



Innovate for Impact: Join the Sustainable Plasticiser Challenge!

ISC3 and NUVANT Launch New Corporate Challenge on Sustainable High-Performance Plasticisers for PVC Emulsion Plasticsols

The International Sustainable Chemistry Collaborative Centre and NUVANT, an international company dedicated to the design and manufacturing of coated textiles launch a joint Corporate Challenge – aimed at safer, more sustainable solutions for automotive interior applications. Together, ISC3 and NUVANT, invite innovators, start-ups, and researchers worldwide to co-develop a sustainable, high-performance plasticiser for PVC emulsion plasticsols. The winning solution will enter into a strategic partnership with NUVANT. This includes full technical support, performance testing free of charge, and an initial purchase of 1 ton of the product by 2027, with the potential to scale up to 20 tons by 2030. Applications are open until 27 February 2026 and can be submitted via the ISC3 website: <https://isc3.org/page/corporate-challenge>.

Tackling the Global Plasticiser Challenge

Background: Plasticisers are vital in providing flexibility and durability to PVC-based materials. However, many traditional phthalate-based plasticisers are restricted in numerous countries due to health and environmental concerns. As industries look to sustainable solutions, there is an urgent need for high-performance, bio-based plasticisers that can meet demanding technical requirements while lowering carbon footprints and safety hazards. “At NUVANT, we believe that high performance and sustainability must move forward together as part of a shared vision,” emphasizes Mauricio Restrepo, CEO of Nuvant. “We see this challenge as an opportunity to turn innovation into real solutions – ones that create positive impact and drive the industry toward a more responsible future.”

“We are excited to collaborate with NUVANT in the search for innovative Sustainable Chemistry solutions for high-performance plasticisers for industrial applications”, stated Dr. Alexis Bazzanella, Director of the Innovation Hub, ISC3. “We are confident that the growing ISC3 network – with its many pioneering young companies supported by our Global Start-up Service – will generate valuable ideas and foster impactful collaborations.”

High-Performance Criteria

Proposed solutions must demonstrate performance comparable to state-of-the-art plasticisers such as DINP (Diisononyl Phthalate) and meet the following criteria:

Implemented by:



Supported by:



1. Plasticisation Efficiency: Comparable to DINP.
2. Low Migration, Exudation, and Volatility: Stability within the PVC matrix.
3. Low-Temperature Performance: Withstand impacts at -30°C without brittle failure.
4. Thermal Stability: Act as a co-stabilizer, enabling PVC to endure 500 hours of thermal aging at 110°C without loss of flexibility or colour.

In addition, the plasticiser must be:

- Bio-Based: Ideally derived from waste-based sources.
- High-Performance: Matching or exceeding technical benchmarks of conventional plasticisers.
- Colourless and Transparent: To avoid altering blends.
- Low Odor: Free of unpleasant or unacceptable odours (e.g., fishy, mouldy, sulphur-like).
- Low-Toxicity: A safe substitute for restricted phthalates and SVHCs.
- Recyclability-Friendly: Preferably enabling recyclability or at least not hindering it.

Finalists will be required to submit a 2 kg sample of their proposed plasticiser. NUVANT will cover shipment costs, conduct all testing at no cost to participants, and share results transparently. This pathway provides innovators with a unique opportunity to bring their sustainable solutions to market at industrial scale.

The full requirements for Technical Validation and Testing can be found on the application page: <https://9420.evalato.com>.



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About NUVANT

Nuvant believes that sustainability is not a trend – it is a way to transform the industry. The company integrates innovation, design, and environmental responsibility in the development of materials, driving the transition toward a more circular and conscious model. Sustainability is the guiding principle behind every decision. Nuvant embeds the principles of the circular economy throughout the entire value chain, turning production processes into opportunities to regenerate, reuse, and reduce environmental impact. The company implements energy efficiency strategies that optimize the use of natural resources and promote responsible production. Nuvant's sustainable packaging incorporates between 30% and 100% recycled material, significantly reducing waste generation. High-risk chemical substances are being replaced with safer alternatives, fostering a healthier environment for both people and the planet. In addition, Nuvant is committed to using biobased and recycled raw materials, driving innovation in next-generation materials. Through rigorous environmental management, Nuvant recovers and repurposes 94% of the waste generated in the processes, reintegrating it into new production cycles. The company also optimizes their logistics operations, eliminating unnecessary transportation and reducing carbon emissions associated with distribution. Nuvant's commitment to quality, sustainability, and transparency is reflected in their international certifications and seals such as REACH and RoHS, which validate the excellence of their products and processes. Nuvant complies with international regulations and directives, allowing them to access new markets and strengthen positive environmental and social impact.

About ISC3

The International Sustainable Chemistry Collaborative Centre promotes Sustainable Chemistry for a sustainable world. ISC3 supports the chemical industry and chemical-related sectors in their transformation process through sustainable, innovative approaches from Sustainable Chemistry. The goal is a circular economy that integrates multiple aspects of sustainability throughout the entire product life cycle and encourages a shift in stakeholder behaviour. To advance the dialogue between different sectors and actors worldwide, including Europe and other regions as well as emerging and developing countries, ISC3 follows a multi-stakeholder approach with the networking of policymakers, public and private sectors, education, science and society. It contributes to international chemicals policy, develops professional and academic training programs, advises companies, and promotes start-ups and research. Founded in 2017 by the Federal Ministry for the Environment, Climate Protection, Nature Conservation und Nuclear Safety (BMUKN) and the Federal Environment Agency (UBA), the centre is implemented by the German Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ; English: Society for International Cooperation) and supported by the Society for Chemical Engineering and Biotechnology (DECHEMA e.V.) as ISC3 Innovation Hub. www.isc3.org