Strategic research and innovation partnership (SRIP) –
Networks for the transition to circular economy

Bio-Raw materials for coatings in Helios

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AMONG THE TOP COATING COMPANIES IN THE EUROPEAN MARKET

Sales 2018: €400m

Employees: approx. 2,000

Production sites in: Austria, Germany, Italy, Slovenia, Croatia, Russia, Serbia and Ukraine

Production: 80,000 tons liquid coatings, 16,000 tons powder coatings, 29,000 tons chemicals, 54,000 tons resins

| Production 54,000 tons
| Turnover over €100m
| Sales to over 50 countries worldwide
| 81% external sales
| 75% of sales in Germany, Italy and France

RESINS SUPPLIER SINCE 1908

SRIP CIRCULAR ECONOMY

REPUBLIC OF SLOVENIA
MINISTRY OF ECONOMIC DEVELOPMENT
AND TECHNOLOGY

EUROPEAN UNION
EUROPEAN REGIONAL
DEVELOPMENT FUND
INVESTING IN YOUR FUTURE

Circular economy in Paints / Coatings

Coating:

1. **Resin(s) / binder(s)**
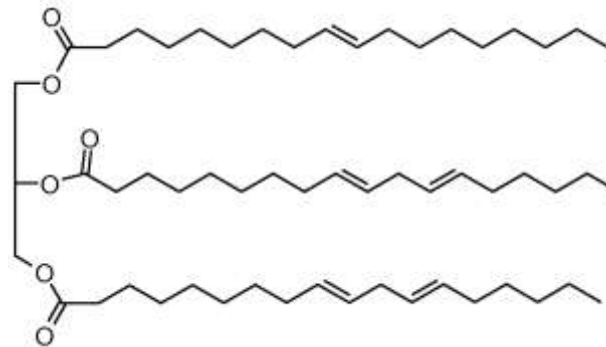2. Solvent(s)
3. Aditive(s)
4. Pigment(s)

Curent status in Helios regarding Circular economy

Process:

- Waste-water treatment

- Regenerative thermal oxidizer (RTO)

- …

Materials:

- Alkyds

- Water-based materials

- Partly Bio-based (Meth)Acrylates

- BPA-free resins for food-contact coatings

- …

Responsible Care®
OUR COMMITMENT TO SUSTAINABILITY

Finished projects

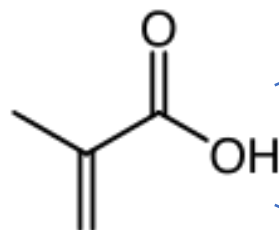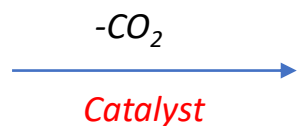*Novel high performance, water-based "high solids" and bio-based industrial wood coating*
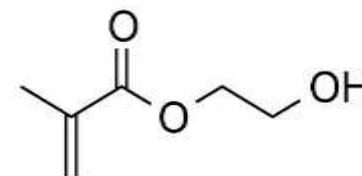
Increasing Bio-based content

- ○ **Bio-based methacrylic acid**
- ○ **Cooperation with National Institute of Chemistry Slovenia**
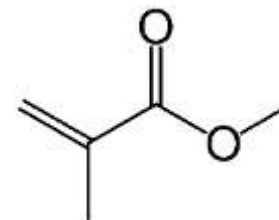- ○ **EU patent application**
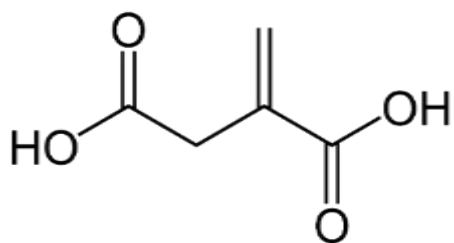
BIO-based Itaconic acid (from Citric Acid) → −CO_2 / *Catalyst* → *BIO-Methacrylic acid*

BIO-Hydroxyethyl Methacrylate

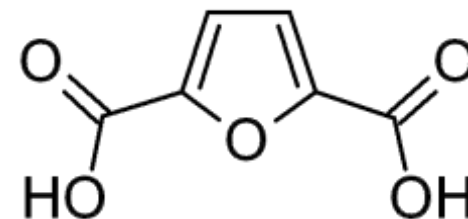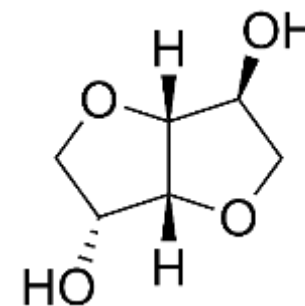*BIO-Methyl Methacrylate*

Increasing Bio-based content

- Bio alternative polyols (Isosorbide) and diacids for polyesters (Furandicarboxylic acid instead Terephthalic acid)
- COST Action:

  European network of furan based chemicals and materials for a sustainable development (FUR4Sustain)

- September 2019: 2 BBI (Bio-based Industries) proposals

SUSTAINABILITY
vs.
PERFORMANCE
&
PRICE

Thank you for your attention!

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HELIOS RESINS