

Chemical Safety Data Sheet

Dimethyl Glutarate

Part One Chemical and Company Identification

Chemical Code : Dimethyl Glutarate

Chemical English Name : Dimethyl Glutarate

Company Name : Shenzhen Feiyang Industrial Co.,Ltd.

Address : No.1 Feiyang Road, Shajing Town, Shenzhen, P.R.C

Postcode : 518104

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Document Number : Mar-CSDS001

Date into Effect : 18/3/2001

Emergency Call : 0755-27237286

Website : <http://www.feiyang.com.cn>

Registered Code :

Part Two Composition/Component Information

Component	CAS Number	Content
Dimethyl Glutarate	1119-40-0	98%

Part Three Hazards Identification

Hazards Class :

Way to Enter : Absorb by skin or inhalation

Human Health Effects: Skin contact may cause skin irritation with discomfort or rash.

Eye contact may cause eye irritation with discomfort, tearing, or blurring of vision. Inhalation may cause irritation of the upper respiratory passages, with coughing and discomfort. Some

individuals who have been overexposed by inhalation or skin contact experienced blurry vision. Some symptoms of pre-existing eye disease could be aggravated by overexposure to this material.

Hazards to Environment :

Explosion Hazard : Vapor forms explosive mixture with air.

Part Four First Aid Measures

Any question or continual symptom, ask for help from doctors.

Skin Contact: Flush skin with water after contact. Wash contaminated clothing before next use.

Eye Contact: In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Call a physician if required.

Inhalation: If inhaled, immediately remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Call a physician.

Ingestion: If swallowed, do not induce vomiting. Immediately give 2 glasses of water. Never give anything by mouth to an unconscious person. Call a physician.

Notes to Physicians: Activated charcoal mixture may be beneficial. Suspend 50 g activated charcoal in 400 mL water and mix well. Administer 5mL/kg, or 350 mL for an average adult.

Part Five Fire Fighting Measures

Hazards : Vapor forms explosive mixture with air.

Hazardous Formed Gas : Carbon monoxide.

Extinguishing Way: Water Spray, Foam, Dry Chemical, CO2.

Fire Fighting Instructions: Keep personnel removed and upwind of fire. Wear self-contained breathing apparatus. Wear full protective equipment. Cool tank/container with water spray.

Part Six Accidental Release Measures

Emergency Action : Remove source of heat, sparks, flame, impact, friction or electricity.

Dike spill. Prevent material from entering sewers, waterways, or low areas. Recover free liquid for reuse or reclamation. Recover undamaged and minimally contaminated material for reuse and reclamation. Soak up with sawdust, sand, oil dry or other absorbent material.

Part Seven Handling and Storage

Handling: Avoid breathing vapors or mist. Avoid contact with eyes, skin, or clothing. Wash thoroughly after handling.

Storage: Do not mix with strong oxidants, acids, or alkalies. Store in a well ventilated place. Keep container tightly closed.

Part Eight Exposure Controls/Personal Protection

Exposure Limits

DMG

PEL (OSHA) : None Established

TLV (ACGIH) : None Established

AEL * (DuPont) : 1.5 ppm, 10 mg/m³, 8 Hr. TWA This limit is for Dimethyl Glutarate.

* AEL is DuPont's Acceptable Exposure Limit. Where governmentally imposed occupational exposure limits which are lower than the AEL are in effect, such limits shall take precedence.

Monitoring Method :

Engineering Controls: Use sufficient ventilation to keep employee exposure below recommended limits.

Respirator: A NIOSH approved air purifying respirator with an organic vapor cartridge or canister may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits. Protection provided by air-purifying respirators is limited. Use a NIOSH approved positive pressure air-supplied respirator if there is any potential for an uncontrolled release, exposure levels are not known, or any other circumstances where air-purifying respirators may not provide adequate protection.

Eye/face Protection: Wear safety glasses. Wear coverall chemical splash goggles when possibility exists for eye and face contact due to splashing or spraying material.

Protective Clothing: Wear impervious clothing, such as gloves, apron, boots, or whole bodysuit as appropriate. Recommended glove and clothing

material: Butyl Rubber.

Part Nine Physical and Chemical Properties

Appearance : Colorless liquid with some sweet odor.

pH Value :	Melting point () : about -20
Specific gravity : about 1.09	Boiling point() : 196-230
Vapor Pressuer : 0.2mmHg(at 20)	Flash point () : 100 (TCC)
Lower explosion limit[% (V/V)] : 0.9	Upper explosion limit% (V/V)] : 8.0
Firing point : 370	Solubility in water : 5.3%(weight, at 20)

Part Ten Stability and Reactivity

Stability : Stable

Incompatibility with Other Materials: Incompatible or can react with strong oxidizers, acids, alkalies.

Avoid in conditions : Heating

Polymerization: Polymerization will not occur.

Decomposition : Carbon monoxide

Part Eleven Toxicological Information

Animal Data :

Inhalation 4-hour LC50: >11 mg/L in rats

Inhalation 1-hour LC50: >10.7 mg/L in rats

Skin absorption LD50 : >2,250 mg/kg in rabbits

Oral LD50 : 8,191 mg/kg in rats

Sub-acute toxicity and chronic toxicity : Toxicity described in animals from repeated exposure by inhalation include decreased weight gain, absolute and relative liver weight decrease, and degeneration of olfactory epithelium (nasal tissue). Toxicity described in animals from repeated exposure by ingestion include weight loss, but there were no pathological abnormalities noted.

Irritability : The mixture is a mild to severe skin irritant and a moderate eye irritant,

Sensitivity : not a skin sensitizer

Damage : The mixture does not produce genetic damage in animals, or in bacterial cell cultures, but it was positive in one study with cultured mammalian cells.

Deformation : Animal testing indicates that this mixture does not have developmental, or reproductive effects.

Carcinogenicity Information: None of the components present in this material at concentrations equal to or greater than 0.1% are listed by IARC, NTP, OSHA or ACGIH as a carcinogen.

Others : A single application of 10 uL to the eye caused corneal opacity. The administration of 10- 100 uL of a similar mixture caused corneal opacity, transient increases in corneal thickness, and transient corneal anesthesia. A single application of approximately 60 mg/kg to the skin caused transient increases in the distance from the cornea to the anterior surface of the lens of the eye.

Part Twelve Ecological Information

Ecological Toxicity :

Aquatic toxicity

Dimethyl glutarate

96 hour LC50 - Fathead minnows: 18-24 mg/L.

Moderately toxic.

48 hour LC50 - Daphnia magna: 112-150 mg/L

Biodegradation Information: The dimethyl glutarate was tested for biodegradability using the 28-day closed bottle test. A minimum of 60% biodegradation must be reached in a 14 day window after exceeding the 10% level in order to pass this test and be rated as readily biodegradable. DIMETHYL GLUTARATE passes this test and, therefore, DIMETHYL GLUTARATE is considered readily biodegradable.

Dimethyl glutarate - 70% biodegradability in day 7

Part Thirteen Disposal Considerations

Kind of Waste Disposal : Hazardous Waste

Treatment : Treatment and disposal must be in accordance with applicable provincial and

local regulations. Recover unusable free liquid and dispose into either an approved and permitted incinerator or approved and permitted biological treatment system.

Notice : Do not flush any water or solids into surface water drains or sanitary sewer system.

Part Fourteen Transportation Information

Not Regulated as a hazardous material by *Hazardous Goods List* DOT, IMO, or IATA.

Part Fifteen Regulatory Information

Regulations : *Safety Regulation for Hazardous Chemicals*
Detail Application Rules of Safety Regulation for Hazardous Chemicals
Rules of Using Chemical Safely at Working Spot
Cass and Sign For Common Hazardous Chemicals (GB13690-92)
General Technique Conditions For Transportation and
Packing Hazardous Goods (GB12463-90)

Part Sixteen Other Information

References : 1. *Safety Management for Chemicals at Working Spot*
2. *Safety Handbook for Hazardous Goods*
3. *All-Round Book for Safety Technology Hazardous Chemicals*
4. *Register Regulation for Hazardous Chemicals*

Writing Date : March, 2001

Writing Organization : Shenzhen Feiyang Industrial Co.,Ltd.

Data Inspected by : Shenzhen Feiyang Industrial Co.,Ltd.

Writing Account : Writing according to Rules for Writing MSDS (GB16483-2000).

Others :

The data in this Chemical Safety Data Sheet relates only to the specific material designated herein and does not relate to use in combination with any other material or in any process.

This information is based upon technical information believed to be reliable. It is subject to revision as additional knowledge and experience is gained.

End of CSDS