

MATERIAL SAFETY DATA SHEET

MSDS Number

AS-E0577

Effective Date: 1/31/2005



AccuStandard

125 Market Street • New Haven, CT USA 06513

Phone: (203) 786-5290 • Fax: (203) 786-5287

Emergency Phone Number

203-786-5290

Mon. to Fri. 8am-5pm EDT

Product Number : AS-E0577

Product Name : 1,2:3,4-Diepoxybutane

Synonyms : N/A

Formula : N/A

Molecular Weight : N/A

Section 2 - Composition / Information on Ingredients

Component(s) (2)	CAS #	Appr. % TWA	ACGIH TLV		OSHA PEL	
			mg/m3	SKIN	TWA mg/m3	SKIN
1,2:3,4-Diepoxybutane	1464-53-5	0.1%				
Acetonitrile	75-05-8	99.9%	67 x		70	

Section 3 - Hazards Identification

Symptoms of Exposure:

Breathing high vapor concentrations may cause cyanide poisoning.

Overexposure to Acetonitrile can cause headache, breathing difficulty, irritation of eyes and throat, Central Nervous System disturbances and unconsciousness.

Irritating to eyes, skin, mucous membranes and upper respiratory system.

Effects may be delayed.

Potential Health Effects:

Harmful if inhaled, swallowed, or absorbed through the skin.

May damage blood, central nervous system, kidneys, liver, lungs, and reproductive system.

Routes of Entry:

Inhalation, ingestion or skin contact.

Carcinogenicity:

Contains component(s) which are possible cancer hazard(s).

Section 4 - First Aid Measures

First Aid Procedures:

Get medical assistance for all cases of overexposure.

Always have on hand a cyanide first aid kit. Break an amyl nitrite pearl in a cloth and hold lightly under nose for 15 seconds. Repeat five times at about 15 second intervals. Call A Physician.

Skin: Wash thoroughly with soap and water.

Eyes: Immediately flush thoroughly with water for at least 15 minutes. Assure adequate flushing by separating the eyelids with fingers.

Inhalation: Remove to fresh air; give artificial respiration if breathing has stopped. If breathing is difficult, give oxygen.

Ingestion: If conscious, drink water and induce vomiting immediately as directed by medical personnel. Never give anything by mouth to an unconscious person.

Section 5 - Fire Fighting Measures

Fire fighting measures for the Solvent

Flammable Properties:

Flash Point (°F):	35.6 °F (2 °C)	(cc)
Flammable Limits LEL (%):	4.40	
Flammable Limits UEL (%):	16.00	
Autoignition Temperature:	523 °C	

Dangerous fire and explosive hazard.

Vapors can travel to a source of ignition and flash back.

Thermal decomposition produces toxic fumes.

Extinguishing Media:

Use water spray, dry chemical, CO₂, or "alcohol" foam.

Protection of Firefighters:

Wear self-contained breathing apparatus and protective clothing.

Section 6 - Accidental Release Measures

Spill Response:

Wear suitable protective equipment listed under Expose /Personal Protection. Eliminate any ignition sources until the area is determined to be free from explosion or fire hazards. Contain the release and eliminate its source, if this can be done without risk. Dispose as hazardous waste. Comply with Federal, State and local regulations.

Section 7 - Handling and Storage

Keep container closed.

Store in a cool area away from ignition sources and oxidizers.

Do not breathe vapor.

Do not get in eyes, on skin, or on clothing.

This product should only be used by persons trained in the safe handling of hazardous chemicals.

Section 8 - Exposure Controls / Personal Protection

Engineering Controls and Personal Protection Equipment (PPE):

Respiratory Protection: If workplace exposure limit(s) of product or any component is exceeded (see TLV/PEL), a NIOSH/MSHA approved air supplied respirator is advised in absence of proper environmental control. OSHA regulations also permit other NIOSH/MSHA respirators (negative pressure type) under specified conditions (see your safety equipment supplier). Engineering and/or administrative controls should be implemented to reduce exposure.

Material should be handled or transferred in an approved fume hood or with adequate ventilation.

Protective gloves must be worn to prevent skin contact.

(Butyl rubber, neoprene, PVA or equivalent)

Safety glasses with side shields must be worn at all times.

General Hygiene Considerations:

Wash thoroughly after handling. Do not take internally. Eye wash and safety equipment should be readily available.

Section 9 - Physical and Chemical Properties

Physical and chemical properties for the Solvent

Appearance: Clear liquid

Odor: Pungent odor

Boiling Point: 81.6 °C

Melting Point: -45.7 °C

pH: N/A

Specific Gravity (Water = 1): 0.785 g/cm³

Vapor Pressure: 72.8 mmHg (20 °C)

Vapor Density (Air = 1): 1.41 g/L

Percent Volatile (by volume): 99.9+

Evaporation Rate (Butyl acetate = 1): 5.79

Flash Point: 35.6 °F (2 °C) (cc)

Explosion Limits (%): 4.40 to 16.00

Solubility in water (%): Soluble

Section 10 - Stability and Reactivity

Stability and reactivity for the Solvent

Stability: Stable

Materials to Avoid: Acids

Bases
Oxidizers

Alkali metals; Reducing agents

Hazardous Decomposition: Hydrogen cyanide (HCN); Carbon oxides; Nitrogen oxides
Forms HCN when heated to about 120 °C

Hazardous Polymerization: Does not occur

Conditions to Avoid: Heat; Contact with ignition sources

Section 11 - Toxicological Information

See section 3 for specific toxicological information for the ingredients of this product.

Section 12 - Ecological Information

By complying with sections 6 and 7 there will be no release to the environment.

Section 13 - Disposal Considerations

Recycle or incinerate at any EPA approved facility or dispose in compliance with Federal, State and local regulations. Empty containers must be triple-rinsed prior to disposal.

Section 14 - Transport Information

DOT UN Number: UN1648 Shipping Class: 3 Packing Group: II FLAMMABLE

Section 15 - Regulatory Information

In addition to Federal and state regulations, local regulations may apply. Check with your local regulatory authorities.

The following regulations apply:

None.

Section 16 - Other Information

This document has been designed to meet the requirements of OSHA, ANSI and CHIPs regulations.

The statements contained herein are offered for informational purposes only and are based on technical data that we believe to be accurate. It is intended for use only by persons having the necessary technical skill and at their own discretion and risk. Since conditions and manner of use are outside our control, we make NO WARRANTY, EXPRESS OR IMPLIED, OF MERCHANTABILITY, FITNESS OR OTHERWISE.

Legend : N/A = Not Available ND = Not Determined NR = Not regulated

*** End of document ***