

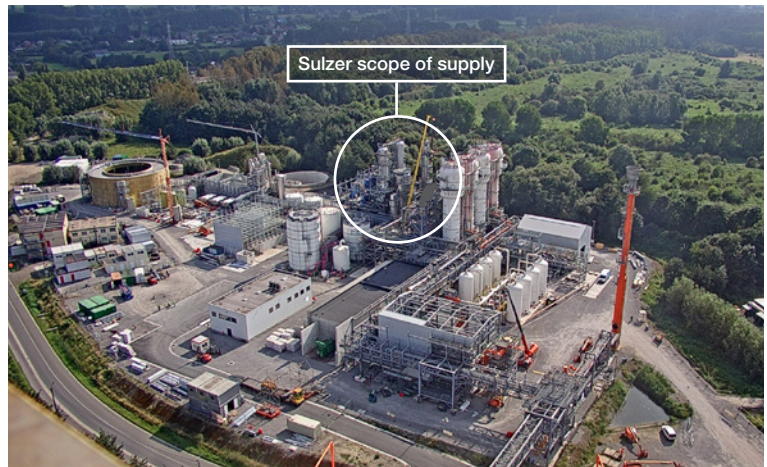
Bio-based chemicals, recycling and carbon capture

Bio-based chemicals, fuels and plastics are future building blocks to sustainability. Each product offers their unique challenges in product recovery and purification. For more than 40 years, Sulzer has worked hands-in-hands with technology providers and end-users to develop downstream recovery and purification technologies devoted to the production of bio-based products. Our product offering ranges from process components to complete separation process plants with improved efficiency and product purity.



PLA biopolymer pilot plant built by Sulzer

Picture on the right: Sulzer biofuel distillation and purification part of ArcelorMittal Steelanol plant in Gent, Belgium



Biofuels & biochemicals

- Sulzer has delivered cutting-edge distillation technology with a high level of heat-integration and membrane separation units across the world. Since 1940, over 100'000 columns were equipped with Sulzer internals in more than 500 applications.
- Our concentration and purification technologies have been industrially applied to a wide range of feedstocks: Starch, cellulosic, plant oils, flue gases and wastes.
- Biorefineries can rely on us to develop advanced separation solutions for the production of biochemicals at pilot, demo and commercial-scale installations.
- We bring broad industrial experiences in the production of various platform chemicals at high purity.

Biopolymers

Sulzer Chemtech offers a proprietary lactide monomer purification technology and Ring-Opening Polymerization technology platform SulROP™ to produce a wide range of (bio) polymers / plastics from PLA to other polyesters such as PEF.

Poly lactic acid (PLA):

- Leading technology provider of PLA technology, we offer PLA plant sizes up to 100 kt/y.
- Delivered 6 plants to convert crude lactide to PLA, globally.
- Unique process enables a wide range of PLA grades exhibiting a very low level of racemization and lowest yellowness index.

Separation technologies for biobased products

We develop, design and produce mass transfer equipment and offer solutions for downstream separations. Our portfolio includes Distillation, Absorption, Stripping, Evaporation, Gas liquid separation, Liquid-liquid extraction, Crystallization and Hybrid solutions like Reactive distillation, dividing wall column etc. for the production of bioethanol, biodiesel, renewable chemicals, flavors and fragrances etc.

Piloting / scale-up

All separation unit operations and process options are backed by pilot testing and full service from proof of concept to detailed engineering and after sales support. Sulzer Chemtech's Process Technology team looks for the most economical solution based on experience and process simulation validated by experimental results.

Carbon capture, utilization, and storage

We work closely with our customers to apply our high-end technologies and services for effective carbon capture and storage. Separation packings help to efficiently capture CO₂ at the point of origin and pumps reliably produce the high pressures needed for capture, transport, and injection. Our specialty packings help to manage pressure drop in large columns. We are working with new technologies on carbon utilization e.g. CO₂-Sequestered polycarbonate aggregates for use in concrete.

How can we help you?

Contact us today to find your best solution.

biobased@sulzer.com
[sulzer.com](https://www.sulzer.com)

Bioethanol hybrid distillation and membrane dehydration



Polymer recycling

Sulzer offers leading purification technologies for advanced chemical recycling for the mixed plastics, PET, PS and textile fibers.

- Licensed technology to recovery of high-quality hydrocarbons from pyrolysis oils using our distillation, hydrotreating & quenching solutions.
- SURE™ styrene – licensed technology to produce high quality recycled styrene (e.g. food grade PS)
- Sulzer's distillation, crystallization and LL-extraction technologies enable the purification of monomers from chemically recycled PET, achieving food-grade purities.
- Sulzer's DEVO technology allows the recovery of solvents from recycled polymers, achieving low ppm VOC levels.

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