SAFETY DATA SHEET

MICROSEAL-MEK® & MICROSEAL DS-MEK®

AS OF: 6/26/2019

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: *C48HO* ● 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
Plant: West Rome Industrial Park, Rome, NY, USA 13440

24 Hour Emergency Contact: Chemtel: 800-255-3924
International: 01-813-248-0573; Fax: 813-248-0580
email: sales@chemtelinc.com; web: www.chemtelinc.com

D. Recommended Use of Chemical: Sealant for metals.

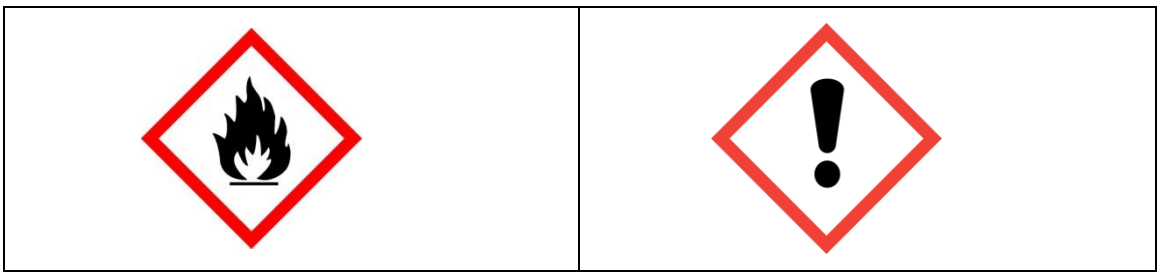
2. HAZARD(S) IDENTIFICATION

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:

I. Inhalation: Remove from exposure and into fresh air immediately. If breathing is difficult administer oxygen. If breathing stopped give artificial respiration (can use a bag valve mask or similar device). Keep person warm and quiet and get medical attention.

II. Skin Contact: Remove contaminated clothing and shoes immediately. Wash area with soap or mild detergent and with large amounts of water for at least 15 minutes. Get medical attention if needed. Launder contaminated clothing before re-use.

III. Eye Contact: Flush eyes immediately with large quantities of water for 10-15 minutes. Occasionally lift upper and lower lids. Seek medical attention.

IV. Ingestion: Contact the local poison control center and/or physician right away. Do *not* induce vomiting! Aspiration of material into the lungs due to vomiting can cause chemical pneumonia which can be fatal. When vomiting occurs, keep head lower than hips to help prevent aspiration, and if person is unconscious, turn head to the side.

B. Symptoms of Short- /Long-Term Exposure Health Effects:

I. Inhalation: **Short-term:** irritation, nausea, vomiting, difficulty breathing, headache, drowsiness, symptoms of drunkenness, lung damage; **Long-term:** convulsions.

II. Skin Contact: **Short-term:** skin irritation due to defatting action, redness, pain, and cracking of skin. **Long-term:** same.

III. Eye Contact: **Short-term:** irritation, eye damage; **Long-term:** same.

IV. Ingestion: **Short-term:** vomiting, digestive disorders, difficulty breathing, irregular heartbeat, headache, symptoms of drunkenness, coma. **Long-term:** no information.

C. Recommendations for immediate medical care: Seek medical attention if needed for Inhalation, Skin, or Eye Contact Exposure. Seek *immediate* medical attention for Ingestion Exposure; physician should consider gastric lavage and a slurry of activated charcoal.

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 and eyes. No not inhale vapors or mists. Use in well-ventilated areas. Do not use contact lenses. Explosion & flameproof engineering controls should be in place. Use non-sparking tools & 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 under OSHA 29 CFR 191-0.106. Empty containers may still contain residue and/or vapors and OSHA Hazard Communication Labels may still be required. Store at 59ºF to 77ºF (15ºC to 25ºC). Avoid incompatible materials.

8. EXPOSURE CONTROLS & PERSONAL PROTECTION

A. Permissible Exposure Limits: **Acetone:**

200 ppm	(590 mg/m3)	OSHA TWA
300 ppm	(885 mg/m3)	OSHA STEL (vacated by 58 FR 35338 6/30/93)
200 ppm	(590 mg/m3)	ACGIH TWA
300 ppm	(885 mg/m3)	ACGIH STEL
200 ppm	(590 mg/m3)	NIOSH recommended TWA
300 ppm	(995 mg/m3)	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

A. Appearance: Clear, colorless liquid

B. Odor: Sweet like mint (non-residual)

C. Odor Threshold: 10ppm

D. pH: N/A

E. Melting Point/Freezing Point: MP: -123ºF (-86ºC)/FP: N/A

F. Initial Boiling Point: 176ºF (80ºC)

G. Flash Point: N/A

H. Evaporation Rate: 2.7 (ether=1.0)

I. Flammability: Flammable Liquid

J. Upper/Lower Flammability/ Explosive Limits: N/A

K. Vapor Pressure: 100mm/HG@25ºC

L. Vapor Density: 2.5 (air=1.0)

M. Relative Density: Specific Gravity 0.836-0.840 for Microseal-MEK; 0.865-0.872 for Microseal DS/MEK (water=1)

N. Solubility(ies): 27.5%

O. Partition coefficient: n-octanol/water: N/A

P. Auto-Ignition Temperature: 505°F (262°C)

Q. Decomposition Temp: N/A

R. Viscosity: 5.0-6.0 cP for Microseal-MEK; 25.0-33.0 cP for Microseal DS/MEK

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. Inhalation: **Short-term:** irritation, nausea, vomiting, difficulty breathing, headache, drowsiness, symptoms of drunkenness, lung damage; **Long-term:** convulsions; **Chronic:** unknown.

II. Skin Contact: **Short-term:** skin irritation due to defatting action, redness, pain, and cracking of skin; **Long-term:** same; **Chronic:** unknown.

III. Eye Contact: **Short-term:** irritation, eye damage; **Long-term:** same; **Chronic:** unknown.

IV. Ingestion: **Short-term:** vomiting, digestive disorders, difficulty breathing, irregular heartbeat, headache, symptoms of drunkenness, coma; **Long-term:** no information; **Chronic:** unknown.

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

16. OTHER INFORMATION

A. **Updated:** 26 June 2019

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.