MATERIAL SAFETY DATA SHEET



DI BUTYL PHTHALATE

1. Chemical product and company identification

| A. Product name B. Trade Name/Synonym | : Di Butyl Phthalate : Phthalic Acid, Di Butyl Ester, Di-N-Butyl Phthalate, 1, |
|--|---|
| | 2- benzenedicarboxylic |
| | Acid, DiButyl Ester, benzene-O-Dicarboxylic Acid, Di-N |
| | Butyl Ester. |
| Chemical Family | : Ester, carboxylic, Aromatic |
| Chemical Formula | : C6H10O |
| | |

C. Manufacturer / Supplier / Distributor Information

RAR Resin & Chemical Industries JLT11th Floor, Jumeirah Lake Towers, P.O. Box: 47381, Dubai UAETel: +971 4 4356516 / +971 4 4356517Email: info@rarresin.comFax: +971 4 4356518Website: www.rarresin.com

2. COMPOSITION AND INFORMATION ON INGREDIENTS

| Composition | CAS # | Percentage |
|--------------------|---------|------------|
| Di Butyl Phthalate | 84-74-2 | 100% |

Toxicological Data on Ingredients : Cyclohexanone : ORAL (LD50) Acute : 1516 mg/ kg [Rat.] 1400 mg/ kg [mouse] DERMAL (LD50) : Acute : 948 mg/ kg [Rabbit]

3. HAZARD IDENTIFICATION

| NFPA ratings (Scale 0-4): | Health = 2, Fire= 1, Reactivity= 0 |
|---------------------------|--|
| Emergency overview: | Colorless to yellow, oily liquid |
| Major health hazrds: | harmful if inhaled, respiratory tract irritation, eye irritation |

Potential health effects

Inhalation:

Short term exposure: Irritation, difficulty breathing, headache, drowsiness, dizziness, paralysis, convulsions.
 Long term exposure: Same effects as short term exposure . Skin contact
 Short term exposure: Irritation
 Long term exposure: no information is available.

Eye contact: Short term exposure: irritation Long term exposure: irritation

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Ingestion

Short term exposure: Vomiting, digestive, disorders, headche, dizziness Long term exposure: no information on significant adverse effects.

Carcinogen status

OSHA: N NTP: N IARC: N

4.FIRST AID MEASURES

INHALATION

- Remove from exposure area to fresh air immediately
- Perform artificial respiration if necessary,
- Get medical attention immediately.

SKIN CONTACT

- Remove from exposure area to fresh air immediately
- Perform artificial respiration if necessary,
- Get medical attention immediately.

EYE CONTACT

- Wash eyes immediately with large amount of water Occasionally lifting upper and lower lids Until no evidence of chemical remains (at least 15-20 minutes)
- Get medical immediately.

INGESTION

- get medical attention immediately.

NOTES TO PHYSICIAN

- For ingestion, consider gastric lavage and feces,
- Consider oxygen.

5. FIRE FIGHTING MEASURES

Fire and Explosion Hazards

- Slightly fire hazards
- Electrostatic charges may be generated by flow,
- Agitation, etc. May result in ignition or explosion.

Extinguishing media

- Dry chemical,
- Regular foam water.

Large Fires

- Use regular foam or food with fine water spray.

Fire fighting

- Move container from fire area if it can be done without risk
- Fight large fires a protected location or safe distance.

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- Stay away from the ends of tanks.
- Do not scatter spilled material with high- pressure water streams.
- Dike fire- control water for lateral disposal.
- Use agents suitable for type of surrounding fire.
- Cool containers with water spray until well after the fire is out.
- Stay upwind and keep out of low areas.
- Water or foam may cause frothing.

| Flash Point | : 157°C (315°F) (CC) |
|---------------------------|----------------------|
| Lower Flammable Limits | : 0.5% @ 235°C |
| Upper Flammable Limits | : 2.5% |
| Auto ignition | : 402°C (756°F) |
| Flammability Class (OSHA) | : III B |

6. ACCIDENTAL RELEASE MEASURES

Air Release

- Reduce vapors with water spray
- Stay upwind and keep out of low areas.

Soil Release

- Dig Holding area such as lagoon, pond or pit for cotainment.
- Dike for later disposal.
- Absorb with sand or other non-combustile material

Water Release

- Cover with absorbent sheets, spill-control pads or pillows.
- Collect with absorbent into suitable container.
- Absorb with activated carbon
- Collect spilled material using mechanical equipment

Occupational Spill

- Do not touch spilled material.
- Stop leak if you can do it without risk.
- Reduce vapors with water spray.
- Small Spill : Absorb with sand or other non- combustible material
- Collect spilled material in appropriate container for disposal.
- Large Spill : Dike for later disposal.
- Keep unnecessary people away, isolate hazard area and deny entry.

- Notify local emergency planning committee and state emergency commission for release greater than or equal to RQ (U.S SARA section 304).

7. HANDLING & STORAGE

- Store and handling in accordance with all current regulations and standards.
- Store in a tightly closed container.
- Store in a cool, dry place, well- ventilated area.
- Keep separated from incompatible substances.

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8. EXPOSURE CONTROLS/ PERSONAL PROTECTION

Exposure Limits

- 5mg/m³ OSHA TWA
- 5mg/m³ ACGIH TWA
- 5mg/m³ NIOSH recommended 10 hour TWA

Ventilations

- Provide local exhaust ventilation or process enclosure ventilation system.
- Ensure compliance with applicable exposure limits.

Eye Protection

- Wear splash resistant saftey goggles.
- Provide an emergency eye wash fountain and quick drench shower in the immediate work area.

Clothing

-Wear appropriate chemical resistant clothing.

Gloves

- Wear appropriate chemical resistant gloves.

Respirator

- Respiratory equipment must be certified by NIOSH/ OSHA.
- The following respirators and maximum use concentrations are drawn from NIOSH OSHA.

- 50mg/m³

Any dust and mist respirator with a full facepiece.

- 125mg/m³

Any supplied-air respirator.

Any powered, any purifying respirator with a dust and mist filter

- 250mg/m³

Any air-purifying respirator with a full face-piece and a high-efficiency particulate filter Any self-contained breathing apparatus with a full facepiece. Anny supplied- air respirator with a full facepiece.

9. PHYSICAL & CHEMICAL PROPERTIES

| Description | : Colorless to yellow, oily liquid |
|----------------------------|--|
| Molecular Weight | : 278.35 |
| Molecu;ar Formula | : C ₁₆ H ₂₂ O ₄ |
| Boiling Point | : 340°Č (644 deg F) |
| Freezing Point | : -35°C (-31°F) |
| Vapor Pressure | :<0.01 mmHg @ 20°F |
| Vapor Density (Air= 1) | : 9.58 |
| Specific Gravity (water=1) | : 1.047 |
| Water Solubility | : 4500ppm @ 25°C |
| рН | : No data available |
| Volatility | : 0% |
| Odor Threshold | : 5ppm |
| Evaporation rate | : 0 (Butyl acetate =1) |
| Viscosity | : 20 cP @ 20°C |
| Solvent Solubility | : Soluble: Acetone, alcohol, ether, benzene, organic solvents. |

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10. STABILITY & REACTIVITY

| Reactivity Conditions to Avoid | : Stable at normal temperatures and pressure. |
|-----------------------------------|--|
| Incompatibilities | Avoid heat, flames, sparks and other sources of ignition. Containers may rupture or explode if exposed to heat. |
| | - Acids, bases, oxidizing materials, reducing agents. |
| Hazardous Decompostion | Thermal decomposition products : Oxides of carbon |
| Polymerization: | Will not polymerize. |

11. TOXICOLOGICAL INFORMATION

Toxicity Data

LD50 : >20 ml/kg skin-rabbit, 7499mg/kg oral- rat.LC50 : 4250mg/m³ inhalation-ratLocal effects:Irritant (inhalation-eye)Acute Toxicity Level:Toxic (inhalation), Slightly Toxic (ingestion)Medical conditions aggravated exposure:Kidney problemMutagenic data:Available.Reproductive effects data:Available.

12. ECOLOGICAL INFORMATION

Ecotoxicity data

| Fish Toxicity | : 700 µg/ℓ 96hour LC50 (Mortality) - Bluegill |
|-----------------------|---|
| Invertebrate Toxicity | : 540 µg/ℓ 7 hour |
| | EC50 (regeneration) - Flatform |
| Algal toxicity | : 3.4 µg/ℓ 96year |
| | EC50 (Growth) - Dinoflaggellate |
| Other toxic | : 340 μ g/ ℓ 2 week (population)- Aquatic community |
| Fate and transport | |
| Bioconcentration | : 3500 μ g/ ℓ 24day BCF(Residue)- Midge 0.18 μ g/ ℓ |

13. DISPOSAL CONSIDERATIONS

- Dispose in accordance with all applicable regulations.

- Subject to disposal regulations : U.S EPA 40CFR262. Hazardous waste number (s) : U069

14. TRANSPORT INFORMATION

- No classification currently assigned.

15. REGULATORY INFORMATION

Section 4 CERCLA section 103 (40CFR302.4): Y - Di Butyl Phthalate : 10 LBS RQ SARA hazard categories, SARA sections 311/ 312 (40CFR370.21) Acute hazards: Y Chronic hazard: N Fire hazard: N Reactive hazard: N Sudden release: N OSHA process safety (29CFR1910.119): N California proposition 65: N