U.S and therefore they looked at India and Southeast Asia to offload their excess inventory. Reports show that the prices went as low as 18-20% per watt, making it tougher for Indian producers to compete. Indian firms, especially the smaller ones struggled with unsold stock and wafer-thin margins. Furthermore, the Solar Power Developers Association (SPDA) raised concerns with the government over Chinese dumping, demanding stronger safeguard measures.

Reliable reports say that Indian solar manufacturers have reported a 20-30% price drop in solar modules in 2023, which is largely due to overcapacity in China. To add to this developing issue, the Indian government has temporarily paused the ALMM requirement in 2023, to reduce solar costs and accelerate deployment. This has opened the door for foreign modules in large projects. This has caused a setback for the Indian manufacturers and stirred fear that this would allow Chinese dumping again.

How Indian manufacturers can strategize the opportunity for themselves?

The U.S. has re-imposed Section 201 tariffs on imported solar panels and modules, which disproportionately affected Chinese manufacturers. The Chinese products constitute over 70% of the global solar module production, the restriction opens up supply chain gaps that other nations can fill.

India is growing at a faster pace in the renewable energy market and there is a strong domestic demand for the products, therefore the country is well-positioned and backed by supportive schemes like:

PLI schemes – INR 24,000 or Approx. $3 billion: this aims to boost domestic production of high-efficiency solar PV modules.

Basic customs Duty: 40% on modules and 25% on cells to discourage Chinese imports.

Approved list of Models and manufacturers(ALMM): promotes the use of domestically certified manufacturers for governmental projects.

Indian solar capacity stood at 73.3 GW as of December 2023 with a target of 280GW by 2030. The demand is massive but so is the need for local manufacturing. Overall, with the help of favourable policies and rising domestic demand, India is poised to emerge as a non-Chinese alternative.

Take away:

The U.S. continues to tighten its trade grip on Chinese solar imports and a clear path opens for India to expand their solar manufacturing capabilities. Indian manufacturers can stand tall to benefit from the West's growing appetite for non-Chinese solar products, as they are also supported by progressive policies like the PLI scheme, BCD, and robust domestic market. Nevertheless, some threats come with this policy. Chinese dumping poses a serious challenge to Indian manufacturers. Therefore to fully seize the opportunity, India must strike a careful balance between scaling up exports and safeguarding its homegrown solar industry. India has a chance to become a global solar powerhouse in this shifting geopolitical landscape.

Henkel Debuts New Concentrated Formulas for all®, Persil® and Snuggle® Liquid Laundry Products

STAMFORD, Conn., April 2, 2025 / PRNewswire/ -- Henkel, a leading manufacturer of well-known consumer and industrial brands, is introducing concentrated formulas and packaging across all®, Persil® and Snuggle® liquid laundry products. This update offers laundry-doers effective detergent cleaning power and fabric conditioning softness and scent at a more concentrated level per load – making every wash more environmentally conscious. The new formulas and packaging began shipping to store shelves early March 2025 and will continue to roll out in subsequent months.

This initiative is a testament to the ongoing commitment to sustainability at Henkel, evidenced by significant reductions in resources used across the value chain. This includes an average 16% dose concentration across laundry detergent variants* and the integration of 50% recycled plastic content into new bottle designs, unlocking sustainability improvements and efficiency from production to shipping and to consumer use.

"At Henkel, we are dedicated to leading with initiatives that not only enhance product performance but also demonstrate our corporate values for the good of all generations," said Philipp Schaffer, Corporate Senior Vice President, Henkel Consumer Brands, NA. "Together, we're fostering more mindful laundry days that create positive, lasting impact."

Martina Spinatsch, Senior Vice President, Research & Development adds, "By further concentrating the liquid formulas for these laundry brands, we're reducing our environmental footprint from plastic to water-usage to shipping, providing efficacy our consumers know and trust."

The introduction of these concentrated formulas also sets new benchmarks in environmental stewardship for the brands:

- Water Conservation: The new detergent formulas reduce water usage in our manufacturing facilities, conserving approximately 9 million gallons annually, equivalent to the water used in 450,000 standard laundry wash loads**.
- Plastic Reduction: With concentrated formulas comes smaller bottles. The initiative achieves a nearly 5% net reduction in plastic, which is equivalent to the plastic found in over 20 million one-gallon milk jugs.
- Moreover, the majority of the brands' laundry product bottles will be made with 50% recycled materials.
- CO2 Reduction: With smaller, more efficient packaging, Henkel can effectively reduce the number of trucks needed for transportation, resulting in a significant decrease in CO2 emissions. This change will contribute to a projected annual CO2 emissions savings of over 4,000 metric tons, which is equivalent to the absorption capabilities of approximately 169,100 trees annually.

Formula concentration supports the Henkel 2030+ Sustainability Impact Framework, which focuses on creating a regenerative planet, thriving communities and trusted partnerships. By reducing resource consumption and enhancing product sustainability, Henkel aims to help influence positive consumer behavior through effective and environmentally responsible products.

Source : all®

Boosting Indias Aerospace TASL Invests INR 29 Point 34 Crore in New Manufacturing Facility- Strategic Land Acquisition in Vemgal

Vinodhini Harish

Introduction:

Tara Advanced Systems Limited (TASL), a key associate of Tata Sons is known as a critical player in India's aerospace and defence sector has made a strategic investment by acquiring 7.4 lakh square feet. This is a part of industrial land in Karnataka's vemgal region. The deal is valued at INR 29.34 crore and the acquisition reflects TASL's strong commitment to enhancing the country's defence manufacturing capabilities. In this article, we have everything you want to learn about the news. Let's begin.

Tata Advanced Systems purchases 7.4 lakh sq feet of ground in Karnataka for Rs 29 cr

Tata Advanced Systems Limited (TASL) is a pivotal player in India's aerospace and defence industry and a subordinate of Tata Sons. They have acquired a 7.4 lakh square foot plot, which is approximately 17 acres, in the Vemgal industrial area near Bengaluru, Karnataka. The deal was finalized and signed on February 24, 2025, and it was valued at INR 29.34 crore. It was done through a lease-cum-sale agreement.

- TASL intends to utilize the land to build a modern facility to develop its:
- Aircraft manufacturing
- Final assembly line where different components of an aircraft are put together
- MRO (Maintenance, Repair and Overhaul) operations.
- The facility is a part of TATA's broader commitment to strengthening the country's defence and aerospace manufacturing ecosystem.

Vemgal Industrial Area acquired by Tata Advanced Systems Ltd is situated near the Kolar-Chikkaballapur Road (SH-96) in Karnataka. The land acquisition deal is structured as a lease-cum-sale-agreement, this was finalized at a total cost of INR 29.34 crore, translating to around INR1.7 crore per acre. Under the agreement, TASL will lease the land for 10 years, paying an annual rent of INR 17,011 along with an annual maintenance fee of INR 2.55 lakh. The company has also paid a stamp duty of INR1.5 crore as a part of the transaction. Since the land is strategically located and the site has very good proximity to Narasapur and Jakkasandra industrial areas and about 38 kilometres from Bengaluru via Yelahanka, therefore it offers strong logistical connectivity and access to the growing industrial ecosystem.

Karnataka is considered as a hotspot for aerospace and defense due to a strong infrastructure, industry-friendly policies by the state government, and a skilled workforce.

The presence of Bengaluru, provides a great exposure to India and making it a top hub for aviation, defense and R&D.

What are the opportunities?

India is expediting its growth in the commercial aviation market like no other country in the world andwith the number of aircraft orders, expanding airports and massive aerospace supply chain, the country is emerging as a global aviation leader.

Digitalization expenditure on Indian aerospace is anticipated to grow from USD 33.6 billion in 2024 to USD 53.8 billion by 2034. There is a strong emphasis on AI-driven design, predictive analytics and operational visibility.

Airlines is battling and pushing the limits to enhance passenger comfort and sustainability, therefore the country is emerging as a key player in the next-generation aircraft interiors. India's aircraft seating market is expected to reach USD 797.2 million by 2030 and its growing with a CAGR of 13.3% from 2025 to 2030.

The growth of the aircraft seating market is driven by innovation in lightweight materials, AI-powered smart cabins and eco-friendly solutions. Therefore, the facility marks a major push toward indigenous aircraft production and reinforces the country's ambitions to become a global aerospace hub. TASL is already a key defence and aerospace play which is looking for ways to expand its footprint and thereby contribute to the Make in India and Atmanirbhar Bharat initiatives by reducing the number of imports and striving to become independent in the energy sector.

The Karnataka state government's push for self-reliance and initiatives such as Make in India are attracting foreign investments and are leading to

international partnerships with countries like France, Russia, and the US.

This acquisition has a goal to establish a cutting-edge aircraft manufacturing facility and it will house a final assembly line and MRO (Maintenance, Repair and Overhaul) operations.

The Final Assembly line: The final assembly line is a critical phase in the aircraft manufacturing where the individual components are bought toegehter to form the finished product.

MRO facilities: MRO facilities include additional essential operations such as regular maintenance services, repairs, and major overhauls to ensure the upkeep, safety, and efficiency of aircraft.

Both these facilities are crucial in helping the Indian Air force, especially for maintaining and supporting their Lockheed Martin C-130 J aircraft, which is a type of military transport plane used for carrying cargo, troops and other important operations.

The Vemgal 1st phase industrial area is a large industrial zone that covers about 666 acres(about the size of 500 football fields). The area is about 10 kilometres away from the nearby industrial zones of Narasapura and Jakkasandra and around 38 kilometres from Bengaluru if you go through Yelahanka.

The region has become popular place as it is well set up for factories, warehouses and especially for car manufacturing, general industries, logistics, because of the good roads, strong infrastructure which makes transportation and business operations easy.

What can be learnt from this strategic move of TASL?

1. **Why Vemgal was chosen – A strategic location advantage:**

   TASL's choice of vemgal is not a coincidence as the location has a good proximity to Bengaluru which is India's tech and aerospace hub. There is a good network of existing suppliers and ancillary industries. Vemgal's connectivity to national highways and industrial corridors which ensures smooth logistics for transporting aircraft parts and finished goods.

2. **Tata's Broader Aerospace Vision:**

   TASL's new facility is a strategic step in Tata group's larger aerospace journey and the company has already established partnerships with global defense giants such as Lockheed Martin, Airbus, Boeing, contributing parts, structures, and services.

   This acquisition represents TATA's ambition to scale up from a component sup;;ier to a full spectrum aerospace player capable of manufacturing entire aircraft platforms, unmanned aerial systems (UAS), radars and missile systems.

3. **Supporting India's defence preparedness:**

   The focus on MRO and final assembly operations aligns with the country aligns with India's long-term defence preparedness goals. Maintaining critical platforms such as C-130J super Hercules locally reduces turnaround time and cost. This enhances national security by reducing dependence on foreign MRO hubs.

Take away:

TASL's assertive investment underlines the TATA group's confidence in the country's defence manufacturing potential and Karnataka's conducive business ecosystem. This transformation signifies India's shift from being a buyer of foreign defence technology to becoming a global aerospace supporter. There is a massive demand surging in both military and commercial aviation segments, and the development of high-tech, indigenous capabilities like those planned in Vemgal are all crucial for positioning India as a serious player in the global aviation landscape. Overall the acquisition of land by TATA's advanced system in Karnataka's vemgal Industrial area marks a decisive leap forward in India's aerospace journey. The planned development of an advanced manufacturing and maintenance facility demonstrates TASL's long-term vision is becoming a full-spectrum aerospace and defense leader.