

# Chemical Material Safety Data Manual

## (MSDS )

### Part I Chemicals and corporate identification

Chemical Number: DBE

Chinese name of chemical: divalent acid, binary acid, dimethyl acid, dimethyl acid, The English name of the chemical is: Mixture of Dimethyl dicarboxylic Acid

***Company name: Deckens Chemical (Shandong) Co., Ltd***

Address: Qianwan Bonded Port Area, Qingdao Area, China (Shandong) Pilot Free Trade Zone

Postcode: 255400

Tel.: 86-17685872921

Website: <http://www.dakingschem.com>

### Part II Composition / composition information

Pure product mixture

Concentration of harmful substance components CAS number

Dimethyl glutarate 25-60% 1119-40-0

Dimethyl adipate 20-50% 627-93-0

Dimethyl butyinate 10-30% 106-65-0

### Part III: An Overview of the hazards

Risk category:

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Invasive approach: through skin absorption and inhalation

Health hazards: Skin contact may cause skin irritation, discomfort and skin rash. Eye contact may be cited

An eye irritation reaction, causing discomfort, tears, or blurred vision. Inhalation stimulates the upper airway, with a cough and discomfort. Some people have blurred vision with excessive inhalation or excessive skin contact. The mechanism of causing blurred vision is unclear. Have had an eye disease, excessive contact with the substance, its condition is aggravated.

environment hazards:

#### **Part IV First aid measures**

For any questions or symptoms, seek medical help.

Skin contact: rinse the skin with plenty of clean water

Eye contact: Immediately rinse the eyes with large amounts of water for at least 15 minutes and seek medical attention.

Inhalation: Immediately transfer the patient to fresh air. If breathing stops, perform artificial respiration. If breathing is difficult, give oxygen and seek medical attention.

Eating in: no emesis. Give 2 glasses of water immediately. If the injured person loses consciousness, never eat anything. seek medical advice.

Doctor's notice: activated carbon mixture can give help. 50g of activated carbon was suspended in 400 mL of water and mixed well. 5mg / kg or 350ml per adult.

#### **Part V Fire protection measures**

Hazard characteristics: Steam and air can form an explosive mixture.

Hazardous combustion products: carbon monoxide.

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Fire extinguishing method: use fog water, foam, dry powder and CO<sub>2</sub> fire extinguishing.

Fire fighting precautions: wear self-contained breathing apparatus and full-body protective clothing. Evacuate to the fire upwind. dabble

Cooling the tank (or container).

## **Part VI Emergency treatment emergency treatment**

Emergency action: Remove heat source, spark, open flame to prevent collision, friction or static electricity. Embankment to shelter leaks. provide against

Stop leakage flow into sewer, drain or concave areas. With sawdust, sand, dry oil or other adsorbed substances adsorption. When cleaning up, use the appropriate personal protective equipment. Before cleaning, refer to fire protection measures and handling parts.

## **Part VII. Operation, Disposal and Storage**

Handling Note: Avoid inhaling vapor (or fog). Avoid contact with the eyes, skin, and clothing. handle

Then rinse it out thoroughly. Contaminated work clothes should be cleaned before reuse.

Storage precautions: Avoid mixing with strong oxidants, acid or alkali metals. Store it in a well-ventilated place. Keep the container

seal.

Storage requirements and shelf life: The shelf life is one year without opening the storage conditions.

## **Part VIII: Contact Control / Personal Protection**

maximum allowable concentration:

D BE

Short-term exposure limits: not set.

Door threshold: not set.

AEL \* (DuPont): 1.5ppm, 10mg / m<sup>3</sup>, 8 hours, time average

The AEL value is the acceptable contact limit set by the DuPont.

When the occupational exposure limit set by the government is below the AEL value, the occupational exposure limits set by the government have a priority.

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Monitoring method:

Engineering control: adequate ventilation to keep staff exposure concentrations below the recommended limits.

Respiratory system protection: When the concentration in the air exceeds the contact limit, wear a NIOSH approved purifying air respirator with an organic vapor filter tank. The protection provided by the purifying air respirator is limited. If the leakage cannot be controlled, the contact concentration is not known, or the purified air respirator does not provide sufficient protection, the positive pressure air supply respirator should be used.

Eye protection: Wear safety goggles. Wear a full cover when the eyes or face may contact due to material splash or spray

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Type of anti-chemical glasses.

Body protection: wear anti-seepage clothing.

Hand protection: wear butyl rubber gloves.

Other protection: Wear aprons, boots or body protective clothing

## Part IX Physicochemical properties

Appearance and

characteristics: a colorless	Melting point (°C): about-20
liquid, with a sweet taste.pH	Boiling point (°C): 190-230
price:	Saturation vapor pressure (kPa):
Relative density (water =1):	0.2mmHg (20°C)
1.070-1.092 Relative Density	critical temperatures (°C):
(air =1):	Octanol / water distribution
Heat of combustion (kJ / mol):	coefficient:
Critical Pressure (Mpa):	ignition temperature (°C):
Flash point (°C): 100 (TCC)	Upper blast limit [% (V / V)]: 8.0
Lower limit [% (V / V)]: 0.9	Maximum explosion pressure (Mpa):
Minimum ignition energy (mJ):	
Spontaneous combustion point: 370	solubility: 20°C The solubility in
water is 5.3% (mass)	
Other physicochemical properties: Volatile: 100% (20°C);	evaporation
rate: <0.1 (butyl acetate =1.0);	threshold value: 0.1ppm at 100%
detection, 0.01ppm at 50% detection;	gravity: 1.092 (20°C)
Main use: used as a solvent or intermediate	

## Part X: Stability and reactivity

Stability: It is stable

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Procompound: strong oxidant, acid, alkali metals

Conditions to avoid contact: heat

Polyization hazard: does not occur

Decomposition product: carbon monoxide

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## Part X Toxicology data

acute toxicity:

Rat inhalation (4h) LC 50:> 11mg / L

Rats were inhaled (1h) LC 50:>10.7mg / L

LD 50:> 2,250mg / kg

Rat oral LD 50:8,191mg / kg

Subacute versus chronic toxicity: Repeated inhalation of animals includes reduced weight gain, absolute and relative weight of the liver

Reduced, olfactory organ epithelium (the tissue of the nose) degeneration. Its toxicity included weight loss, but no pathological changes were found.

Irritant: The mixture is a mild skin irritant, a moderate eye irritant.

Sensitization: not an animal skin sensitizing substance.

Mutagenicity: Neither animal experiments or bacterial culture experiments cause genetic damage, but in a mammalian cell culture

Positive results in the breeding experiment.

Teratogenicity: Animal experiments showed that the substance does not cause developmental or reproductive toxicity.

Carcinogenicity: Concentrations at or higher than 0.1% in this substance were not represented by IARC, NTP, OSHA, or ACGI

H is listed as a component of a carcinogen.

Others: a experiment of 4 hours of 60ppm found that the animal corneal opacity, cornea to the anterior surface of the lens

The distance of the surface is temporarily increased. An infusion of 10 uL of the substance into the eye of the animal

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showed that the substance caused corneal opacity. Administration of 10 - 100 uL of a similar mixture caused corneal opacity, temporary corneal thickening and temporary paralysis of the cornea. An animal experiment with a skin toxicity of about 60mg / kg found a temporary increase in the distance from the cornea to the anterior surface of the lens

## **Part XII Ecological data**

Eco-toxicity:

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Aquatic toxicity

M ADE

Carprinid small fish 96 hours LC 50:18-24mg / L, moderate toxicity.

Daphnia 48 hours LC 50:112-150mg / L

Biodegradability: For the MADE components, dimethyl succinate, dimethyl glutarate, and dimethyl adipate, using 28

Day closed bottle biodegradability test. At at least 60% biodegradation at 14 days, to pass this test must exceed 10% level, graded as a biodegradable material. All components of the MADE pass this test, so the MADE is considered to be readily biodegradable.

The biodegradability of dimethyl butyrate was 67% for 7 days.

The biodegradability of dimethyl glutarate was 70% for 7 days.

The biodegradability of dimethyl adipic acid was 58% for 7 days.

The biodegradability at 14 days was 84%.

Non-biological degradability:

Biological enrichment or bioaccumulability:

Other harmful effects:

### **Part XIII Waste disposal**

Waste nature: hazardous waste

Waste disposal method: Waste disposal must comply with the corresponding federal, state / provincial and local regulations requirements. Recycling liquid for reuse or regeneration. Disuse in a licensed approved incineration unit or within a biological treatment system.

Waste precautions: Do not flush water or solid material into the surface water or sanitary water system.

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## Part XIV Transportation Information

Dangerous Goods Number: No

UN number: None

Packaging logo:

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Packaging category: 220 kg net closed steel barrel

Packaging method: closed mouth steel barrel

Transportation considerations:

## **Part XV: Regulatory Information**

Regulatory information: safety management regulations for chemical hazardous substances

Implementation Rules for the Regulations of the  
Safety Management of Chemical Hazardous Articles  
([1992] No.677) Regulations on safe Use of Chemicals  
in Workplace ([1996] Ministry of Labor No.423)  
Classification and labeling of common hazardous chemicals  
(GB 13690-92)

The Law of the People's Republic of China on the Prevention  
and Control of Environmental Pollution caused by Solid Waste  
General Technical Conditions for Transport and Packaging of  
Dangerous Goods (GB 12463-90)

## **Part XVI Other Information**

1. Safety Management of chemicals in workplaces, Safety Production Bureau of State Economic and Trade Commission, 2000
  2. New Dangerous Goods Safety Manual, Chemical Industry Press, 2001
  3. Complete Book of Safety Technology of Hazardous Chemicals, Chemical Industry Press, 1997
  4. Regulations on the Registration of Hazardous Chemicals, State Economic and Trade Commission, October 1,2000 Data audit unit: Deckens Chemical (Shandong) Co., LTD
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Amendment instructions: revised according to the preparation provisions of Chemical Safety Technical Specification (GB 16483-2000). Other information:

The information provided in this information is not a product indicator: it does not guarantee a specific nature. The insured information contained is based on the general guidance on health and safety provided by our knowledge in the operation, storage and use of the product. It is not applicable to special or non-standard and not as indicated and recommended.

The technical data used in this information is currently reliable. Any additional knowledge and experience should be revised.

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