



5515 North Service Rd. #306
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megaloid.ca



Responsible Care®
Our commitment to sustainability.



RDC
Responsible Distribution Canada
Leaders in Chemicals and Ingredients

1. IDENTIFICATION

Name: *Dibasic Esters*

Synonyms: *DBE*

Product Uses: *Solvent, paint stripper*

Supplier: *Megaloid Laboratories Limited*
Identifier: *5515 North Service Road # 306
Burlington, ON L7L 6G4*

EMERGENCY INFORMATION: *Call CHEMTREC - (800) 424-9300
(CCN# 693764)*

2. HAZARD IDENTIFICATION

GHS Class <i>(category)</i>	Reproductive Toxicity <i>(1A)</i>	Effects on or via lactation	Eye Irritation <i>(2B)</i>
Signal Word	DANGER		
Hazard Statements	<i>May damage fertility or the unborn child. (H360)</i>	<i>May cause harm to breast-fed children. (H362)</i>	<i>Causes eye irritation (H320)</i>

Hazardous Pictograms



GHS Precautionary Statements for Labelling

Prevention:

P201	Obtain special instructions before use.
P202	Do not handle until all safety precautions have been read and understood.
P260	Do not breathe dust/fume/gas/mist/vapors/spray.
P263	Avoid contact during pregnancy/while nursing.
P264	Wash thoroughly after handling.
P270	Do not eat, drink or smoke when using this product.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
Response:	
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P308+P313	IF exposed or concerned: Get medical advice/attention.
P337+P313	If eye irritation persists: Get medical advice/attention.
Storage:	
P405	Store locked up.
Disposal:	
P501	Dispose of contents/container in accordance with local/regional/national/international regulations.

3. COMPOSITION / INFORMATION ON INGREDIENTS

Chemical Name:	CAS No.	%
Dimethyl Glutarate	1119-40-0	50-75
Dimethyl Succinate	106-65-0	10-25
Dimethyl Adipate	627-93-0	10-25
Methanol	67-56-1	0.1-1.0

4. FIRST-AID MEASURES

Inhalation

Remove from contaminated area promptly. CAUTION: Rescuer must not endanger himself! If breathing stops, administer artificial respiration and seek medical aid promptly.

Skin Contact

Wash with plenty of water. Remove contaminated clothing and do not reuse until thoroughly laundered.

Eye Contact

Wash eyes with plenty of water, holding eyelids open. Seek medical assistance if there is any irritation.

Ingestion

Give plenty of water to dilute product. Do not induce vomiting (NOTE below). Keep victim quiet. If vomiting occurs, lower victim's head below hips to prevent inhalation of vomited material. Seek medical help promptly.

Most important symptoms and effects, both acute and delayed

May damage fertility or the unborn child. May cause harm to breast-fed children. Causes eye irritation.

Notes to physician

No data available

Inadvertent inhalation of vomited material may seriously damage the lungs. The danger of this is greater than the risk of poisoning through absorption of this relatively low-toxicity substance. The stomach should only be emptied under medical supervision, and after the installation of an airway to protect the lungs.

5. FIRE FIGHTING MEASURES

Suitable Extinguishing Media

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Unsuitable Extinguishing Media

Water jet spreads flames

Specific Hazards Arising from the Product

Carbon oxides

Special Protective Equipment and Precautions for Fire-fighters

Wear self-contained breathing apparatus for firefighting if necessary.

Static Charge Accumulation

Not known – *high flash point makes ignition by static discharge unlikely*

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Use personal protective equipment. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. - For personal protection see section 8.

Methods and materials for containment and cleaning up

Dyke to control spillage and prevent environmental contamination. Recover free liquid with suitable pumps; Soak up with inert absorbent material and dispose of as hazardous waste. Keep in suitable closed containers for disposal. Do not let product enter drains.

7. HANDLING AND STORAGE

Precautions for Safe Handling

Use only in a well ventilated area. Avoid breathing product vapour. Use with adequate ventilation. Avoid contact with skin and wash work clothes frequently. An eye bath must be available near the workplace. Use spark-proof tools and explosion proof equipment.

Conditions for Safe Storage

Store in a cool, dry environment, away from sources of ignition, open flame, oxidising agents, strong acids or alkalis. Always ensure that containers, whether empty or full, are tightly sealed unless in use. Never cut, drill, weld or grind on or near this container. Containers can build up pressure if exposed to heat (fire).

8. EXPOSURE CONTROL / PERSONAL PROTECTION

Methanol:

Ontario TWAEV	200 ppm	Ontario STEV	-
ACGIH TLV	-	ACGIH STEL	250ppm
OSHA PEL	200ppm	OSHA STEL	-

Ventilation	mechanical ventilation may be required to control airborne titre; depending on handling procedures
Hands	nitrile or "Viton" gloves recommended – <i>other types may also protect; confirm suitability with suppliers</i>
Eyes	safety glasses with side shields – <i>always protect the eyes</i>
Clothing	wear impermeable (above) apron, boots, & long sleeves if there is any danger of splashing,

9. PHYSICAL AND CHEMICAL PROPERTIES

Odour & Appearance	clear, colourless liquid with musty, wine-like, sweetish odour
Odour threshold	0.01 – 0.1ppm
pH	5.0-7.0
Melting point/Freezing point	-40 °F
Initial boiling point/boiling range	383 – 421 °F

Flash point	212 °F
Evaporation rate	less than 0.1 (BuAc=1)
Flammability (solid; gas)	no data available
Lower flammable/explosive limit	8%
Upper flammable/explosive limit	9%
Vapour pressure	0.2mmHg / 0.027kPa (20°C / 68°F)
Vapour density	no data available
Relative density	1.092 (20/20°C)
Solubility (water)	slight
Partition coefficient – n-octanol/water	no data available
Auto ignition temperature	370°C / 698°F
Decomposition temperature	not known – no decomposition below the auto ignition temperature
Viscosity	2.4 centipoise (25°C / 77°F)
Conversion Factor	1ppm = 6.7mg/m ³ – approximate value for the mixture
Molecular Weight	159 grams per mole – average value for mixture

10. STABILITY AND REACTIVITY

Reactivity

No data available

Chemical Stability

Stable under recommended storage conditions.

Possibility of Hazardous Reactions

No data available

Conditions to avoid

Avoid impact, friction, heat, sparks, flame and source of ignition.

Incompatible materials

Bases, Oxidizing agents, Reducing agents, acids

Hazardous decomposition products

Toxic gases/fumes are given off during burning or thermal decomposition. During combustion carbon monoxide may be formed. During combustion carbon dioxide may be formed. Combustion can lead to the formation of formaldehyde. Combustion can lead to formation of formic acid.

Sensitive to Mechanical Impact

No

11. TOXICOLOGICAL INFORMATION

Acute Toxicity	
Skin Contact	not irritating; may irritate if contact is prolonged
Skin Absorption	slight; no toxic effects likely by this route
Eye Contact	irritating
Inhalation	not known – probably not irritating due to very low vapour pressure
Ingestion	not known – not a route of industrial exposure

Dimethyl Glutarate	LD ₅₀ (oral)	8190mg/kg (rat), 8900mg/kg (mouse), >5000mg/kg (rat) ¹
	LD ₅₀ (skin)	>3400mg/kg (rat)-no mortality, >5000mg/kg (rabbit), >2000mg/kg (rabbit) ¹
Dimethyl Succinate	LC ₅₀ (inhalation)	6100mg/m ³ (rat), 11,000mg/m ³ (rat) ¹
	LD ₅₀ (oral)	6890mg/kg (rat) ²
	LD ₅₀ (skin)	>5000mg/kg (rabbit), >2000mg/kg (rat) ² - no mortality
Dimethyl Adipate	LC ₅₀ (inhalation)	5900mg/m ³ (rat) ²
	LD ₅₀ (oral)	1920 & 11,300mg/kg (rat), >5000mg/kg (rat) ³ , 8500mg/kg
	LD ₅₀ (skin)	>5000mg/kg (rabbit) - no mortality ³
Methanol	LC ₅₀ (inhalation)	>11,000mg/m ³ rat) - no mortality ³
	LD ₅₀ (oral)	300
	LD ₅₀ (skin)	>200mg/kg
Dibasic Esters <i>*(DuPont data for the mixture)</i>	LD ₅₀ (oral)	8200mg/kg(rat)* ,8190mg/kg - RTECS data
	LD ₅₀ (skin)	2250 mg/kg(rabbit)*, >500mg/kg(rabbit) - RTECS data
	LC ₅₀ (inhalation)	11,000mg/m ³ (rat) - RTECS data is identical

11. TOXICITY, CONTINUED

General

Prolonged exposure may cause dermatitis; prolonged inhalation at 5900mg/m³ damages rat nasal tissue; rats recovered (no lung damage seen); ingestion (rodents) may damage liver with weight loss; *DuPont data states that ingestion of 50,000ppm (as 5% in food) for 2 weeks had no effect*

Sensitising

Not a sensitiser in humans or animals

Carcinogen

Not considered a tumorigen or a carcinogen in humans or animals

Synergistic With

Not known

12. ECOLOGICAL INFORMATION

Dimethyl Glutarate, CAS# 1119-40-0:

Bioaccumulation	not a bioaccumulator
Biodegradation	biodegrades very rapidly in the presence of oxygen; 70% in 7 days ¹
Abiotic Degradation	reacts with atmospheric hydroxyl radicals; estimated ½-life in air is 4-5 days – <i>low vapour pressure ensures this is a minor process compared to biodegradation</i>
Mobility in soil, water	sufficiently water soluble to move readily in soil and water
Aquatic Toxicity	
LC ₅₀ (Fish, 96hr)	31mg/litre (Lepomis macrochirus) ¹ , >18mg/litre (Pimephelas promelas) ¹ , 34mg/litre (Lepomis pallidus)
EC ₅₀ (Crustacea, 48hr)	>112mg/litre (Daphnia magna) ¹ , 180mg/litre (Daphnia magna – 24hr) ¹
EC ₅₀ (Algæ)	36mg/litre (Pseudokirchnerella subcapitata) ¹
EC ₁₀ (Bacteria)	62.5mg/litre (Pseudomonas putida) – <i>note this is an EC₁₀, not an EC₅₀</i>

Dimethyl Succinate CAS# 106-65-0:

Bioaccumulation	not a bioaccumulator
Biodegradation	biodegrades rapidly in the presence of oxygen; 74% in 28 days ²
Abiotic Degradation	reacts with atmospheric hydroxyl radicals; estimated ½-life in air is 4-5 days – <i>low vapour pressure ensures this is a minor process compared to biodegradation</i>
Mobility in soil, water	sufficiently water soluble to move readily in soil and water
Aquatic Toxicity	
LC ₅₀ (Fish, 96hr)	>50mg/litre (Danio rerio) ²
EC ₅₀ (Crustacea, 48hr)	>100mg/litre (Daphnia magna) ²
EC ₅₀ (Algæ)	>100mg/litre (Pseudokirchnerella subcapitata) ²
EC ₅₀ (Bacteria)	>1000mg/litre (<i>sewage sludge</i>) ²

Dimethyl Adipate CAS# 627-93-0:

Bioaccumulation	not a bioaccumulator
Biodegradation	biodegrades very rapidly in the presence of oxygen; 100% in 4 days ³
Abiotic Degradation	reacts with atmospheric hydroxyl radicals; estimated ½-life in air is 4-5 days – <i>low vapour pressure ensures this is a minor process compared to biodegradation</i>
Mobility in soil, water	sufficiently water soluble to move readily in soil and water
Aquatic Toxicity	
LC ₅₀ (Fish, 96hr)	>18mg/litre (Pimephelas promelas) ³ , 31mg/litre (Lepomis macrochirus) ³
EC ₅₀ (Crustacea, 48hr)	72mg/litre (Daphnia magna) ³
EC ₅₀ (Algæ)	>100mg/litre (Pseudokirchnerella subcapitata) ³
EC ₅₀ (Bacteria)	not known

Methanol CAS# 67-56-1:

Bioaccumulation	not a bioaccumulator
Biodegradation	biodegrades readily & very rapidly in the presence of oxygen; various degradation rates reported eg: 48% in 5 days & 93% in 2 days; ½-life in sandy loam 1-3 days; anaerobic degradation also rapid

Abiotic Degradation LC ₅₀ (Fish, 96hr)	reacts slowly with atmospheric hydroxyl radicals; estimated ½-life in air is 17 days. 15,400 & 19,230mg/litre (Lepomis macrochirus), 8530, 10,800, 11,850, 19,000 & 20,100 mg/litre (Oncorhynchus mykiss), 28,100 & 29,400 mg/litre (Pimephelas promelas) 7900-26,070mg/litre (Agonus cataphractus), 28,000mg/litre (Alburnus alburnus) & others
EC ₅₀ (Crustacea, 48hr)	>10,000, 18,260mg/litre (Daphnia magna), 12,000mg/litre (Nitocra spinipes)
EC ₅₀ (Algæ)	3600 & 28,440mg/litre (Chlorella pyrenoidosa), 12,000mg/litre (“plankton”)
EC ₅₀ (Bacteria)	18,750mg/litre (Tetrahymena pyriformis), 7690mg/litre (Paramecium caudatum) & others

13. DISPOSAL CONSIDERATIONS

Waste Disposal:

Do not flush to sewer, recycle solvent if possible, local regulations may permit disposal in sanitary landfill, may be incinerated in approved facility after mixing with a suitable flammable waste

Containers:

Drums should be reused. Recondition and pressure test by a licensed reconditioner prior to re-use.

Pails must be vented and thoroughly dried prior to crushing and recycling.

IBCs (intermediate bulk containers): polyethylene bottle must be pressure tested & recertified at 30 months. Replace at 60 months (5yrs).

Steel containers must be inspected, pressure tested & recertified every 5 years.

***Never cut, drill, weld or grind on or near this container,
even if empty***

14. TRANSPORT INFORMATION

Canada TDG AND U.S.A. 49 CFR	UN / PIN # Shipping Name Class & Packing Group	Not regulated for transport
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Marine Pollutant ERAP Required (CA only) Emergency Response Guide No. Reportable Quantity (RQ – USA only)	Not a marine pollutant No No No
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15. REGULATORY INFORMATION

Canada DSL U.S.A. TSCA Europe EINECS	On Inventory On Inventory On Inventory
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16. OTHER INFORMATION

NFPA RATING	Health 1	Flammability 1	Reactivity 0
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(1) European Chemicals Agency (EChA) dossier for dimethyl glutarate:

http://apps.echa.europa.eu/registered/data/dossiers/DISS-b6b5bc9c-d510-2a57-e044-00144f67d031/DISS-b6b5bc9c-d510-2a57-e044-00144f67d031_DISS-b6b5bc9c-d510-2a57-e044-00144f67d031.html

(2) European Chemicals Agency (EChA) dossier for dimethyl succinate:

http://apps.echa.europa.eu/registered/data/dossiers/DISS-9d845f89-c8e8-5ba0-e044-00144f67d249/DISS-9d845f89-c8e8-5ba0-e044-00144f67d249_DISS-9d845f89-c8e8-5ba0-e044-00144f67d249.html

(3) European Chemicals Agency (EChA) dossier for dimethyl adipate:

http://apps.echa.europa.eu/registered/data/dossiers/DISS-be0406c4-6870-2b94-e044-00144f67d031/DISS-be0406c4-6870-2b94-e044-00144f67d031_DISS-be0406c4-6870-2b94-e044-00144f67d031.html

Prepared for Megaloid Laboratories **by** Rob Cangiano
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Key to Abbreviations	<p>ACGIH® = American Conference of Governmental Industrial Hygienists AIHA® = AIHA® Guideline Foundation HSDB® = Hazardous Substances Data Bank IARC = International Agency for Research on Cancer NIOSH = National Institute for Occupational Safety and Health NTP = National Toxicology Program OSHA = US Occupational Safety and Health Administration RTECS® = Registry of Toxic Effects of Chemical Substances</p>
References	<p>CHEMINFO database. Canadian Centre for Occupational Health and Safety (CCOHS). HSDB® database. US National Library of Medicine. Available from Canadian Centre for Occupational Health and Safety (CCOHS). NIOSH Pocket Guide database. National Institute for Occupational Safety and Health. Available from Canadian Centre for Occupational Health and Safety (CCOHS). Registry of Toxic Effects of Chemical Substances (RTECS®) database. Dassault Systèmes/BIOVIA ("BIOVIA"). Available from Canadian Centre for Occupational Health and Safety (CCOHS).</p>
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