

## UFlex Chemicals Business Secures India Patent for New Process to Derive Epoxy Ester Resin

*~A first ever for the company's Chemical Business~*

*~Acts as a booster to the existing Epoxy Resin portfolio~*

**Noida, India, 18.01.2021:** The Chemicals Business of [UFlex Limited](#) today announced securing of a patent (**Patent No 354903**) on '**A process for the preparation of Epoxy Ester Resin**' in accordance with the provisions of the Patents Act, 1970. This is the first patent for Chemicals business ever in India and it will be considering applying for a global patent in due course of time. UFlex' Chemicals Business is a leading manufacturer of Inks, Coatings and Adhesives for flexible packaging, cartons, labels, and paperboard.



UFlex' new patent will ensure technical advancement in providing a process for resin preparation wherein no waste water treatment is required which is a significant move in the direction of sustainability. Furthermore, Epoxy Ester Resin prepared by this process will be used in radiation curing or energy curing and therefore curing will be faster, unlike the typical Epoxy Ester resin which is thermally cured and takes a longer time besides being uneconomical. With enhanced stability of coating and its chemical resistance attributes a **total of 16 claims have been taken under this patent.**

On securing this patent, **Rajesh Bhasin, Joint President, Chemicals Division, UFlex Limited** said, "We are extremely delighted with the continued strengthening of our R&D prowess. The issuance of this patent is another step in the development of a robust portfolio for our business. This is part of our initiative to backward integrate,

*using our inherent strengths. Such initiatives help us to have greater control on product quality and supply security. This unique achievement is all because of the progressive approach, years of hard work and commitment."*

Epoxy Ester resins are known for their use in coatings, paints and adhesives. Before this patent was registered, conventionally Epoxy Ester resin is produced in a two-stage process. The first stage is condensation which generates a lot of salt that is removed through several water washings, resulting in high effluent generation. Typically, waste water contains 50,000-95,000 ppm TDS and 50,000-60,000 ppm COD, which, therefore, requires large capital investment for waste water treatment plants adding to the capital expenditure and operating expense of the process of Epoxy resin preparation. In the second stage of a conventional process, Epoxy resin is converted into Epoxy Ester resin with the esterification process which results in the formation of undesirable Epoxy Ester resin, which has a dark colour and odour.

However, UFlex' newly invented and patented approach arrests the challenges posed in a conventional method as the Epoxy ester produced has no waste water generation, no odour and neither a dark colour which is good for fast curing coatings with efficient cost effective processing.

Epoxy Resins are gaining supremacy over the conventional use of Vinyl Esters and polyesters in the Flexible Packaging industry as well as in Offset printing areas. Epoxy Resins deliver performance attribute in five key areas.

- Better adhesion by allowing to bond to the reinforcement or core
- Superior mechanical properties imparting higher strength and stiffness  
Improved resistance to fatigue and micro cracking issues
- Reduced degradation from water ingress. Epoxy Resins have lesser shrink ability by up to 50% in comparison to Vinyl Esters and Polyesters.
- Increased resistance to osmosis which is way better than Vinyl Ester and Polyesters

*\*\*ppm- Parts per million; TDS- Total Dissolved Solid; COD- Chemical oxygen demand*

#### **About UFlex Chemicals Business:**

The Chemicals Business of UFlex that was incorporated in 1994 and headquartered in Noida is the leading provider of flexible packaging Inks, water-based, solvent-less and solvent-based adhesives and speciality UV & LED Coatings with the full range of UV and LED inks/ coatings for sheetfed offset, letterpress & narrow web application serving customers across the globe. Noida and Jammu plants are accredited with several certificates—such as ISO 9001:2015, ISO 14001:2015, ISO 45001:2018, ISO 50001:2018, and ISO 31000:2018. Its state-of-the-art R&D centre is NABL (ISO/IEC 17025:2017) accredited & recognized by The Department of Science and Technology, Government of India. The verticals' prime focus remains on developing sustainable technology, customized products, food-safe toluene free compliant inks as per IS 15495:2020 and providing on-site support to our customers.

For details please visit: <https://www.uflexltd.com/chemicals.php>



**About UFlex:**

UFlex is India's largest multinational Flexible Packaging Materials & Solution Company and a global player in Polymer Sciences. Since its inception in 1985, UFlex has grown from strength-to-strength and has created a presence across all verticals of the flexible packaging value chain - Packaging, Packaging Films, Aseptic Liquid Packaging, Holography, Cylinder, Engineering and Chemical. The Company has earned an irreproachable reputation defining the contours of the 'Packaging Industry' in India and overseas by providing end-to-end solutions to clients across 140 countries. Headquartered in Noida, UFlex enjoys a global reach with state-of-the-art manufacturing facilities in India, UAE, Mexico, Egypt, USA, Poland & Russia.

For more details, click on: [www.uflexltd.com](http://www.uflexltd.com)

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