

Safety Data Sheet

1. IDENTIFICATION

Product Name:	Dibasic Ester
Other Names:	Dibasic Ester mixture; DBE
Recommended Use:	To be used as the solvent in the paint/ coating/ ink and adhesive industrial not for pharmaceutical and health care.
Supplier:	Global Chemie ASCC Limited
Street Address:	88/123 Moo 2 Bangpoo Industrial Estate (North), Phraek Sa Mai, Mueang Samutprakan, Samutprakan 10280
Telephone:	+66 2324 6888
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2. HAZARDS IDENTIFICATION

Health Hazard Classification

This product isn't classified as hazardous under GHS criteria.

Hazardous Categories

No data available.

GHS Pictograms

No data available.

Hazard Statements

H320: Causes eye irritation.

Precautionary Statements

P264: Wash thoroughly after handling.

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.

P337 + P313: If eye irritation persists: Get medical advice/attention.

Storage

P405: Store locked up.

Disposal

P501: Disposal should be in accordance with applicable regional, national, and local laws and regulations. Local regulations.

Signal Word No signal word

3. COMPOSITION: Information on Ingredients

Chemical Ingredient	CAS No.	UN No.	Proportion (%)
Dimethyl Succinate	106-65-0	-	15-25
Dimethyl Glutarate	1119-40-0	-	55-65
Dimethyl Adipate	627-93-0	-	10-25

Molecular Formular: CH₃O₂C(CH₂)_nCO₂CH₃ (n=2,3,4)

Molecular Weight: No data available.

4. FIRST AID MEASURES

For advice, contact Ramathibodi Poison Center (Phone: 1367) or a doctor.

INHALATION

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

SKIN CONTACT

Flush skin with water after contact. Wash contaminated clothing before reuse.

EYE CONTACT

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

INGESTION

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

NOTE TO PHYSICIAN

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

5. FIRE FIGHTING MEASURES

Extinguishing Media: Water Spray, dry chemical, or carbon dioxide (CO₂) to extinguish flames.

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

Unusual Fire Hazards: No data available.

6. ACCIDENTAL RELEASE MEASURES

NOTIFICATION PROCEDURES

Remove source of heat, sparks, flame, impact, friction or electricity. Dike spill. Prevent material from entering sewers, water ways or low areas.

SPILL MANAGEMENT

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.

ENVIRONMENTAL PRECAUTIONS

No data available.

7. HANDLING AND STORAGE

HANDLING

Avoid breathing vapours 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.

8. EXPOSURE CONTROLS: PERSONAL PROTECTION

EXPOSURE LIMIT VALUES

Engineering Controls:

- Use sufficient ventilation to keep employee exposure below recommended limits.
- Personal Protective Equipment
- 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.

Personal Protective

Wear impervious clothing, such as gloves, apron, boots or whole bodysuit as appropriate. Recommended glove and clothing material: Butyl Rubber.

Respiratory Protection: 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 uncontrolled release exposure levels are not known or any other circumstances where air-purifying respirators may not provide adequate protection.

ENVIRONMENTAL CONTROLS

No data available.

9. PHYSICAL AND CHEMICAL PROPERTIES

Property	Unit of Measurement	Typical Value
Appearance	-	Colorless Liquid
Odour	-	Sweet
pH	-	No data available
Boiling point	°C	195-230
Melting point	°C	-20
Flash point	°C	100
Autoignition Temperature	°C	370
Decomposition Temperature	°C	No data available
Lower/Upper Flammability Limits	%V	0.9-8.0
Density @ 20°C	g/cm ³	1.074-1.094
Specific Gravity @ 20°C	-	1.076-1.096
Viscosity @ 20°C	cSt.s	No data available
Vapor pressure	mmHg	0.2 at 20 °C
Vapor density	kPa (Air = 1)	No data available
Evaporation Rate	(n-Butyl acetate = 1)	< 0.1
Water Solubility	-	No data available
Solubility in other solvents Partition coefficient	(n-octanol/water)	5.3 %wt at 20 °C
Coefficient of Thermal Expansion	per Deg °C	No data available

The values listed are indicative of this product's physical and chemical properties. For a full product specification, please consult the Product Data Sheet.

10. STABILITY AND REACTIVITY

Chemical Stability

Material is stable under normal conditions.

Conditions to avoid

Avoid heat, sparks, and flames.

Hazardous decomposition products

No data available

Possibility of Hazardous reactions

No data available

Materials to Avoid

Strong oxidizers, acids, alkalies.

11. TOXICOLOGICAL INFORMATION

Acute Toxicity

Route of Exposure	Values
Inhalation	Toxicity (Rat): LC50 > 11 mg/l (4hr)
	Toxicity (Rat): LC50 > 10.7 mg/l (1hr)
Ingestion	Toxicity (Rat): LD50 = 8,191 mg/l (1hr)
Skin	Toxicity (Rabbit): LD50 > 2,250 mg/kg
Eye	No data available

The mixture is a mild to severe skin irritant and a moderate eye irritant but is not a skin sensitizer in animals. Toxic effects described in animals from exposure by inhalation include upper respiratory tract irritation. A single 4-four exposure to 60 ppm caused transient corneal opacity and transient increases in the distance from the cornea to the anterior surface of the lens of the eye. 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.

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. The mixture does not produce genetic damage in animals, or in bacterial cell cultures, but it was positive in one study with cultures, but it was positive in one study with cultured mammalian cells. Animal testing indicates that this mixture does not have developmental, or reproductive effects.

12. ECOLOGICAL INFORMATION

AQUATIC TOXICITY

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

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

ECOTOXICITY

No data available.

MOBILITY

No data available.

PERSISTENCE AND DEGRADABILITY

No data available.

Biodegradation:

Biodegradation Information: The DIBASI ESTER components, dimethyl succinate, dimethyl glutarate, and dimethyl adipate were 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. All of the components of DBE pass this test and, therefore, DIBASIC ESTER is considered readily biodegradable.

Dimethyl Succinate - 67% biodegradability in day 7

Dimethyl Glutarate - 70% biodegradability in day 7

Dimethyl Adipate -58% biodegradability in day 7

Dibasic Ester - 84% biodegradability in day 14

13. DISPOSAL CONSIDERATIONS

DISPOSAL RECOMMENDATIONS

Treatment, storage, transportation and disposal must be in accordance with applicable Federal, State/provincial and local regulations. Recover unusable free liquid and dispose into either an approved and permitted incinerator or approved and permitted biological treatment system. Recover any Dibasic Ester contaminated water and dispose of into an approved and permitted biological treatment system. Do not flush any water or solids into surface water drains or sanitary sewer system. Remove unusable solid material or contaminated soil for disposal into an approved and permitted landfill.

14. TRANSPORT INFORMATION

Road and Rail Transport		Marine Transport		Air Transport	
UN No.	Not regulated	UN No.	Not regulated	UN No.	Not regulated
Class/Item	Not regulated	Class/Item	Not regulated	Class/Item	Not regulated
Hazard Symbol	Not regulated	Hazard Symbol	Not regulated	Hazard Symbol	Not regulated
Proper Shipping Name	Not regulated	Proper Shipping Name	Not regulated	Proper Shipping Name	Not regulated
Packing Group	Not regulated	Packing Group	Not regulated	Packing Group	Not regulated
		Marine Pollutant	No		

15. REGULATORY INFORMATION

U.S.Federal Regulations

TSCA Inventory Status : Reported/Included.

TITLE III HAZARD CLASSIFICATION SECTIONS 311,312

Acute: Yes

Chronic: No

Fire: No

Reactivity: No

Pressure: No

HAZARDOUS CHEMICAL LISTS

SARA Extremely Hazardous Substance: No

CERCLA Hazardous Substance: No

SARA Toxic Chemical: No

Canadian Regulations

CLASS D Division 2 Subdivision B-Toxic Material. Skin or Eye Irritant.

16. OTHER INFORMATION

National Fire Protection Association (USA) : No data available

SDS Distribution : The information contained herein is based on our current knowledge of the underlying data and is intended to describe the product for the purpose of health, safety and environmental requirements only. No warranty of guarantee is expressed or implied regarding the accuracy of these data or the results to be obtained from the use of the product.

Prepared By : Quality Control Department / Global Chemie ASCC Limited

Abbreviations:

No data available

References:

- Supplier Material Safety Data Sheets
- <http://chem.sis.nlm.nih.gov/chemidplus> (October 18)
- <http://hsis.ascc.gov.au/SearchHS.aspx> (October 18)
- Ecotoxicology data: http://cfpub.epa.gov/ecotox/quick_query.htm (October 18)
- *Sax's Dangerous Properties of Industrial Materials*, Richard J. Lewis Snr., pub. Canada (2000)

The information sourced for the preparation of this document was correct and complete at the time of writing to the best of the writer's knowledge. The document represents the commitment to the company's responsibilities surrounding the supply of this product, undertaken in good faith. This document should be taken as a safety guide for the product and its recommended uses but is in no way an absolute authority. Please consult the relevant legislation and regulations governing the use and storage of this type of product. No warranty and guarantee are expressed or implied regarding the accuracy of these data or the results to be obtained from the use of the product for further information, please contact Global Chemie ASCC Limited.