

Building-Block Chemicals

BIO-BASED SUCCINIC ACID IN RESINS FOR COATINGS



CREATING VALUE FOR THE RESINS & COATINGS INDUSTRY

Resins & Coatings Applications

Polyester polyols (PEPs) using BioAmber BIO-SA™ brand bio-based succinic acid offer an excellent alternative for full replacement of petroleum-derived adipic acid and partial replacement of aromatic petroleum-derived phthalic anhydride or isophthalic acid in a wide range of coating applications.

→ UNSATURATED POLYESTER Gel coat



VALUE PROPOSITION

- Gloss
- Good tensile strength & elongation at break
- Better HDT & durability
- Less yellowing

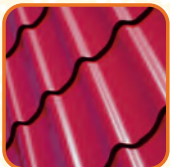
POSSIBLE COMBINATIONS

BIO-SA™ brand +
IPA + MA + NPG + PG

ROLE

Replacement of
adipic acid and
full/partial
replacement of
isophthalic acid

→ SATURATED POLYESTER Coil



VALUE PROPOSITION

- Hardness & flexibility
- Impact resistance
- Durability & chemical resistance
- Less yellowing

POSSIBLE COMBINATIONS

BIO-SA™ brand +
IPA + NPG + EG

ROLE

Replacement of
adipic acid and
partial replacement of
isophthalic acid

IPA = isophthalic acid
MA = malic anhydride

NPG = neopentyl glycol
PG = 1, 2 propylene glycol

PDO = 1, 3 propane diol
BDO = 1, 4 butane diol

HDO = 1, 6 hexane diol
TOFA = tall oil fatty acid

Penta = pentaerythritol
BA = benzoic acid



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BIO-BASED SUCCINIC ACID IN RESINS FOR COATINGS



→ **POLYURETHANE (PU)**
Synthetic leather



VALUE PROPOSITION

- Softness
- Tear resistance
- Abrasion and solvent resistance
- Bio content

POSSIBLE COMBINATIONS


BIO-SA™ succinate polyols with

- BioPDO
- BioPDO/BDO
- Mixtures with adipates

ROLE

Replacement of **adipic acid** and modified combinations of glycols

→ **POLYURETHANE (PU)**
Coating



VALUE PROPOSITION

- Hardness
- Abrasion and solvent resistance
- Good adhesion
- Bio content

POSSIBLE COMBINATIONS


BIO-SA™ succinate polyols with

- BioHDO
- BioPDO
- BioPDO/HDO

ROLE

Replacement of **adipic acid** and modified combinations of glycols

→ **ALKYD RESINS**
Wood & deco



VALUE PROPOSITION

- Gloss
- Durability & less yellowing
- Abrasion resistance
- Bio content

POSSIBLE COMBINATIONS

BIO-SA™ brand +

PA + BA
TOFA + Penta

ROLE

Replacement of **adipic acid** and partial replacement of **phthalic anhydride**

IPA = isophthalic acid
MA = malic anhydride

NPG = neopentyl glycol
PG = 1, 2 propylene glycol

PDO = 1, 3 propane diol
BDO = 1, 4 butane diol

HDO = 1, 6 hexane diol
TOFA = tall oil fatty acid

Penta = pentaerythritol
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