

Wuhan Xinru Chemical Industry Co., Ltd

Add: Room 2805, North Fuxinhuiyu, Changqing Road, Wuhan, China 430015

Tel: +86-27-5984 3600 Fax: +86-27-6666 0488

MATERIAL SAFETY DATA SHEET

Product Identification

【Product Name】

1,4-Butanedicarboxylic acid

【Synonyms】

1,4-Butanedicarboxylic acid
1,6-Hexanedioic acid
Acifloctin
Asapic
Hexanedioic acid
Inipol DS

【CAS】 124-04-9

【Formula】 C₆H₁₀O₄

【Molecular Weight】 146.13999

【EINECS】 204-673-3

【RTECS】 AU8400000

【RTECS Class】 Mutagen; Primary Irritant

【Merck】 13,163

【Beilstein/Gmelin】 1209788

【Beilstein Reference】 4-02-00-01956

【EC Index Number】 607-144-00-9

【EC Class】 Irritant

Physical and Chemical Properties

【Appearance】

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Colorless or white crystalline solid. Odorless.

【Solubility in water】 14 g/L

【Melting Point】 152 - 154

【Boiling Point】 337

【Vapor Pressure】 .1

【Density】 1.398 g/cm³ (-143 C)

【pKa/pKb】 4.39 (pKa)

【Partition Coefficient】 .08

【Heat Of Vaporization】 140 kJ/mol

【Heat Of Combustion】 -2800 kJ/mol

【Usage】 Raw material for pharmaceuticals, perfume fixative.

【Vapor Density】 5.04

【Saturation Concentration】 96 ppm at 18.5 C (calculated)

【Refractive Index】 1.439 (20 C)

First Aid Measures

【Ingestion】

If victim is conscious and alert, give 2-4 cupfuls of milk or water. Never give anything by mouth to an unconscious person. Get medical aid immediately.

【Inhalation】

Remove from exposure to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical aid if cough or other symptoms appear.

【Skin】

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Flush skin with plenty of soap and water for at least 15 minutes while removing contaminated clothing and shoes. Get medical aid if irritation develops or persists. Wash clothing before reuse.

【Eyes】

Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid immediately.

Handling and Storage

【Storage】

Keep away from sources of ignition. Store in a tightly closed container. Keep from contact with oxidizing materials. Store in a cool, dry, well-ventilated area away from incompatible substances. Keep away from strong bases.

【Handling】

Use with adequate ventilation. Minimize dust generation and accumulation. Avoid contact with eyes, skin, and clothing. Avoid contact with heat, sparks and flame. Avoid ingestion and inhalation. Avoid mechanical shock and friction.

Hazards Identification

【Inhalation】

May cause respiratory tract irritation. Low hazard for usual industrial handling.

【Skin】 May cause skin irritation.

【Eyes】 May cause severe eye irritation.

【Ingestion】

Ingestion of large amounts may cause gastrointestinal irritation. Expected to be a low ingestion hazard.

【Hazards】

Melts and may decompose to give volatile acidic vapors of valeric acid and other substances. Dust may form explosive mixture with air.

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【EC Risk Phrase】 R 36

【UN (DOT)】 9077

Exposure Controls/Personal Protection

【Personal Protection】

Eyes: Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166. Skin: Wear appropriate gloves to prevent skin exposure. Clothing: Wear appropriate protective clothing to minimize contact with skin.

【Respirators】

Follow the OSHA respirator regulations found in 29CFR 1910.134 or European Standard EN 149. Always use a NIOSH or European Standard EN 149 approved respirator when necessary.

【Exposure Effects】

Human effects not reported. Poisoned animals experience somnolence or seizure activity. Pregnant mice given 263 mg/kg of adipic acid from day 6 to 15 of gestation developed no negative effects on nidation, maternal or fetal survival, or fetal abnormalities.

【Exposure limit(s)】

TLV: 5 mg/m³(as TWA) (ACGHI 1977).

【Poison Class】 4

Fire Fighting Measures

【Flash Point】 196

【Autoignition】 405

【Fire Fighting】

Wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. This material in sufficient quantity and reduced particle size is capable of creating a dust explosion. Extinguishing media: For small fires, use water spray, dry chemical, carbon dioxide or chemical

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foam.

【Upper exp. limit】 9.6

【Lower exp. limit】 1.6

【Fire Potential】

Moderately flammable. Slight when exposed to heat or flame.

Accidental Release Measures

【Small spills/leaks】

Vacuum or sweep up material and place into a suitable disposal container. Clean up spills immediately, using the appropriate protective equipment. Avoid generating dusty conditions. Provide ventilation.

【Stability】

Stable under normal shipping and handling conditions. Dusts may form an explosion hazard.

【Incompatibilities】

Strong oxidizers. Corrosive to mild steel at room temperature.

【Decomposition】

Carbon monoxide, carbon dioxide, acrid smoke and fumes.

【Combustion Products】

Fire may produce irritating, corrosive and/or toxic gases.

Transport Information

【UN Number】 9077

【Hazard Class】 9.2

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【HS Code】 2917 12 10