**DIISOBUTYL KETONE (DIK)**

### CAUTIONARY RESPONSE INFORMATION

**Common Synonyms**
- DIBK
- 5-Diisopropyl-4-heptanone
- Isovaleron

**DIK**
- Liquid
- Colorless
- Mild, sweet odor

- Floats on water.

**Keep local authorities; notify local health & pollution control agencies.**

**Fire**
- Combustible. Extinguish with dry chemicals, foam or carbon dioxide. Water may be ineffective on fire.

**Exposure**
- CALL FOR MEDICAL AID.

**VAPOR**
- Irritating to eyes, nose and throat. If inhaled, will cause coughing or difficulty breathing. If in eyes, hold eyelids open and flush with plenty of water. If breathing has stopped, give artificial respiration. If breathing is difficult, give oxygen.

**LIQUID**
- Irritating to skin and eyes. If swallowed, wash with soap and water. If skin or eyes are irritated, remove contaminated clothing and shoes. If inhaled will cause nausea and vomiting. Remove contaminated clothing and shoes. If swallowed will cause nausea and vomiting.

**Water Pollution**
- Effect of low concentrations on aquatic life is unknown. May be dangerous if it enters water intakes. Notify local health and wildlife officials.

**Public Health**
- May be dangerous if it enters water intakes. Notify local health and wildlife officials.

### 1. CORRECTIVE RESPONSE ACTIONS

**Stop discharge**
- Contain
- Chemical and Physical Treatment: Burn; Absorb Clean shore line
- Salvage waterfront

### 2. CHEMICAL DESIGNATIONS

**Chemical Name:** DIISOBUTYL KETONE (DIK)

- CAS Registry No.: 108-83-8
- Standard Industrial Trade Classification: 51625
- NAERG Guide No.: 127
- DOT No.: 1157
- IMOG3 No.: 108-83-8
- CAS Registry No.: 1157
- DOT No.: 1157
- NAGRO Guide No.: 127

### 3. HEALTH HAZARDS

**3.1 Personal Protective Equipment:**
- Air-supplied mask in confined areas; plastic gloves; face shield and safety glasses

**3.2 Symptoms Following Exposure:**
- Inhalation of vapor causes irritation of nose and throat. Inhalation causes irritation of mouth and stomach. Vapor irritates eyes. Contact with liquid irritates skin.

**3.3 Treatment of Exposure:**
- INHALED: move to fresh air; give oxygen if breathing is difficult; call a physician. EYES: flush with plenty of water. SKIN: wipe off; flush with plenty of water; wash with soap and water.

### 4. FIRE HAZARDS

**4.1 Flash Point:** 131°F O.C. 120°F C.C.
**4.2 Flammable Limits in Air:** 0.8%-7.1% at 20°F
**4.3 Fire Extinguishing Agents:** Foam, dry chemical, carbon dioxide

**4.4 Fire Extinguishing Agents Not to Be Used:** Water may be ineffective.

**4.5 Special Hazards of Combustion Products:**
- Currently not available.

**4.6 Behavior in Fire:**
- Currently not available.

**4.7 Auto Ignition Temperature:** 74°F

**4.8 Electrical Hazards:**
- Currently not available.

**4.9 Burning Rate:**
- Currently not available.

**4.10 Abiabatic Flame Temperature:**
- Currently not available.

**4.11 Stoichiometric Air to Fuel Ratio:**
- 61.9 (calc.)

**4.12 Flame Temperature:**
- Currently not available.

**4.13 Combustion Molar Ratio (Reactant to Product):**
- 18.0 (calc.)

**4.14 Minimum Oxygen Concentration for Combustion (MOCC):**
- Not listed.

### 5. CHEMICAL REACTIVITY

**5.1 Reactivity with Water:**
- No reaction

**5.2 Reactivity with Common Materials:**
- May attack some forms of plastics.

**5.3 Stability During Transport:**
- Stable

**5.4 Neutralizing Agents for Acids and Caustics:**
- Not pertinent

**5.5 Polymerization:**
- Not pertinent

**5.6 Inhibitor of Polymerization:**
- Currently not available

### 6. WATER POLLUTION

**6.1 Aquatic Toxicity:**
- 55 ppm/24 hour/brine shrimp/TL

**6.2 Waterfowl Toxicity:**
- Currently not available

**6.3 Biological Oxygen Demand (BOD):**
- 4% of theoretical in 5 days, fresh water

**6.4 Food Chain Concentration Potential:**
- None

**6.5 GESAMP Hazard Profile: Bioaccumulation:**
- 0

**6.6 Damage to living resources:**
- 0

**6.7 Human Contact hazard:**
- 0

**6.8 Human Oral hazard:**
- 0

**6.9 Reduction of amenities:**
- 0

**6.10 Exposed Human health:**
- 0

**6.11 Exposure human health:**
- 0

**6.12 Reduction of amenities:**
- 0

**6.13 Human Impact Elements:**
- 0

**6.14 Water Quality Impact:**
- 0

**6.15 Tributary Impacts:**
- 0

### 7. SHIPPING INFORMATION

**7.1 Grades of Purity:**
- Technical

**7.2 Storage Temperature:**
- Ambient

**7.3 Inert Atmosphere:**
- No requirement

**7.4 Venting:**
- Open (flame arrestor)

**7.5 IMO Pollution Category:**
- D

**7.6 Ship Type:**
- Data not available

**7.7 Barge Hull Type:**
- Currently not available

### 8. HAZARD CLASSIFICATIONS

**8.1 49 CFR Category:**
- Flammable liquid

**8.2 49 CFR Class:**
- 3

**8.3 49 CFR Package Group:**
- III

**8.4 Marine Pollutant:**
- No

**8.5 NFPA Hazard Classification:**
- Category Classification
  - Health Hazard (Blue)............ 1
  - Flammability (Red).................. 2
  - Instability (Yellow).............. 0

**8.6 EPA Reportable Quantity:**
- Not listed.

**8.7 EPA Pollution Category:**
- Not listed.

**8.8 RQWA Waste Number:**
- Not listed

**8.9 EPA FIFRA List:**
- Not listed

### 9. PHYSICAL & CHEMICAL PROPERTIES

**9.1 Physical State at 15°C and 1 atm:**
- Liquid

**9.2 Molecular Weight:**
- 430.8

**9.3 Boiling Point at 1 atm:**
- 200°F

**9.4 Freezing Point:**
- Not pertinent

**9.5 Critical Temperature:**
- Not pertinent

**9.6 Critical Pressure:**
- Not pertinent

**9.7 Specific Gravity:**
- 0.806 at 20°C (liquid)

**9.8 Liquid Surface Tension:**
- 23.92 dynes/cm = 0.0235 N/m at 22°C

**9.9 Liquid Water Interfacial Tension:**
- Currently not available

**9.10 Vapor (Gas) Specific Gravity:**
- 4.9

**9.11 Ratio of Specific Heats of Vapor (Gas):**
- Not pertinent

**9.12 Latent Heat of Vaporization:**
- 121 Btu/lb = 2.8 X 10^6 J/kg

**9.13 Heat of Combustion:**
- 16,040 Btu/lb = 6.7 cal/g = 2.8 X 10^6 J/kg

**9.14 Heat of Decomposition:**
- Not pertinent

**9.15 Heat of Solution:**
- Not pertinent

**9.16 Heat of Polymerization:**
- Not pertinent

**9.17 Heat of Fusion:**
- Currently not available

**9.18 Limiting Value:**
- Currently not available

**9.19 Reid Vapor Pressure:**
- 0.21 psia

### NOTES

**JUNE 1999**
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