

Technical Data Sheet

Eastman™ 1,4-CHDA-HP

Chemical Synonym

Cyclohexanedicarboxylic Acid

Applications

- Automotive
- Building materials
- Coil coatings
- Construction chemicals
- Electronic connectors
- Food flavors & food fragrances
- Intermediates
- Kitchen & bath
- Metal coatings
- Paints & coatings
- Pharmaceutical chemicals
- Process additives
- Protective coatings
- Truck/bus/rv
- Wind energy

Key Attributes

- An excellent combination of hardness and flexibility in one monomer
- Better gloss retention and yellowing resistance
- Better hydrolytic stability
- Excellent thermal stability for low resin color
- High solubility in molten glycols
- Improved corrosion, stain, chemical, and detergent resistance
- Reduced "orange peel" in powder coatings

Product Description

Eastman™ 1,4-CHDA-HP (1,4-cyclohexanedicarboxylic acid high purity) is a cycloaliphatic diacid offering many unique performance properties to polyester resins for coatings and fiberglass-reinforced plastics. It is also ideally suited improving performance of waterborne, high solids, powder coatings and coil coating applications. Its symmetrical, 1,4-substituted cycloaliphatic ring brings properties ideally suited for high-performance applications in automotive, transportation, industrial maintenance, aerospace, architectural, appliance, and general metal coatings, and gel coats. CHDA is a mixture of cis and trans isomers. It is supplied as white to off-white powder in various package sizes. Eastman also manufactures DMCD, which is the dimethyl ester of CHDA.

Typical Properties

Property	Typical Value, Units
General	
Molecular Weight	172.2
Empirical Formula	C ₈ H ₁₂ O ₄
Appearance	White to Off-White Powder
Assay	99+ wt % min.
cis Isomer	65 wt % min.
Iron	<15 ppm
Water	1.0 wt % max.
Solubility	
in Water, @ 20°C	1 wt %
Specific Gravity	
@ 20°C/20°C	1.38
Bulk Density	0.56 g/mL (35 lb/ft ³)
Melting Point ^a	164-167 °C (327-333 °F)
Flash Point	

Cleveland Open Cup	235 °C (455 °F)
Chemical Inventory Listings ^b	TSCA (USA), EINECS (Europe)

^aMelts quickly to give a hazy liquid due to 30-40% of the high-melting trans isomer. At this melting range, isomerization of the cis to trans begins to take place. Since the trans isomer melts above 300°C, a well defined melting point is not observable.

^bMITI (Japan), AICS (Australia)

Comments

Properties reported here are typical of average lots. Eastman makes no representation that the material in any particular shipment will conform exactly to the values given.

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