

EMS CATALOG NO: 12100
EMS PRODUCT: N-Butyl Methacrylate
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MATERIAL SAFETY DATA SHEET

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FOR PRODUCT AND SALES INFORMATION

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PRODUCT IDENTIFICATION

PRODUCT NAME: N-Butyl Methacrylate
CAS NUMBER: 97-88-1
FORMULA: CH₂C(CH₃)CO₂CH₂CH₂CH₂CH₃
SYNONYMS: Butyl methacrylate monomer FORMULA: C₈H₁₄O₂
HAZARD RATING: SCALE:
TOXICITY: 1 4=EXTREME
FIRE: 2 3=HIGH
REACTIVITY: 2 2=MODERATE
SPECIAL: - 1=SLIGHT

OSHA HAZARDOUS WHMIS CONTROLLED: DOT HAZARD CLASS
FLAMMABLE LIQUID
UN 2227 CLASS 3 PACKAGE III

COMPOSITIONAL INFORMATION

| COMPONENT | CAS NUMBER | AMT (%) |
|-----------------------|--------------|-------------|
| Butyl methacrylate | 97-88-1 | 99.0 min. |
| Isobutyl methacrylate | 97-86-9 | 1.0 max. |
| Other ester adducts | not required | 0.7 max. |
| MEHQ | 150-76-5 | 0.0015 max. |

TWA/TLV

| R&H | OSHA | ACGIH |
|-----|------|--------|
| 50 | NE | NE ppm |
| 50 | NE | NE ppm |
| NR | NR | NR |
| 5 | 5 | 5 |

mg/M3

PHYSICAL PROPERTY INFORMATION

APPEARANCE/ODOR/pH: Clear, colorless, mobile liquid; mild, sweet odor
VISCOSITY: 0.92 cps
MELTING POINT: -50oC /- 58oF
BOILING POINT: 160oC/320oF
VAPOR DENSITY (AIR=1): > 1
VAPOR PRESSURE: 4.9 @ 20oC/68oF
SPECIFIC GRAVITY (WATER=1): 0.90
SOLUBILITY IN WATER: Negligible
PERCENT VOLATILITY: 100%
EVAPORATION RATE (Bac=1): < 1

FIRE AND EXPLOSION HAZARD INFORMATION

FLASH POINT: 49oC / 120oF
AUTO-IGNITION TEMPERATURE: 294oC / 561oF
LOWER EXPLOSIVE LIMIT: 2.0%
UPPER EXPLOSIVE LIMIT: 8.0%

EXTINGUISHING MEDIA: Alcohol foam, CO2, dry chemical, water spray

SPECIAL FIRE FIGHTING PROCEDURES:

Wear self-contained breathing apparatus (pressure-demand, MSHA/NIOSH-approved or equivalent) and full protective gear. Use water spray to cool containers. Fight fire from a protected location - EXPLOSION HAZARD.

UNUSUAL FIRE AND EXPLOSION HAZARDS:

Heat can cause polymerization. Heated containers can explode.

HEALTH HAZARD INFORMATION

EFFECTS OF OVEREXPOSURE:

INHALATION: Vapor or mist can irritate the nose and throat. Extended exposure will lead to headache, nausea, drowsiness and unconsciousness.

SKIN CONTACT: Slightly irritating to skin.

EYE CONTACT: Moderately irritating to eyes.

DELAYED EFFECTS Substance can cause allergic reaction on skin.

EMERGENCY AND FIRST AID PROCEDURES:

INHALATION: Move subject to fresh air. Give artificial respiration if breathing has stopped. SEE A PHYSICIAN.

EYE AND SKIN CONTACT:

Flush eyes with a large amount of water for at least 15 minutes. See a physician if irritation persists. Wash affected skin areas with soap and water.

INGESTION: If swallowed, dilute by giving 2 glasses of water to drink. SEE A PHYSICIAN.

REACTIVITY INFORMATION

STABILITY: Stable

CONDITIONS TO AVOID: Heat, aging, contamination, oxidizing agents

HAZARDOUS POLYMERIZATION: May occur.

INCOMPATIBILITY: Oxidizing or reducing agents

SPILL OR LEAK PROCEDURE INFORMATION

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED:

Keep spectators away. Eliminate ignition sources. Use self-contained breathing apparatus pressure-demand, MSHA/NIOSH approved or equivalent), impervious clothing and boots. Dike and contain spill with inert material (e.g., sand, earth). Transfer liquid to containers for recovery or disposal and solid diking material to separate containers for disposal. Contaminated monomer may be unstable. Add extra inhibitor to prevent polymerization. Remove contaminated clothing promptly and wash affected skin areas with soap and water. Keep spills and cleaning runoffs out of municipal sewers and open bodies of water. Product is slightly toxic to fish.

NOTE: Spills on porous surfaces can contaminate ground water.

WASTE DISPOSAL METHODS:

When discarded this material is a hazardous waste. RCRA #D-001 ignitable; reportable quantity 100 lbs. (40 CFR Part 302) "Superfund". Incinerate liquid and the contaminated diking material, in accordance with local, state, and Federal regulations.

SPECIAL PROTECTION INFORMATION

VENTILATION TYPE: Mechanical local exhaust ventilation at point of contaminant release.

RESPIRATORY PROTECTION:

One required if good ventilation is maintained. Otherwise wear self-contained breathing apparatus (pressure-demand, MSHA/NIOSH approved or equivalent).

PROTECTIVE GLOVES: Impervious

EYE PROTECTION: Chemical splash goggles (ANSI Z-87.1 or approved equivalent)

OTHER PROTECTIVE EQUIPMENT:

Eyewash facility, safety shower, impervious clothing.

STORAGE AND HANDLING INFORMATION

STORAGE TEMPERATURE: Max. AMBIENT Min. (1)

Store out of direct sunlight at ambient temperatures. Leave air space over liquid surface in all containers. Ground all containers when transferring material. Use within one year of date stamped on label. Monitor inhibitor level during storage using CM-18.

Material stored in bulk should be tested for stability every month; drums and bails every 3 months.

TOXICITY INFORMATION

Acute oral LD50, rat: 20,300 mg/kg;

Acute dermal LD50, rabbit: 10,200 mg/kg;

Acute inhalation LC50, rat: >2,900 ppm for 8 hours.

MISCELLANEOUS INFORMATION

Monomer stability is a logarithmic function of time vs. temperature. Stability is also dependent on inhibitor concentration, the presence of air and type of monomer.

NOTE: Use local exhaust ventilation with a minimum capture velocity of 100 ft/min. (30 m/min.) at the point of monomer evolution.