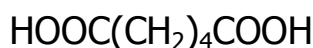


Adi-pure® Adipic Acid



Product Description

Adi-pure® is a crystalline, white powder used to make a variety of polymer and nonpolymer products serving many end uses.

Adi-pure® Adipic Acid is **not** sold for use as a direct food ingredient.

Applications

- Adhesives: urethane, polyester and polyamide
- Coatings: alkyd, urethane, gel coat, and polyester
- Nylon 6/6 fibers, engineering resins, films and monofilaments
- pH buffering in water soluble polymers and in flue gas desulfurization
- Ester plasticizers: monomeric and polymeric
- Synthetic ester lubricants and hydraulic fluids
- Textile treatments
- Urethane foams, elastomers and fibers
- Unsaturated polyester resins
- Wet strength paper resins: polyamide-epichlorohydrin type
- Copolyamide adhesives, resins, films and binders
- Intermediate in the production of adiponitrile, cyclopentanone, dimethyl sebacate and adipic polyanhydride
- Personal care emollients

Specifications

Assay, wt%, min.	99.7
Water, wt%, max.	0.20
Ash, ppm, max.	2.0
Iron, as Fe, ppm, max.	0.5
Methanol Solution Color (APHA), max.	4
Total Nitrogen (TN) mpm (moles per million moles), max.	15

General Information

CAS Name	Hexanedioic acid					
CAS Number	124-04-9					
Formula	C ₆ H ₁₀ O ₄					
Other Names	1,4-Butanedicarboxylic acid					
Molecular Weight	146.14					
Melting Point, °C (°F)	152–153 (306–307)					
Density, g/cc						
solid	1.360					
liquid, 163°C (325°F)	1.093					
Bulk Density, loose, lb/ft ³	40–45					
Melt Viscosity, cP						
160°C (320°F)	4.54					
193°C (379°F)	2.64					
Specific Heat	cal/g°C	kJ/kg°K				
solid	0.38	1.59				
liquid	0.54	2.26				
Heats of	cal/g	kJ/kg				
Formation	–1630	–6500				
Fusion	57	239				
Vaporization	134	560				
Sublimation, 25°C (77°F)	211	882				
Combustion	4580	19,200				
Crystallization (water)	64	265				
Solution (water)						
10–20°C (50–68°F)	–51	–214				
90–100°C (194–212°F)	–58	–241				
Nonhygroscopic at 27°C (81°F) and 85% relative humidity						
Flash Point (TCC), °C (°F)	196 (385)					
Crystal	Monoclinic needles					
Ionization Constants, 25°C (77°F)						
K1	3.71 × 10 ^{–5}	pKa1	4.43			
K2	3.87 × 10 ^{–6}	pKa2	5.41			
Acidity of aqueous solutions, 25°C (77°F)						
wt%	0.1	0.2	0.4	0.6	1.2	2.5
pH	3.2	3.1	3.0	2.9	2.8	2.7
Vapor Pressure						
	Temperature, °C (°F)	mmHg	kPa			
	159.5 (319.1)	1	0.13			
	205.5 (401.9)	10	1.3			
	240.5 (464.9)	40	5.3			
	265.0 (509.0)	100	13.3			
	312.5 (594.5)	400	53.3			
	337.5 (639.5)	760	101			

* With decomposition

Shipping Information

Bulk

Pressure Differential (PD) Trailer: 47,000 lb
Shipping Points: Elizabeth, NJ
Carnegie, PA
Highlands, TX

Packages

Bulk Bags: 2,000 lb
500, 900, 1,000 kg
Paper Bags: 50 lb
25 Kg
Shipping Point: Highlands, TX
Pointe Claire, Quebec, Canada
Scarborough, Ontario, Canada

Pallet Dimensions/Weight

	L x W x H (in)	Gross/Net (lb)
50 bags	48 x 42 x 60	2,580/2,500
Bulk Bags	38 x 40 x 47	2,090/2,000

If packages contain less than 5,000 lb, shipping description is **not** regulated by DOT/IMO. If package contains 5,000 lb or more:

Proper Shipping Name

Environmentally Hazardous Substance, Solid,
N.O.S. (Adipic Acid)
UN Number: 3077
DOT Hazard Class: 9
Freight Classification: Adipic Acid
Packaging Group: III
Harmonized Schedule No.: 2917.12.10002

For Samples and Information:
INVISTA™ Specialty Intermediates • (800) 231-0998
www.intermediates.invista.com

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