



DIMETHYL ADIPATE

GHS SAFETY DATA SHEET

Version No:2.0

Page 1 of 15

Section 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME

DIMETHYL ADIPATE

OTHER NAMES

C8-H14-O4, "dibasic adipic acid methyl ester", dimethyladipate, "dibasic ester DBE-6", "hexanedioic acid dimethyl ester", dimethylhexanedioate

PRODUCT USE

Slow evaporating ester solvent, used as component in thinners, solvent in enamels, lacquers, coatings.

Attacks, softens and may dissolve rubber, many plastics, paints and coatings.

SUPPLIER

Company: S D FINE- CHEM LIMITED

Address:

315- 317, T.V. INDUSTRIAL ESTATE,
248, WORLI,

MUMBAI- 400030.INDIA.

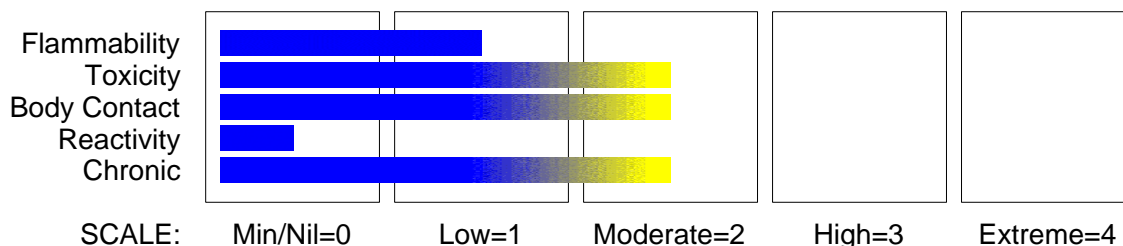
technical@sdfine.com

Telephone: 91- 22- 24959898

Telephone: 91- 22- 24959899

Fax: 91- 22- 24937232

HAZARD RATINGS



Section 2 - HAZARDS IDENTIFICATION

GHS Classification

Respiratory Irritation Category 3

Skin Corrosion/Irritation Category 2

continued...

DIMETHYL ADIPATE



EMERGENCY OVERVIEW

HAZARD

WARNING

Determined by using GHS criteria:

H335 H315

May cause respiratory irritation

Causes skin irritation

PRECAUTIONARY STATEMENTS

Prevention

Wash thoroughly after handling.

Response

IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

If skin irritation occurs, seek medical advice/attention.

Remove/Take off immediately all contaminated clothing

Wash/Decontaminate removed clothing before reuse.

IF ON SKIN: Gently wash with plenty of soap and water.

Section 3 - COMPOSITION / INFORMATION ON INGREDIENTS

NAME	CAS RN	%
dimethyl adipate	627-93-0	> 99
dimethyl glutarate	1119-40-0	< 1
dimethyl succinate	106-65-0	< 0.1
water	7732-18-5	< 0.3
methanol	67-56-1	< 0.1
hydrogen cyanide	74-90-8	<0.001
No other ingredient information supplied		

Section 4 - FIRST AID MEASURES

SWALLOWED

Rinse mouth out with plenty of water.

For advice, contact a Poisons Information Centre or a doctor.

- If swallowed do NOT induce vomiting.
- If vomiting occurs, lean patient forward or place on left side (head-down position, if possible) to maintain open airway and prevent aspiration.
- Observe the patient carefully.

continued...

DIMETHYL ADIPATE

- Never give liquid to a person showing signs of being sleepy or with reduced awareness; i.e. becoming unconscious
- Give water to rinse out mouth, then provide liquid slowly and as much as casualty can comfortably drink.
- Seek medical advice.

EYE

If this product comes in contact with the eyes:

- Immediately hold eyelids apart and flush the eye continuously with running water.
- Ensure complete irrigation of the eye by keeping eyelids apart and away from eye and moving the eyelids by occasionally lifting the upper and lower lids.
- Continue flushing until advised to stop by the Poisons Information Centre or a doctor, or for at least 15 minutes.
- Transport to hospital or doctor without delay.
- Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.

SKIN

If skin contact occurs:

- Immediately remove all contaminated clothing, including footwear.
- Flush skin and hair with running water (and soap if available).
- Seek medical attention in event of irritation.

INHALED

- If fumes or combustion products are inhaled remove from contaminated area.
- Lay patient down. Keep warm and rested.
- Prostheses such as false teeth, which may block airway, should be removed, where possible, prior to initiating first aid procedures.
- Apply artificial respiration if not breathing, preferably with a demand valve resuscitator, bag-valve mask device, or pocket mask as trained. Perform CPR if necessary.
- Transport to hospital, or doctor.

NOTES TO PHYSICIAN

for simple esters:

BASIC TREATMENT

- Establish a patent airway with suction where necessary.
- Watch for signs of respiratory insufficiency and assist ventilation as necessary.
- Administer oxygen by non-rebreather mask at 10 to 15 l/min.
- Monitor and treat, where necessary, for pulmonary oedema .
- Monitor and treat, where necessary, for shock.
- DO NOT use emetics. Where ingestion is suspected rinse mouth and give up to 200 ml water (5 ml/kg recommended) for dilution where patient is able to swallow, has a strong gag reflex and does not drool.
- Give activated charcoal.

ADVANCED TREATMENT

- Consider orotracheal or nasotracheal intubation for airway control in unconscious patient or where respiratory arrest has occurred.
- Positive-pressure ventilation using a bag-valve mask might be of use.
- Monitor and treat, where necessary, for arrhythmias.
- Start an IV D5W TKO. If signs of hypovolaemia are present use lactated Ringers solution. Fluid overload might create complications.

continued...

DIMETHYL ADIPATE

- Drug therapy should be considered for pulmonary oedema.
- Hypotension with signs of hypovolaemia requires the cautious administration of fluids. Fluid overload might create complications.
- Treat seizures with diazepam.
- Proparacaine hydrochloride should be used to assist eye irrigation.

EMERGENCY DEPARTMENT

• Laboratory analysis of complete blood count, serum electrolytes, BUN, creatinine, glucose, urinalysis, baseline for serum aminotransferases (ALT and AST), calcium, phosphorus and magnesium, may assist in establishing a treatment regime. Other useful analyses include anion and osmolar gaps, arterial blood gases (ABGs), chest radiographs and electrocardiograph.

• Positive end-expiratory pressure (PEEP)-assisted ventilation may be required for acute parenchymal injury or adult respiratory distress syndrome.

• Consult a toxicologist as necessary.

BRONSTEIN, A.C. and CURRANCE, P.L. EMERGENCY CARE FOR HAZARDOUS MATERIALS EXPOSURE: 2nd Ed. 1994.

Section 5 - FIRE FIGHTING MEASURES

EXTINGUISHING MEDIA

- Alcohol stable foam.
- Dry chemical powder.
- BCF (where regulations permit).
- Carbon dioxide.
- Water spray or fog - Large fires only.

FIRE FIGHTING

- Alert Fire Brigade and tell them location and nature of hazard.
- Wear breathing apparatus plus protective gloves for fire only.
- Prevent, by any means available, spillage from entering drains or water courses.
- Use fire fighting procedures suitable for surrounding area.
- DO NOT approach containers suspected to be hot.
- Cool fire exposed containers with water spray from a protected location.
- If safe to do so, remove containers from path of fire.
- Equipment should be thoroughly decontaminated after use.

FIRE/EXPLOSION HAZARD

- Combustible.
- Slight fire hazard when exposed to heat or flame.
- Heating may cause expansion or decomposition leading to violent rupture of containers.
- On combustion, may emit toxic fumes of carbon monoxide (CO).
- May emit acrid smoke.
- Mists containing combustible materials may be explosive.

Other combustion products include: carbon dioxide (CO₂) and aldehydes.

FIRE INCOMPATIBILITY

Avoid contamination with strong oxidising agents as ignition may result.

Dissolves most plastics and synthetic fibres.

DIMETHYL ADIPATE

Personal Protective Equipment

Breathing apparatus.
Chemical splash suit.

Section 6 - ACCIDENTAL RELEASE MEASURES

EMERGENCY PROCEDURES

MINOR SPILLS

Slippery when spilt.

- Clean up all spills immediately.
- Avoid breathing vapours and contact with skin and eyes.
- Control personal contact by using protective equipment.
- Contain and absorb spill with sand, earth, inert material or vermiculite.
- Wipe up.
- Place in a suitable labelled container for waste disposal.

MAJOR SPILLS

Slippery when spilt.

Minor hazard.

- Clear area of personnel.
- Alert Fire Brigade and tell them location and nature of hazard.
- Control personal contact by using protective equipment as required.
- Prevent spillage from entering drains or water ways.
- Contain spill with sand, earth or vermiculite.
- Collect recoverable product into labelled containers for recycling.
- Absorb remaining product with sand, earth or vermiculite and place in appropriate containers for disposal.
- Wash area and prevent runoff into drains or waterways.
- If contamination of drains or waterways occurs, advise emergency services.

SAFE STORAGE WITH OTHER CLASSIFIED CHEMICALS



+: May be stored together

O: May be stored together with specific preventions

X: Must not be stored together

Personal Protective Equipment advice is contained in Section 8 of the MSDS.

Section 7 - HANDLING AND STORAGE

PROCEDURE FOR HANDLING

Avoid breathing mist and vapour.

- Avoid all personal contact, including inhalation.
- Wear protective clothing when risk of exposure occurs.

DIMETHYL ADIPATE

- Use in a well-ventilated area.
- Prevent concentration in hollows and sumps.
- DO NOT enter confined spaces until atmosphere has been checked.
- Avoid smoking, naked lights or ignition sources.
- Avoid contact with incompatible materials.
- When handling, DO NOT eat, drink or smoke.
- Keep containers securely sealed when not in use.
- Avoid physical damage to containers.
- Always wash hands with soap and water after handling.
- Work clothes should be laundered separately.
- Use good occupational work practice.
- Observe manufacturer's storing and handling recommendations.
- Atmosphere should be regularly checked against established exposure standards to ensure safe working conditions.

SUITABLE CONTAINER

- Metal can or drum
- Packaging as recommended by manufacturer.
- Check all containers are clearly labelled and free from leaks.

STORAGE INCOMPATIBILITY

Avoid storage with oxidisers and Long term storage.
Attacks, softens and may dissolve rubber, many plastics, paints and coatings.

STORAGE REQUIREMENTS

- Store in original containers.
- Keep containers securely sealed.
- No smoking, naked lights or ignition sources.
- Store in a cool, dry, well-ventilated area.
- Store away from incompatible materials and foodstuff containers.
- Protect containers against physical damage and check regularly for leaks.
- Observe manufacturer's storing and handling recommendations.

Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

EXPOSURE CONTROLS

The following materials had no OELs on our records

- | | |
|-----------------------|---|
| • dimethyl adipate: | CAS:627- 93- 0 CAS:111366- 61- 1 |
| • dimethyl glutarate: | CAS:1119- 40- 0 CAS:111366- 62- 2 |
| • dimethyl succinate: | CAS:106- 65- 0 |
| • water: | CAS:7732- 18- 5 CAS:558440- 53- 2 CAS:558440- 22- 5 |
| • methanol: | CAS:58456- 46- 5 CAS:67- 56- 1 CAS:19710- 56- 6 |
| | CAS:7263- 60- 7 CAS:6853- 31- 2 CAS:79825- 55- 1 |
| | CAS:253142- 14- 2 CAS:54841- 71- 3 |

EMERGENCY EXPOSURE LIMITS

Material	Revised IDLH Value (mg/m3)	Revised IDLH Value (ppm)
methanol		6, 000
hydrogen cyanide		50 [Unch]

DIMETHYL ADIPATE

ODOUR SAFETY FACTOR (OSF)

OSF=2 (dimethyl glutarate)

Exposed individuals are NOT reasonably expected to be warned, by smell, that the Exposure Standard is being exceeded.

Odour Safety Factor (OSF) is determined to fall into either Class C, D or E.

The Odour Safety Factor (OSF) is defined as:

OSF= Exposure Standard (TWA) ppm/ Odour Threshold Value (OTV) ppm

Classification into classes follows:

Class	OSF	Description
A	550	Over 90% of exposed individuals are aware by smell that the Exposure Standard (TLV- TWA for example) is being reached, even when distracted by working activities
B	26- 550	As " A " for 50- 90% of persons being distracted
C	1- 26	As " A " for less than 50% of persons being distracted
D	0.18- 1	10- 50% of persons aware of being tested perceive by smell that the Exposure Standard is being reached
E	<0.18	As " D " for less than 10% of persons aware of being tested

MATERIAL DATA

No exposure limits set by NOHSC or ACGIH.

CEL TWA: 1.5ppm, 10 mg/m3 [DUPONT]

INGREDIENT DATA

DIMETHYL GLUTARATE:

DIMETHYL SUCCINATE:

WATER:

No exposure limits set by NOHSC or ACGIH.

DIMETHYL GLUTARATE:

CEL TWA: 1.5ppm, 10 mg/m3 [Manuf.DU]

DIMETHYL SUCCINATE:

CEL TWA: 1.5ppm, 10 mg/m3 [Du Pont]

METHANOL:

Odour Threshold Value: 4.2-5960 ppm (detection), 53.0-8940 ppm (recognition)

NOTE: Detector tubes for methanol, measuring in excess of 50 ppm, are commercially available.

Exposure at or below the recommended TLV-TWA is thought to substantially reduce the significant risk of headache, blurred vision and other ocular and systemic effects.

DIMETHYL ADIPATE

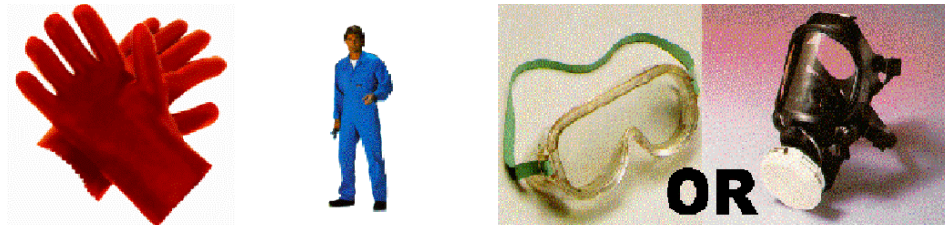
HYDROGEN CYANIDE:

Odour threshold: 0.2 - 5.0 ppm., recognition 2.0 - 5.0 ppm.

NOTE: Detector tubes for hydrocyanic acid, measuring in excess of 2 ppm, are commercially available. Long-term (8 hrs) measurements may be conducted to detect concentrations exceeding 1.3 ppm.

The recommended TLV-C is thought to provide protection against the significant risk of headache, fatigue, colic and nervousness observed in individuals exposed at 10 ppm in a full working shift. There are no rigorous studies which demonstrate objective signs of cyanide induced adverse health effects from long-term exposure to HCN in the workplace at concentrations equal to or less than 10 ppm. Although reports do exist which describe diverse and non-specific symptoms attributed to chronic exposures, other chemicals and stressors may also be implicated.

PERSONAL PROTECTION



EYE

- Safety glasses with side shields; or as required,
- Chemical goggles.
- Contact lenses may pose a special hazard; soft contact lenses may absorb and concentrate irritants. A written policy document, describing the wearing of lens or restrictions on use, should be created for each workplace or task. This should include a review of lens absorption and adsorption for the class of chemicals in use and an account of injury experience. Medical and first-aid personnel should be trained in their removal and suitable equipment should be readily available. In the event of chemical exposure, begin eye irrigation immediately and remove contact lens as soon as practicable. Lens should be removed at the first signs of eye redness or irritation - lens should be removed in a clean environment only after workers have washed hands thoroughly. [CDC NIOSH Current Intelligence Bulletin 59].

HANDS/FEET

Neoprene gloves.
Rubber gloves.
Safety footwear.

OTHER

- Overalls.
 - Eyewash unit.
- Ensure there is ready access to an emergency shower.

RESPIRATOR

Where the concentration of gas/particulates in the breathing zone, approaches or exceeds the "Exposure Standard" (or ES), respiratory protection is required.

Degree of protection varies with both face-piece and Class of filter; the nature of protection varies with Type of filter.

DIMETHYL ADIPATE

Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

Protection Factor	Half- Face Respirator	Full- Face Respirator	Powered Air Respirator
10 x ES	BAX- AUS P	-	BAX- PAPR- AUS P
50 x ES	-	BAX- AUS P	-
100 x ES	-	BAX- 2 P	BAX- PAPR- 2 P ^

^ - Full-face.

The local concentration of material, quantity and conditions of use determine the type of personal protective equipment required.

For further information consult your

Occupational Health and Safety Advisor.

ENGINEERING CONTROLS

Use in a well-ventilated area or Local exhaust ventilation may be required for safe working, i.e. to keep exposures below required standards, otherwise PPE is required.

None required when handling small quantities.

OTHERWISE:

General exhaust is adequate under normal operating conditions. If risk of overexposure exists, wear SAA approved respirator. Correct fit is essential to obtain adequate protection. Provide adequate ventilation in warehouse or closed storage areas. Air contaminants generated in the workplace possess varying "escape" velocities which, in turn, determine the "capture velocities" of fresh circulating air required to effectively remove the contaminant.

Type of Contaminant:

solvent, vapours, degreasing etc., evaporating from tank (in still air)

aerosols, fumes from pouring operations,

intermittent container filling, low speed

conveyer transfers, welding, spray drift,

plating acid fumes, pickling (released at low velocity into zone of active generation)

direct spray, spray painting in shallow booths,

drum filling, conveyer loading, crusher dusts,

gas discharge (active generation into zone of rapid air motion)

grinding, abrasive blasting, tumbling, high

speed wheel generated dusts (released at high

initial velocity into zone of very high rapid air motion).

Air Speed:

0.25- 0.5 m/s (50- 100 f/min)

0.5- 1 m/s (100- 200 f/min.)

1- 2.5 m/s (200- 500 f/min)

2.5- 10 m/s (500- 2000 f/min.)

Within each range the appropriate value depends on:

Lower end of the range

1: Room air currents minimal or favourable to capture

2: Contaminants of low toxicity or of nuisance value only

3: Intermittent, low production.

4: Large hood or large air mass in motion

Upper end of the range

1: Disturbing room air currents

2: Contaminants of high toxicity

3: High production, heavy use

4: Small hood - local control only

Simple theory shows that air velocity falls rapidly with distance away from the opening of a simple extraction pipe. Velocity generally decreases with the square of distance from the extraction point (in simple cases). Therefore the air speed at the extraction

continued...

DIMETHYL ADIPATE

Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

point should be adjusted, accordingly, after reference to distance from the contaminating source. The air velocity at the extraction fan, for example, should be a minimum of 1-2 m/s (200-400 f/min.) for extraction of solvents generated in a tank 2 meters distant from the extraction point. Other mechanical considerations, producing performance deficits within the extraction apparatus, make it essential that theoretical air velocities are multiplied by factors of 10 or more when extraction systems are installed or used.

Section 9 - PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE

Clear thin combustible liquid; slightly soluble in water. Ester like odour.
Water solubility is 2.5 % @ 20C

PHYSICAL PROPERTIES

Liquid.
Does not mix with water.
Sinks in water.

Molecular Weight: 173 approx
Melting Range (°C): 8
Solubility in water (g/L): Partly miscible
pH (1% solution): Not available
Volatile Component (%vol): 100
Relative Vapour Density (air=1): > 1.0
Lower Explosive Limit (%): 0.8
Autoignition Temp (°C): 360
State: Liquid

Boiling Range (°C): 215- 225
Specific Gravity (water=1): 1.07
pH (as supplied): 7 approx
Vapour Pressure (kPa): 0.009 @ 20 C
Evaporation Rate: Very Slow
Flash Point (°C): 102
Upper Explosive Limit (%): 8.1
Decomposition Temp (°C): Not available

log Kow: -0.82- -0.66
log Kow: 0.35-1.07

Section 10 - CHEMICAL STABILITY AND REACTIVITY INFORMATION

CONDITIONS CONTRIBUTING TO INSTABILITY

- Presence of incompatible materials.
- Product is considered stable.
- Hazardous polymerisation will not occur.

Section 11 - TOXICOLOGICAL INFORMATION

POTENTIAL HEALTH EFFECTS

ACUTE HEALTH EFFECTS

SWALLOWED

Although ingestion is not thought to produce harmful effects (as classified under EC Directives), the material may still be damaging to the health of the individual, following ingestion, especially where pre-existing organ (e.g liver, kidney) damage is

continued...

DIMETHYL ADIPATE

evident. Present definitions of harmful or toxic substances are generally based on doses producing mortality rather than those producing morbidity (disease, ill-health).

Gastrointestinal tract discomfort may produce nausea and vomiting. In an occupational setting however, ingestion of insignificant quantities is not thought to be cause for concern.

Considered an unlikely route of entry in commercial/industrial environments.

Ingestion may result in nausea, pain, vomiting. Vomit entering the lungs by aspiration may cause potentially lethal chemical pneumonitis.

EYE

Although the material is not thought to be an irritant (as classified by EC Directives), direct contact with the eye may produce transient discomfort characterised by tearing or conjunctival redness (as with windburn).

The material may be irritating to the eye, with prolonged contact causing inflammation. Repeated or prolonged exposure to irritants may produce conjunctivitis.

SKIN

Skin contact with the material may damage the health of the individual; systemic effects may result following absorption.

Evidence exists, or practical experience predicts, that the material either produces inflammation of the skin in a substantial number of individuals following direct contact, and/or produces significant inflammation when applied to the healthy intact skin of animals, for up to four hours, such inflammation being present twenty-four hours or more after the end of the exposure period. Skin irritation may also be present after prolonged or repeated exposure; this may result in a form of contact dermatitis (nonallergic). The dermatitis is often characterised by skin redness (erythema) and swelling (oedema) which may progress to blistering (vesiculation), scaling and thickening of the epidermis. At the microscopic level there may be intercellular oedema of the spongy layer of the skin (spongiosis) and intracellular oedema of the epidermis.

Toxic effects may result from skin absorption.

The material may produce severe skin irritation after prolonged or repeated exposure, and may produce a contact dermatitis (nonallergic). This form of dermatitis is often characterised by skin redness (erythema) thickening of the epidermis.

Histologically there may be intercellular oedema of the spongy layer (spongiosis) and intracellular oedema of the epidermis. Prolonged contact is unlikely, given the severity of response, but repeated exposures may produce severe ulceration.

INHALED

Inhalation may produce health damage*.

Limited evidence exists, or practical experience predicts, that the material produces irritation of the respiratory system in a significant number of individuals following inhalation.

Inhalation hazard is increased at higher temperatures.

Acute effects from inhalation of high vapour concentrations may be chest and nasal irritation with coughing, sneezing, headache and even nausea.

The main effects of simple aliphatic esters are narcosis and irritation and anaesthesia at higher concentrations. These effects become greater as the molecular weights and boiling points increase. Central nervous system depression, headache, drowsiness, dizziness, coma and neurobehavioral changes may also be symptomatic of overexposure.

Respiratory tract involvement may produce mucous membrane irritation, dyspnea, and tachypnea, pharyngitis, bronchitis, pneumonitis and, in massive exposures, pulmonary oedema (which may be delayed). Gastrointestinal effects include nausea, vomiting, diarrhoea and abdominal cramps. Liver and kidney damage may result from massive exposures.

DIMETHYL ADIPATE

CHRONIC HEALTH EFFECTS

Principal routes of exposure are usually by skin contact/absorption and inhalation of vapour, inhalation of vapour from heated material.

Prolonged or continuous skin contact with the liquid may cause defatting with drying, cracking, irritation and dermatitis following.

Chronic solvent inhalation exposures may result in nervous system impairment and liver and blood changes. [PATTYS].

As with any chemical product, contact with unprotected bare skin; inhalation of vapour, mist or dust in work place atmosphere; or ingestion in any form, should be avoided by observing good occupational work practice.

TOXICITY AND IRRITATION

TOXICITY

Oral (rat) LD50: 8191 mg/kg

Oral (rat) LDLo: 7500 mg/kg

Dermal (rabbit) LD50: >2500 mg/kg

Dermal (rabbit) LDLo: > 200 mg/kg

Inhalation (rat) LC50: 11 mg/l/4h

Inhalation (rat) LC50: 10.7 mg/l/1h

IRRITATION

Eye (rabbit): Irritant

Skin (human): SEVERE

DIMETHYL GLUTARATE:

TOXICITY

Oral (rat) LD50: 5000 mg/mg

Oral (mouse) LD50: 2227 mg/kg

IRRITATION

Eye (rabbit): Irritant

Skin (human): Irritant

[Manuf. DU]

DIMETHYL SUCCINATE:

TOXICITY

Oral (rat) LD50: > 5000 mg/kg

Dermal (rat) LD50: > 5000 mg/kg

IRRITATION

Nil Reported

WATER:

No significant acute toxicological data identified in literature search.

METHANOL:

TOXICITY

Oral (human) LDLo: 143 mg/kg

Oral (man) LDLo: 6422 mg/kg

Oral (man) TDLo: 3429 mg/kg

Oral (rat) LD50: 5628 mg/kg

Inhalation (human) TLo: 86000 mg/m³

Inhalation (human) TLo: 300 ppm

Inhalation (rat) LC50: 64000 ppm/4h

Dermal (rabbit) LD50: 15800 mg/kg

IRRITATION

Skin (rabbit): 20 mg/24 h- Moderate

Eye (rabbit): 40 mg- Moderate

Eye (rabbit): 100 mg/24h- Moderate

The material may cause skin irritation after prolonged or repeated exposure and may produce a contact dermatitis (nonallergic). This form of dermatitis is often characterised by skin redness (erythema) and swelling the epidermis. Histologically there may be intercellular oedema of the spongy layer (spongiosis) and intracellular oedema of the epidermis.

HYDROGEN CYANIDE:

TOXICITY

Oral (human) TDLo: 0.57 mg/kg

Inhalation (man) LLo: 400 mg/m³/2m

IRRITATION

Nil Reported

continued...

DIMETHYL ADIPATE

Inhalation (human) TCLo: 500 mg/m³/3m
Inhalation (human) TCLo: 200 mg/m³/10m
Inhalation (human) TCLo: 120 mg/m³/1h
Inhalation (rat) LC50: 484 ppm/5m

Section 12 - ECOLOGICAL INFORMATION

No data for dimethyl adipate.
Refer to data for ingredients, which follows:

DIMETHYL GLUTARATE:
DO NOT discharge into sewer or waterways.

METHANOL:
DO NOT discharge into sewer or waterways.
log Kow: -0.82- -0.66
Half-life (hr) air: 427
Half-life (hr) H₂O surface water: 5.3-64
Henry's atm m³ /mol: 1.35E-04
BOD 5 if unstated: 0.76-1.12
COD: 1.05-1.50,99%
ThOD: 1.5
BCF: 0.2-10
Toxicity Fish: LC50(96): 11-15mg/L
TLm(48Hr): 8000mg/L (trout)
Toxicity Arthropoda: NOEL 10 g/L/48Hr (Daphnia) [ICI]

HYDROGEN CYANIDE:
Hazardous Air Pollutant: Yes
Fish LC50 (96hr.) (mg/l): 5.3E- 06 -
Algae IC50 (72hr.) (mg/l): 1.8
log Pow (Verschueren 1983): 0.35/1.07

The material is classified as an ecotoxin* because the Fish LC50 (96 hours) is less than or equal to 0.1 mg/l

* Classification of Substances as Ecotoxic (Dangerous to the Environment)

Appendix 8, Table 1

Compiler's Guide for the Preparation of International Chemical Safety Cards: 1993

Commission of the European Communities.

Marine Pollutant

log Kow: 0.35-1.07

Toxicity invertebrate: cell mult. inhib. prtz 0.24mg/L

Section 13 - DISPOSAL CONSIDERATIONS

- Consult manufacturer for recycling options and recycle where possible .
- Consult State Land Waste Management Authority for disposal.
- Incinerate residue at an approved site.
- Recycle containers if possible, or dispose of in an authorised landfill.

DIMETHYL ADIPATE

Page 14 of 15

Section 14 - TRANSPORTATION INFORMATION

HAZCHEM: None

NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS:UN, IATA,
IMDG

Section 15 - REGULATORY INFORMATION

REGULATIONS

dimethyl adipate (CAS: 627-93-0) is found on the following regulatory lists;
International Council of Chemical Associations (ICCA) - High Production Volume List
OECD Representative List of High Production Volume (HPV) Chemicals

No data available for dimethyl adipate as CAS: 111366-61-1.

Section 16 - OTHER INFORMATION

INGREDIENTS WITH MULTIPLE CAS NUMBERS

Ingredient Name	CAS
dimethyl adipate	627- 93- 0, 111366- 61- 1
dimethyl glutarate	1119- 40- 0, 111366- 62- 2
water	7732- 18- 5, 558440- 53- 2, 558440- 22- 5
methanol	58456- 46- 5, 67- 56- 1, 19710- 56- 6, 7263- 60- 7, 6853- 31- 2, 79825- 55- 1, 253142- 14- 2, 54841- 71- 3

REPRODUCTIVE HEALTH GUIDELINES

Ingredient	ORG	UF	Endpoi nt	CR	Adeq TLV
methanol	262 mg/m3	NA	NA	NA	Yes

These exposure guidelines have been derived from a screening level of risk assessment and should not be construed as unequivocally safe limits. ORGS represent an 8-hour time-weighted average unless specified otherwise.

CR = Cancer Risk/10000; UF = Uncertainty factor:

TLV believed to be adequate to protect reproductive health:

LOD: Limit of detection

Toxic endpoints have also been identified as:

D = Developmental; R = Reproductive; TC = Transplacental carcinogen

Jankovic J., Drake F.: A Screening Method for Occupational Reproductive
American Industrial Hygiene Association Journal 57: 641-649 (1996).

continued...

DIMETHYL ADIPATE

The above information is believed to be accurate and represent the best information currently available to us, but does not represent any warranty expressed or implied of the properties of the product. User should make their own investigation to determine the suitability of the information for their particular purpose.

Issue Date: 30-Mar-2018