



## SAFETY DATA SHEET

# MICROSEAL-MEK® & MICROSEAL DS-MEK®

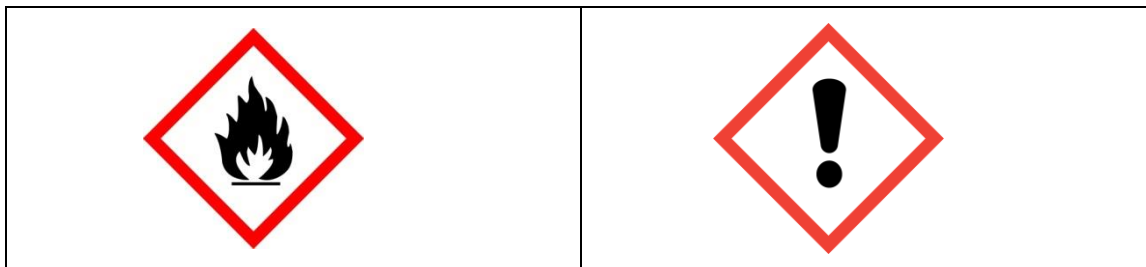
Date Prepared: 29 February 2016

### 1. IDENTIFICATION

- A. SUBSTANCE:** Microseal-MEK & Microseal DS/MEK containing Methyl Ethyl Ketone as a Solvent.
- B. Trade Names/Synonyms of Solvent:** Butanone, 2-Butanone, 3-Butanone, Methyl Acetone, MEK, Ethyl Methyl Ketone, UN1193 • Symbol: *C<sub>4</sub>H<sub>8</sub>O* • Chemical Family: Ketones, Aliphatics.
- C. Company Name:** Microleak-Seal Impregnant Co., DBA: The Microseal Co.  
Mail: PO Box 541, Rome, NY, USA 13442-0541  
Office: 707 W. Bloomfield St., Rome, NY, USA 13440-3114  
Tel: (315) 337-2720 • email: [microseal@microleak.com](mailto:microseal@microleak.com) • email: [www.microleak.com](http://www.microleak.com)  
Plant: West Rome Industrial Park, Rome, NY, USA 13440 . Web: [www.microleak.com](http://www.microleak.com)
- 24 Hour Emergency Contact:** Chemtel: 800-255-3924  
International: 01-813-248-0573; Fax: 813-248-0580  
email: [sales@chemtelinc.com](mailto:sales@chemtelinc.com); web: [www.chemtelinc.com](http://www.chemtelinc.com)
- D. Recommended Use of Chemical:** Sealant for porous metals.

### 2. HAZARD(S) IDENTIFICATION

- A. Classification:**  
EC Classification (assigned): F - Highly flammable; Xi Irritant, R 11-36/37  
WHIMS Classification: BD2  
NFPA Ratings (Scale 1-4): Health-2, Fire-3, Reactivity-0
- B. Signal Word:** Danger
- C. Hazard Statement:**  
FLAMMABLE LIQUID AND VAPOR. MAY BE HARMFUL IF SWALLOWED. MAY EFFECT THE CENTRAL NERVOUS SYSTEM CAUSING DIZZINESS, HEADACHE, OR NAUSEA. PROLONGED OR REPEATED CONTACT MAY DRY THE SKIN AND CAUSE IRRITATION AND BURNS.
- D. Pictograms:**



#### E. **Precautionary Statement:**

No Smoking.  
Keep away from heat, sparks, open flame, and hot surface.  
Ground/Bond container and receiving equipment.  
Use explosion-proof equipment.  
Use non-sparking tools.  
Take precautionary measures against static discharge.  
Wash any exposed skin thoroughly after handling.  
Avoid breathing vapors or mist.  
Use only outdoors or in a well-ventilated area.  
Wear protective gloves, eye protection, face protection.

### 3. COMPOSITION INFORMATION and INGREDIENTS

- A. **Main Component:** Methyl Ethyl Ketone; CAS no: 78-93-3; UN1193
- B. **Mixed Non-Hazardous Component:** Bakelite-type resins which contain less than 1.0 ppm of Vinylchloride Monomer and less than 0.5% of Vinyl Acetate.
- C. **Percentages:** 90% Methyl Ethyl Ketone for Microseal-MEK® / 80% Methyl Ethyl Ketone for Microseal DS-MEK®.

### 4. FIRST AID MEASURES

#### A. **First Aid Measures:**

**I. General advice:** Move from dangerous area, consult physician, provide SDS to attending medical personnel.

**II. If inhaled:** Move person to fresh air, give artificial respiration if not breathing, and consult a physician.

**III. In case of contact with skin:** Apply plenty of water and wash with soap. Remove contaminated clothing. Consult physician.

**IV. In case of eye contact:** Thoroughly and cautiously rinse with water for at least 15 minutes. Consult an ophthalmologist.

**V. If swallowed:** DO NOT induce vomiting. Risk of aspiration. Rinse mouth with water. Consult a physician.

- B. **Symptoms:** Cough, headache, eye and throat irritation, dizziness, dermatitis at levels below 100ppm and at higher levels may cause unconsciousness.
- C. **Treatment:** Minimal toxicity on organ systems. Treatment of severe intoxication (narcosis) from exposure through ingestion or vapors is primarily supportive. If ingestion is recent, removal by gastric lavage or activated charcoal may be prescribed.

### 5. FIRE-FIGHTING MEASURES

- A. **Extinguishing Equipment:** Dry Chemical, Carbon Dioxide, Foam or Alcohol-type Foam. Do not apply water!
- B. **Advice on Specific Hazards:** Extremely flammable liquid, emits extremely flammable and explosive vapors when mixed with ambient air. Vapors heavier than air and may travel along floor. May ignite when exposed to sparks, heat, flame or oxidants.
- C. **Special Protective Equipment or Precautions for Firefighters:** PPE Level C recommended. Self-contained breathing apparatus. Keep fire-exposed containers cool during water spray. Remove containers from fire area if can be done without risk.

## 6. ACCIDENTAL RELEASE MEASURES

- A. Use of Personal Precautions:** Avoid breathing vapors, gases, or mists. Use proper personal protection equipment. Ensure proper ventilation of fumes and vapors if it can be done safely. Remove all sources of ignition. Vapors may travel considerable distance to low-lying ignition sources (vapors are heavier than air). Evacuate to safe area.
- B. Emergency Procedures including instructions for evacuations, consulting experts when needed, and appropriate protective clothing:** Reportable Quantity (RQ): Notify Local Emergency Planning Committee and State Emergency Response Commissions for release greater than or equal to RQ (US SARA Section 304). If release occurs in the US and is reportable under CERCLA Section 103, notify the US National Response Center at (800) 424-8802 or (202) 426-2675.
- C. Cleanup Procedures:**
- I. Air Release:** Reduce vapors with water spray.
- II. Soil Release:** Dig holding area such as pond or pit for containment. Absorb with sand or other non-combustible materials.
- III. Water Release:** Cover with absorbent sheets, spill-control packs, or pillows. Remove trapped material with suction hoses.
- IV. Occupational Release:** Avoid heat, flames, sparks, and other sources of ignition. Remove sources of ignition. Stop leak if possible without personal risk. Reduce vapors with water spray.
- V. Small Spills:** Avoid heat, flames, sparks, and other sources of ignition. Take up spilled material with paper towels, water, and detergent and allow to evaporate in fume hood or cupboard. Remove sources of ignition. Stop leak if possible without personal risk. Reduce vapors with water spray. Place in non-plastic containers for transportation and disposal according to State, National, and International Waste Regulations.
- VI. Large Spills:** Wear suitable protective equipment. Dike or berm and take up spilled material with inert absorbent material like earth sand or vermiculite. Use non-sparking tools and equipment and avoid ignition sources. Stop spill at source and prevent from entering drains, sewers, streams, or other bodies of water. Prevent from spreading. Isolate hazard area and deny entry. Stay upwind and keep out of low areas. Place in non-plastic containers for transportation and disposal according to State, National, and International Waste Regulations.

## 7. HANDLING & STORAGE

- A. Requirements for Safe Handling:** Avoid contact with skin, eyes, and clothing. Do not inhale vapors or mists. Use in well-ventilated areas. Do not use contact lenses. Explosion and flameproof engineering controls should be in place. Use non-sparking tools and equipment when necessary. Use techniques to eliminate accumulation of static charge when transferring material.
- B. Recommendations for Safe Storage & Ventilation:** No smoking. Store in cool, dry, and well-ventilated area. Avoid direct sunlight. Store in securely closed original containers in an area designed for storage of Flammable Liquids. Empty containers may still contain residue and/or vapors and Hazard Labels may still be required. Store at 59°F to 77°F (15°C to 25°C) Maximum/minimum temperatures are: 39°F to 100°F (4 °F to 38°C). Avoid incompatible materials.

## 8. EXPOSURE CONTROLS & PERSONAL PROTECTION

### A. Permissible Exposure Limits: Acetone:

200 ppm	(590 mg/m <sup>3</sup> )	OSHA TWA
300 ppm	(885 mg/m <sup>3</sup> )	OSHA STEL (vacated by 58 FR 35338 6/30/93)
200 ppm	(590 mg/m <sup>3</sup> )	ACGIH TWA
300 ppm	(885 mg/m <sup>3</sup> )	ACGIH STEL
200 ppm	(590 mg/m <sup>3</sup> )	NIOSH recommended TWA
300 ppm	(995 mg/m <sup>3</sup> )	NIOSH recommended STEL

**B. Appropriate Engineering Controls:** Contents may be under pressure; caution when opening containers. Keep containers closed and in an upright position when not in use. Good ventilation required. Explosion-proof exhaust ventilation should be used (10 air changes per hour). Use process enclosures, exhaust ventilation, or other controls to maintain airborne levels below recommended exposure.

**C. Personal Protective Measures:** Wear butyl-rubber, nitrile, or super-nitrile gloves. Use eye protection such as safety glasses, face shield, or goggles. Avoid vapors or mists. Use respiratory protection. Half-face Organic Vapor Filter Respirator Class A1P2 (AS/NZS 1715) if under 2 liters. Positive-pressure air-supplied respiration if there is potential of release and exposure levels are unknown. Long-sleeved and full-length 100% cotton shirt and pants and enclosed safety shoes. Wash hands thoroughly before eating, drinking, and using toilet. Eyewash station and safety shower should be provided.

## 9. PHYSICAL & CHEMICAL PROPERTIES

- |   |  |
|---|--|
| <b>A. Appearance:</b> Clear liquid                              | <b>M. Specific Gravity:</b> (water=1)<br>Microseal-MEK: 0.830-0.840<br>Microseal-DS-MEK: 0.865-0.750 |
| <b>B. Odor:</b> Sweet like mint (non-residual)                  | <b>N. Solubility:</b> 27.5%  |
| <b>C. Odor Threshold:</b> 10ppm                                 | <b>O. Partition Coefficient:</b><br>n-octanol/water: N/A   |
| <b>D. pH:</b> N/A   | <b>P. Auto-Ignition Point:</b> 759°F   |
| <b>E. Melting Point/Freezing Point:</b> N/A                     | <b>Q. Decomposition Temp:</b> N/A  |
| <b>F. Initial Boiling Point:</b> 176°F (80°C)                   | <b>R. Viscosity:</b><br>Microseal-MEK: 5.0-6.0 cP<br>Microseal-DS-MEK: 25.0-33.0 cP                  |
| <b>G. Flash Point:</b> 24°F (-4°C)                              | <b>S. % Volatile by volume:</b> apx.100% by volume   |
| <b>H. Evaporation Rate:</b> 2.7 (ether=1.0)                     | <b>T. VOC (calc):</b> 6.7 lbs/gal  |
| <b>I. Flammability:</b> Flammable Liquid                        |  |
| <b>J. Explosive Limits:</b> LEL 1.8% at 77°F; UEL 11.5% at 77°F |  |
| <b>K. Vapor Pressure:</b> 83mm HG at 75°F                       |  |
| <b>L. Vapor Density:</b> 2.5 (air=1.0)                          |  |

## 10. STABILITY & REACTIVITY

- A. Reactivity:** Reactive with strong oxidizing agents, halo carbons, acids, combustible materials, peroxides, and bases.
- B. Chemical Stability:** Material is stable and will not polymerize at normal temperatures and pressure.
- C. Conditions to Avoid:** Avoid heat, flames, sparks, and other sources of ignition. Containers may rupture or explode if exposed to heat. Never use welding or cutting torches on or near drums even when empty. Avoid contact with strong oxidizing agents, halo carbons, acids, combustible materials, peroxides and bases.

## 11. TOXICOLOGIC INFORMATION

- A. Likely routes of exposure:** Inhalation, ingestion, skin, and eyes
- B. Symptoms related to the physical, chemical, and toxicological characteristics:**
  - I. Inhalation:** Dizziness, confusion, muscle weakness, nausea, vomiting, and coma. May effect speech and motor skills when exposed in concentrations over 500 ppm. Concentrations of over 10,000 ppm may cause collapse, coma, and death.
  - II. Skin Contact:** May be harmful if absorbed through skin. May cause redness & dermatitis.
  - III. Eye Contact:** Redness, tearing, inflammation, and possible corneal clouding.
  - IV. Ingestion:** Nausea, vomiting, irritation of mouth and gastrointestinal tract. May effect behavior, sleep times, liver, blood, kidney, bladder, and endocrine systems. Collapse and coma have been reported when ingested in quantities under seven (7) ounces.
- C. Description of short-term, long-term, and chronic exposure effects:**
  - I. Delayed effects from short-term exposure:** May increase urination, thirst, and blood sugar levels after four (4) weeks for up to five (5) months after ingestion.
  - II. Immediate effects from short-term exposure:** May cause irritation of throat and nasal passages from inhaling small amounts under 500 ppm. Flushed cheeks, appearance, or intoxication, unconsciousness, collapse, and coma when ingested in quantities of seven (7) ounces have been reported.
  - III. Chronic effects from short-term exposure:** Produced by the human body and will be primarily expelled through respiration over a short time with no long term health effects.
  - IV. Delayed effects from long-term exposure:** NONE AVAILABLE.
  - V. Chronic effects from long-term exposure:** May include dry skin, sleeplessness, nausea, faintness, weight loss, eye irritation, attacks of giddiness, and loss of strength.
  - VI. Immediate effects from long-term exposure:** Repeated exposure may cause dry skin and dermatitis.
- D. Numerical measures of toxicity:**
  - I. Irritation Data:** 350 ppm human eyes; 500mg/24-hrs rabbit skin moderate; 402mg/24-hrs rabbit skin mild; 13780 gm/24-hrs open rabbit skin; 80mg rabbit eyes.
  - II. Toxicity Data:** 23,500mg/m 3-8-hrs inhalation by rat LC50; 6480mg/kg rabbit skin LD50; 2737mg/kg rat orally LD50.
  - III. Acute Toxicity Level:** Moderately toxic: ingestion; slightly toxic: inhalation, dermal absorption.

**IV. Medical Conditions Aggravated by Exposure:** Nervous system, respiratory, skin and allergy disorders.

**V. Mutagenic Data:** Available.

**VI. Reproductive Effects Data:** Available.

**E. Carcinogenic Status:** OSHA: N – NTP: N – IARC: N.

## 12. ECOLOGICAL INFORMATION (non-mandatory)

## 13. DISPOSAL CONSIDERATIONS

Dispose in accordance with all applicable regulations. Hazardous Waste Number D035. For concentrations at or above the regulatory level (200 mg/L), dispose of in accordance with regulations US EPA 40 CFR 262 and hazardous waste number U159.

## 14. TRANSPORT INFORMATION

- A. UN Number:** 1193
- B. UN Proper Shipping Name:** Methyl Ethyl Ketone
- C. Transport Hazard Class:** 3
- D. Packing group number:** II (Roman Numeral)
- E. Label:** Flammable Liquid
- F. Other:** US DOT 49 CFR 172.101

## 15. REGULATORY INFORMATION (non-mandatory)

## 16. OTHER INFORMATION

- A. Updated:** 29 February 2016
- B. Created:** 14 November 2014
- C.** The information herein is believed to be accurate, but is not warranted to be, whether originating with the company or not. Recipients are advised to confirm in advance of need that the information is current, applicable, and suitable to their circumstances.

# ADDENDUM: MICROSEAL® GHS Classification Information:

## SECTION 2: HAZARD IDENTIFICATION

### 2.1. Classification of the substance or mixture

GHS-US classification

Flam. Liq. 2 H225

Eye Irrit. 2A H319

STOT SE 3 H336

### 2.2. Label elements

GHS-US labelling

Hazard pictograms (GHS-US):



GHS02



GHS07

Signal word (GHS-US): Danger

#### **Hazard statements (GHS-US):**

H225 - Highly flammable liquid and vapour

H319 - Causes serious eye irritation

H336 - May cause drowsiness or dizziness

#### **Precautionary statements (GHS-US):**

P210 - Keep away from heat, hot surfaces, open flames, sparks. - No smoking

P233 - Keep container tightly closed

P240 - Ground/bond container and receiving equipment

P241 - Use explosion-proof electrical, lighting, ventilating equipment

P242 - Use only non-sparking tools

P243 - Take precautionary measures against static discharge

P261 - Avoid breathing mist, spray, vapours

P264 - Wash exposed skin thoroughly after handling

P271 - Use only outdoors or in a well-ventilated area

P280 - Wear eye protection, face protection, protective clothing, protective gloves

P303+P361+P353 - IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing.

Rinse skin with water/shower

P304+P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing

P305+P351+P338 - If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing

P312 - Call a POISON CENTER/doctor/.../if you feel unwell

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

P370+P378 - In case of fire: Use dry chemical; powder, alcohol-resistant foam, carbon dioxide (CO2) for extinction

P403+P233 - Store in a well-ventilated place. Keep container tightly closed

P405 - Store locked up

P501 - Dispose of contents/container to comply with local, state and federal regulations

P235 - Keep cool

### 2.4. Unknown acute toxicity (GHS-US)

No data available

## SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

### 3.1. Substances

GHS-US classification

Flam. Liq. 2, H225, Eye Irrit. 2A, H319, STOT SE 3, H336