

Product Data Sheet - Fluids

1,3-Propanediol

CAS No. 504-63-2, EINECS No. 207-997-3

Description

Susterra® propanediol is a specialty diol made from corn sugar, a sustainable and renewable resource. Manufactured by DuPont Tate & Lyle via a propriety fermentation process, Susterra® propanediol offers a non-petroleum based alternative for end uses that desire a bio-based product but demand performance and quality.

Susterra® is a non-corrosive, non-flammable, colorless liquid with low toxicity and consistent purity. It is completely soluble in water and miscible with most aliphatic alcohols and ketones.

Applications

Susterra® can be used in applications such as deicing and heat transfer fluids and as a base for engine coolants where stability over a range of temperatures is important. In polymer applications, Susterra® propanediol can be utilized in the manufacture of unsaturated polyester resins and polyester polyols and as a chain extender and in urethane chemistries. Additionally, Susterra® propanediol can be used in the formulation of water-based paints, coatings and inks.

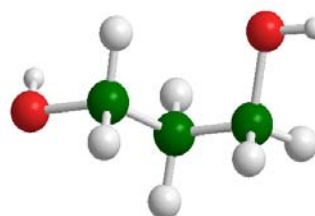
Susterra® has not been approved for use in the manufacture or preparation of food, drugs, or cosmetics.

Benefits

- In deicing applications, 100% renewably sourced Susterra® provides low toxicity and biodegradability.
- Susterra® delivers excellent freeze point depression for aqueous solution applications that require freeze protection.
- In coolant applications, Susterra® offers manufacturers and suppliers an alternative glycol coolant base that functions effectively to provide protection against freezing, boiling, corrosion and cavitation.
- Resins made with Susterra® feature improved flexibility and impact resistance.

Typical Properties

Appearance	Clear
Molecular Weight	76.1
Viscosity, cP (20°C)	52
Density (20°C)	1.053
Boiling Point (760 mmHg)	214 °C / 417 °F
Freezing Point	-24 °C / -11 °F
Flash Point	129 °C / 264 °F
Purity, wt%	99.7
Water, % max	0.05
Color, APHA max	15



Storage Conditions and Expiration Date

Due to its low vapor pressure, toxicity and flammability, Susterra® propanediol presents no special handling problems. Sealed containers should be stored within a temperature range of 0° – 50°C (32° – 122°F). Containers can be resealed and stored within the same temperature range. Avoid prolonged exposure to oxygen and water. The use of nitrogen during storage is encouraged. If the seal is unbroken and the material has been stored according to the manufacturer's recommendations, a 2 year shelf life can be expected.

Susterra® propanediol is hygroscopic and may require storage designed to minimize moisture intrusion, unless increased water content can be tolerated. Storage vessels and transfer lines of mild steel may be used if slight increases in color and trace iron levels are not objectionable. Stainless steel and/or mild steel vessels with baked phenolic or epoxy-phenolic linings are recommended to promote long-term storage and to maintain high quality. Susterra® is compatible with EPDM, Nitrile, PTFE, Viton®, and Teflon® for ancillary tubing and gaskets.

Packaging

18.1 kg (40 lb) Pails

199.8 kg (440 lb) Drums

1,000 kg (2,200 lb) Totes

Tank Trucks

Iso Tanks

Rail Tanks

For additional information or samples, please contact:

DuPont Tate & Lyle Bio Products Customer Service

In the US, Canada or Mexico: 1-866-404-7933

Other Regions: ++001-217-421-3443

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