**CAUTIONARY RESPONSE INFORMATION**

**Common Synonyms:**
- Isobutyl alpha-methacrylate
- Isobutyl 2-methyl-2-propenoate
- Methacrylic acid, isobutyl ester

**Liquid**
- Colorless
- Acrylic odor
- Floats on water.

**Fire**
- Combustible: Sealed containers may rupture explosively when exposed to heat.
- Extinguish small fires: dry chemical, CO2, water spray or alcohol foam; large fires: water spray, fog or alcohol foam.

**Exposure**
- CALL FOR MEDICAL AID.
- **VAPOR**:
  - Irritating to skin and eyes.
  - Move to fresh air.
- **LIQUID**:
  - Irritating to skin and eyes.
  - Harmful if swallowed.

**Water Pollution**
- Dangerous to aquatic life in high concentrations.
- May be dangerous if it enters water intakes.
- Notify local health and wildlife officials.
- Notify operators of nearby water intakes.

**1. CORRECTIVE RESPONSE ACTIONS**
- Stop discharge
- Contain
- Collection Systems: Skim
- Chemical and Physical Treatment: Burn;
  - Absorb
  - Clean shore line
  - Salvage waterfowl

**2. CHEMICAL DESIGNATIONS**
- 2.1 CG Compatibility Group: 14, Acrylates
- 2.2 Formula: CH\(\text{3}\)\(\text{3}\)O\(\text{2}\)\(\text{2}\)\(\text{2}\)CH\(\text{2}\)\(\text{2}\)CO\(\text{2}\)\(\text{2}\)\(\text{2}\)\(\text{2}\)\(\text{2}\)\(\text{2}\)\(\text{2}\)\(\text{2}\)
- 2.3 IMO UN Designation: 3.32283
- 2.4 DOT No.: 520
- 2.5 CAS Registry No.: 57-86-9
- 2.6 NAERG Guide No.: 108P
- 2.7 Standard Industrial Trade Classification: 51373

**3. HEALTH HAZARDS**
- 3.1 Personal Protective Equipment: Wear self-contained positive pressure breathing apparatus and full protective clothing.
- 3.2 Symptoms Following Exposure: May be harmful if inhaled; may cause dizziness or suffocation.
- 3.3 Treatment of Exposure: **INHALATION**: Move victim to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. **EYES OR SKIN**: Flush with running water for at least 15 min; hold eyelids open if necessary. Wash skin with soap and water. **INGESTION**: If unconscious; have victim drink water or milk and induce vomiting.
- 3.4 TLV-TWA: Not listed.
- 3.5 TLV-STEL: Not listed.
- 3.6 TLV-CEILING: Not listed.
- 3.7 Toxicity by Ingestion: Grade 1; LD\(\text{50}\) = 11.99 g/kg (mouse)
- 3.8 Toxicity by Inhalation: Currently not available.
- 3.9 Chronic Toxicity: Teratogen
- 3.10 Vapor (Gas) Irritant Characteristics: Vapors cause a slight smarting of the eyes or respiratory system if present in high concentrations. The effect is temporary.
- 3.11 Liquid or Solid Characteristics: Causes smarting of the skin and first degree burns on short exposure; may cause second-degree burns on long exposure.
- 3.12 Odor Threshold: Currently not available.
- 3.13 DLH Value: Not listed.
- 3.15 OSHA PEL-STEL: Not listed.
- 3.16 OSHA PEL-CEILING: Not listed.
- 3.17 EPA AEGL: Not listed

**4. FIRE HAZARDS**
- 4.1 Flash Point: 120°F O.C. 112°F C.C.
- 4.2 Flammable Limits in Air: Currently not available
- 4.3 Fire Extinguishing Agents: Small fires: dry chemical, CO2, water spray or alcohol foam; large fires: water spray, fog or alcohol foam.
- 4.4 Fire Extinguishing Agents Not to Be Used: Not pertinent
- 4.5 Special Hazards of Combustion: Products: Thermal decomposition may yield oxides of carbon.
- 4.6 Behavior in Fire: Combustible liquid. Sealed containers may rupture explosively when exposed to heat, due to polymerization.
- 4.7 Auto-Ignition Temperature: Currently not available
- 4.8 Electrical Hazards: Class I, Group D
- 4.9 Burning Rate: Currently not available
- 4.10 Adiabatic Flame Temperature: Currently not available
- 4.11 Stoichiometric Air to Fuel Ratio: 50.0 (calc.)
- 4.12 Flame Temperature: Currently not available
- 4.13 Combustion Molar Ratio (Reactant to Product): 15.0 (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: No reaction
- 5.3 Stability During Transport: Stable. Store away from heat, catalysts and strong oxidizing agents.
- 5.4 Neutralizing Agents for Acids and Caustics: Not pertinent
- 5.5 Polymerization: Will occur with elevated temperatures and on contact with oxidizing agents.
- 5.6 Inhibitor of Polymerization: 25 ppm hydroquinone monomethyl ether, 10 ppm p-methoxy phenol (MEHQ)

**6. WATER POLLUTION**
- 6.1 Aquatic Toxicity: Currently not available
- 6.2 Waterfowl Toxicity: Currently not available
- 6.3 Biological Oxygen Demand (BOD): Currently not available
- 6.4 Food Chain Concentration Potential: Currently not available
- 6.5 GESAMP Hazard Profile: Biomagnification: 0
- 6.6 Damage to Living Resources: Not pertinent
- 6.7 Human Contact Hazard: 0
- 6.8 Reduction of amenities: XX

**7. SHIPPIING INFORMATION**
- 7.1 Grades of Purity: 100%
- 7.2 Storage Temperature: Ambient
- 7.3 Inert Atmosphere: No requirement
- 7.4 Venting: Pressure-Vacuum
- 7.5 IMO Pollution Category: D
- 7.6 Ship Type: 3
- 7.7 Barge Hull Type: 3

**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 NFA Hazard Classification: Not listed

**9. PHYSICAL & CHEMICAL PROPERTIES**
- 9.1 Physical State at 15°C and 1 atm: Liquid
- 9.2 Molecular Weight: 242.2
- 9.3 Boiling Point at 1 atm: 311°F = 155°C = 428°F
- 9.4 Freezing Point: Currently not available
- 9.5 Critical Temperature: 642°F = 339°C = 612°F (calc.)
- 9.6 Critical Pressure: 387 psia = 26.3 atm = 2.66 MN/m2 (calc.)
- 9.7 Specific Gravity: 0.8856 at 20°C
- 9.8 Liquid Surface Tension: Currently not available
- 9.9 Liquid Water Interfacial Tension: Currently not available
- 9.10 Vapor (Gas) Specific Gravity: 4.9 (calc.)
- 9.11 Ratio of Specific Heats of Vapor: Currently not available
- 9.12 Latent Heat of Vaporization: Currently not available
- 9.13 Heat of Combustion: Currently not available
- 9.14 Heat of Decomposition: Currently not available
- 9.15 Heat of Solution: Currently not available
- 9.16 Heat of Polymerization: Currently not available
- 9.17 Heat of Fusion: Currently not available
- 9.18 Limiting Value: Currently not available
- 9.19 Reid Vapor Pressure: Currently not available

**NOTES**
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JUNE 1999