

Press release

ECS 2025: Kuraray showcases new, more sustainable polymers for coatings and printing inks

ISCC PLUS certification now confirms that a number of products manufactured by Kuraray in Frankfurt-Höchst are bio-based.

Hattersheim near Frankfurt, January 20, 2025. Kuraray, the global speciality chemicals company with headquarters in Japan and European headquarters in Hattersheim, will be presenting a whole series of product premieres at the European Coatings Show (ECS) in Nuremberg. This year's ECS will take place from 25-27 March 2025. Three Kuraray units will be represented at Stand 366 in Hall 1: Mowital, Poval and Isoprene Chemicals. Their motto for the trade fair is: "Adding value in coatings". Kuraray's MOWITAL[®] PVB resins include three lowviscosity grades whose sustainability is now confirmed by ISCC PLUS certificates. The Poval unit produces Kuraray's wide range of polyvinyl alcohols – the new, very easy-to-process EXCEVAL[™] OKE 975 will be making its debut at the trade fair. And the Isoprene Chemicals Division will be presenting three new products at the ECS: the IPEMA reactive diluent for durable hard coatings, MMB as a solvent for emulsions and coalescing agent for water-based paints, and MPD-based polyols for the premium coating of flooring, car interiors and textiles, for example.

MOWITAL® PVB binders now also with ISCC PLUS certification

Kuraray is the European market leader when it comes to sophisticated polyvinyl butyral (PVB) grades, which are used as high-performance binders for printing inks and coatings. Kuraray's comprehensive range of PVB resins bears the brand name MOWITAL[®] (www.mowital.com). At ECS 2025, Kuraray will be presenting three MOWITAL[®] grades that have received ISCC PLUS certification for the first time. This means that the MOWITAL[®] grades B14S, B16H and B20H, which Kuraray produces in Frankfurt-Höchst, will in future also be available in a version certified for sustainability by an independent organisation.

ISCC PLUS (International Sustainability & Carbon Certification) is a global certification programme for the circular economy and bioeconomy. ISCC PLUS certification (<u>www.iscc-system.org/certification/</u>) verifies the use of bio-based, renewable or recycled raw materials. At the same time, the certificate makes the sustainability of the entire

value chain traceable for customers. ISCC PLUS follows the mass balance approach, which transparently balances the quantity of sustainable raw materials and allocates them to the end product – as is now also the case with the three MOWITAL[®] grades.

While the two very low-viscosity MOWITAL[®] grades B14S and B16H are often used as binders for printing inks – whereby B16H is also suitable for flexographic and gravure printing inks – MOWITAL[®] B20H is not only used in inks, but often also in coatings. This is because B20H not only has excellent compatibility with phenolic resins, it also adheres well to metal surfaces such as steel, iron, zinc or aluminium.

Bio-circular polyvinyl alcohol and the easy-to-process EXCEVAL™ OKE 975

The Poval unit is responsible for the wide range of polyvinyl alcohols (PVOH/PVA) that Kuraray produces in Frankfurt-Höchst (www.kuraray-poval.com). Kuraray also attaches great importance to sustainability in the production of its polyvinyl alcohols. Since October 2024, the company has had a portfolio of KURARAY POVAL[™] products whose bio-circularity has been officially confirmed by corresponding ISCC PLUS certificates. Kuraray has been carrying out a Life Cycle Assessment (LCA) for its KURARAY POVAL[™] production in Frankfurt for several years now, which shows the exact carbon footprint of the KURARAY POVAL[™] polymers. The LCA value currently calculated for 2023 is 2.36 CO₂ equivalents. However, due to the bio-circular polyvinyl alcohol portfolio, it is foreseeable that this already low LCA value will fall further in the 2024 reporting year, by more than 25 per cent.

A new EXCEVAL[™] variant will also be making its trade fair debut at the ECS: OKE 975. The development goal for this EXCEVAL[™] grade was not least to make it easier for users to process. This is because the modified polyvinyl alcohol OKE 975 can be stored better in a dissolved state than previous EXCEVAL[™] grades – even for one to two weeks. This means greater flexibility for production processes. Emulsions made from the water-resistant PVOH/PVA grades of the EXCEVAL[™] family are used in the production of paints or in coatings for food packaging made of paper or plastic, for example, where EXCEVAL[™] serves as a very thin, material-saving barrier layer. The fundamental advantages of both PVOH/PVA types, KURARAY POVAL[™] and EXCEVAL[™], are their biodegradability, compliance with food safety guidelines and the recyclability and reusability of the packaging produced with them.

IPEMA and MPD for sustainable coatings, MMB for more stable aqueous paints

The Isoprene Chemicals Division of Kuraray (<u>www.isoprene-</u> chemicals.com/en/index.html) is presenting three new products at the ECS: IPEMA

(Isoprenyl methacrylate), a low viscosity UV curable monomer for durable hard coatings; MMB (methoxymethybutanol), that serves as a coalescing agent for waterbased paints; and MPD (methylpentanediol), a unique diol that is used to make the Kuraray polyols for high-performance polyurethanes. IPEMA (<u>https://isoprenechemicals.com/en/products/ipema.html</u>) enables the production of resistant and particularly sustainable coatings thanks to stepwise crosslinking, which leads to a relaxation of the applied coating. IPEMA also enables faster curing and thus reduces energy consumption. The reaction in which IPEMA is used does not require any

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solvents. Visitors to the Kuraray stand will be able to compare two car models: One is conventionally coated using HDDA (hexanediol diacrylate), while the coating on the other uses the new IPEMA. The model coatings highlight further advantages of IPEMA: it is characterised by both high resistance to scratches and greater flexibility. This possibility of very accurate and at the same time sustainable coatings has already aroused great interest both in the automotive industry and among electronics manufacturers.

MMB (methoxymethybutanol) is a specialty solvent from Kuraray that is used as a coalescing agent for emulsions and paints. With its hydrophilic properties, it increases the water solubility of otherwise poorly soluble organic compounds. Advantages of MMB for paints: good film formation, flowability due to low viscosity, stability of the emulsion with regard to viscosity during storage and pigment dispersion. MMB itself is a clear, colourless and completely water-soluble liquid. Thanks to its very low toxicity and biodegradability, MMB is ideal for products that are to carry the EU Ecolabel. At its stand, Kuraray will be exhibiting printed paper for visitors to compare ones printed with inkjet ink made with MMB to others made with glycerol or propylene glycol.

This year's third highlight in the area of isoprene chemicals are MPD based polyols, which are used for the production of polyurethane dispersions from which coatings and adhesives are made. (www.kuraray.eu/products-solutions/product-ranges/mpd). Thanks to the structure of MPD, the polyols are hydrolysis resistant, easy to handle because of a low viscosity at room temperature and transparent. Kuraray offers various types of MPD-polyols, with molecular weights from 500 to 6000. This very wide range enables customers to adapt their polyurethane dispersions to their needs: from high flexibility and high adhesion to aluminium to high chemical resistance. MPD-polyols are used, for example, in the coating of floors, vehicle interiors or textiles. At its stand, Kuraray will be exhibiting particularly thin, transparent films that have been created using MPD-based polyols.

About Kuraray

Kuraray Europe GmbH was founded in 1991. It is headquartered in Hattersheim near Frankfurt am Main and generated annual sales of 1.3 billion euros in 2022. More than 830 employees work for Kuraray throughout Germany at its sites in Hattersheim, Frankfurt and Troisdorf. Kuraray is a global speciality chemicals company and is one of the largest suppliers of polymers and synthetic microfibres for many industries, such as KURARAY POVAL[™], MOWITAL®, Trosifol® and CLEARFIL[™]. A further 215 employees at seven European sites are also involved in the development and application of innovative high-performance materials for numerous sectors such as the automotive, paper, glass and packaging industries as well as for architects and dentists.

Kuraray Europe is a wholly owned subsidiary of the Japanese listed Kuraray Group, headquartered in Tokyo, with more than 11,700 employees worldwide and sales of EUR 5.5 billion.

You can also find this press release and images on the Internet at: https://www.kuraray.eu/

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