

# SUSTAINABLE INNOVATION FOR POLYURETHANES

BioAmber bio-based succinic acid for innovative Polyurethane Formulations.

CREATING VALUE  
THROUGH A UNIQUE  
COMBINATION OF  
PERFORMANCE AND  
SUSTAINABILITY.



  
**bioamber**<sup>™</sup>

BioAmber bio-based succinic acid opens a gateway to a portfolio of **renewable building blocks** for innovative polyurethane formulations with **improved properties** and **sustainability profile**. The shorter C4 succinic acid chain can change the H-bonding between hard blocks/soft blocks and **increase polarity**. When combined with different glycols, bio-based succinic acid can produce PEPs with a wide range of melting points and viscosities. This **carbon neutral** product is the perfect substitute to petroleum based adipic acid.

#### Technology segments & applications:

##### TPU Elastomers

- Solvent resistance
- Strength and elongation
- Tear and abrasion resistance
- Higher bio-content

##### CPU Elastomers

- Solvent resistance
- Strength and Elongation
- Good hydrolysis stability
- Broad range of rebound

##### PU Leather

- Softness
- Tear Resistance
- Abrasion & solvent resistance
- Higher bio-content

#### Benefits of bio-based succinic acid in Polyurethanes:

- Formulation flexibility; ability to tailor performance
- Excellent mechanical properties; solvent resistance, hardness and abrasion resistance, adhesion, elongation and flexibility
- Cost competitive to petroleum chemicals
- Reduced exposure to feedstock price volatility

##### PU Coating

- Hardness
- Solvent and abrasion resistance
- Good adhesion
- Higher bio-content

##### Adhesives

- High crystallinity
- Solvent resistance
- Green strength
- Higher bio-content

##### Insulation Foams

- Storage stability
- Higher sustainability
- Stiffness
- Compression set

#### BioAmber bio-based succinic acid offers:

- Differentiated performance
- Renewable content
- An energy efficient process
- Carbon neutral process / Lower carbon footprint

**LET'S BUILD  
A GREENER WORLD,  
ONE CHEMICAL  
AT A TIME!**



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