

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Id: Seam Sealant 15-95C
Chemical Family: Polyurethane Solution
Application: Coating Solution
Prepared By: Health, Safety and Environment Department
HMIS Classification: Health: 3* Flammability: 3 Physical Hazard: 0
HMIS Ratings: 0=Minimal 1=Slight 2=Moderate 3=Serious 4=Severe
 (* Chronic Health Hazard)

Supplier Information

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2. COMPOSITION / INFORMATION ON INGREDIENTS

INGREDIENT NAME/ CAS NUMBER	WEIGHT %	OSHA PEL	ACGIH TLV
Toluol 108-88-3	20 to 25	= 200 ppm TWA	= 50 ppm TWA
Isopropyl Alcohol 67-63-0	20 to 25	= 400 ppm TWA = 980 mg/m ³ TWA	= 200 ppm TWA = 400 ppm STEL
Methyl Ethyl Ketone 78-93-3	25 to 30	= 200 ppm TWA = 590 mg/m ³ TWA	= 200 ppm TWA = 300 ppm STEL

Other Information: This product contains amorphous silica however it is not in a respirable form.

3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW:

DANGER: Flammable liquid and vapor. Keep away from heat, sparks and flame. Off-white Liquid.
 TOLUENE - Irritant; Absorbed through the skin; central nervous system effects; Harmful or fatal if swallowed; Aspiration hazard - if ingested do NOT induce vomiting, as this may cause chemical pneumonia. contact may cause eye, skin and mucous membrane irritation. Harmful if asorbed through the skin. Avoid prolonged breathing of vapors or mists. Inhalation may cause irritation, anesthetic effects (dizziness, nausea, headache, intoxication), and respiratory system effects. Excessive exposure may effect the liver and kidneys. liquid with a strong solvent odor. Flammable liquid and vapor. Vapors can travel a long distance to an ignitiion source and flash back.

Irritating to the eyes and respiratory tract. Acts as a central nervous system depressant

In case of fire, use carbon dioxide, alcohol foam, or dry chemical. Also contains Isopropyl Alcohol and Methyl Ethyl Ketone

Inhalation: May irritate mouth, nose, and throat. Central Nervous System Depression: signs/symptoms can include headache, dizziness, drowsiness, incoordination, slowed reaction time, slurred speech, giddiness and unconsciousness.

High vapor concentrations may cause central nervous system depression. TOLUENE - Repeated excessive exposures may cause Liver Effects or Damage. Kidney Effects or Damage.

Skin Contact: IPA - Prolonged and repeated contact with skin can cause defatting and drying of the skin resulting in skin irritation and dermatitis. TOLUENE - Skin absorption of material may produce systemic toxicity. MEK - Studies show that MEK causes no or mild irritation.

Eye Contact: Causes moderate eye irritation. Liquid

Ingestion: TOLUENE - Harmful or Fatal if Swallowed. Ingestion of this material may cause irritation to the mouth, throat and gastro-intestinal tract. Central nervous system (brain) effects; Nausea, Vomiting, and Diarrhea. Pulmonary aspiration hazard if swallowed and /or vomiting occurs - can enter lungs and cause damage. MEK - May be harmful if swallowed. Liquid can directly enter the lungs (aspiration) when swallowed or vomited. Serious lung damage and possibly fatal chemical pneumonia (chemical pneumonitis) can develop if this occurs.

4. FIRST AID MEASURES

Inhalation: If inhaled, remove to fresh air. If not breathing give artificial respiration, preferably mouth-to-mouth. If breathing is difficult oxygen should be administered by qualified personnel. Call a physician or transport to a medical facility.

Skin Contact: Remove contaminated clothing and launder before reuse. Remove contaminated shoes and discard. For skin contact, wipe away excess material with dry towel. Then wash affected areas with plenty of water, and soap if available, for several minutes. Get medical attention if irritation occurs.

Eye Contact: In case of contact, immediately flush eyes with plenty of water for at least 15 minutes and get medical attention.

Ingestion: TOLUOL - Do not induce vomiting. Guard against aspiration into lungs by having the individual turn on to their left side. If vomiting occurs spontaneously keep head below hips to prevent aspiration of liquid into the lungs. Obtain medical attention immediately. IPA - Do not induce vomiting. Guard against aspiration into lungs by having the individual turn on to their left side. If vomiting occurs spontaneously keep head below hips to prevent aspiration of liquid into the lungs. Obtain medical attention immediately.

5. FIRE FIGHTING MEASURES

Lowest Component Flash Point (°F): MEK = 25 F

Flash Point Method: Closed Cup

FLAMMABILITY (Lowest Component Information)
LFL (% Vol): Toluene = 1.2%
UFL (% Vol): Toluene = 7.1%

Extinguishing Media: Water fog, carbon dioxide, foam, dry chemical. TOLUOL - Water may be effective for cooling, but may not effect extinguishment.

Special Fire Hazards: Vapors are heavier than air and can travel along the ground to a source of ignition and flash back; they can accumulate in low lying areas. Containers can rupture in a fire releasing toxic and corrosive gases.

Special Exposure Hazards: Warning. Flammable liquid and vapor. Clear fire area of unprotected personnel. Do not enter confined fire space without full bunker gear, including a positive pressure NIOSH approved self-contained breathing apparatus. Cool fire exposed containers with water.

Special Protective Equipment: Fire fighters should wear full protective clothing, including self-contained breathing equipment:

NFPA Rating: Health: 3 Flammability: 3 Reactivity: 0

6. ACCIDENTAL RELEASE MEASURES

Personal Precautionary Measures: Wear appropriate protective equipment (See Section 8).

Environmental Precautions: Prevent from entering sewers, waterways or low areas. Prevent contamination of soil.

Spill Procedures: Remove all sources of ignition and ventilate the area. Soak up residue with an absorbant such as clay or sand. Place in a non-leaking container for proper disposal according to Federal, State and Local regulations. Do not discharge into waterways or sewage systems. Vapors are much heavier than air and as such will accumulate in low-lying areas, presenting a hazard to anyone entering such places. Low-lying areas should be ventilated and checked before permitting access.

7. HANDLING AND STORAGE

NORMAL HANDLING: Wear appropriate protective equipment. See Section 8 for normal handling recommendations. Avoid contact with eyes, skin, and clothing. Use in well ventilated area. Ground and bond containers before transferring liquid.

STORAGE RECOMMENDATIONS: Keep containers tightly closed. Store in a cool dry place. Ground equipment to prevent static build-up. Ground containers when pouring or transferring. Keep in cool, dry, ventilated storage and in closed containers. Keep liquid and vapor away from heat, sparks and flame.
Flammable Storage

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering Controls: Use explosion proof equipment. Local exhaust ventilation designed for explosive atmospheres. Good mechanical ventilation is necessary to remove fumes from work place to reduce fire and health hazards. Wear safety glasses or chemical goggles and chemical resistant gloves.

Respiratory Protection: In operations where the exposure limits can be exceeded, wear a NIOSH approved respirator selected by a technically qualified person. If a respirator is worn, OSHA requires compliance with its respiratory protection program (29 CFR 1910.134).

Eyes: Wear safety glasses or goggles to protect against exposure.

Gloves: Use Viton or 4H gloves.

Protective Clothing: Long sleeved clothing and Apron

Hygienic Work Practices: Use proper ventilation. Follow good industrial chemical hygiene practices. Safety showers and eyewash stations should be available. Educate and train employees in safe use of product.



9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State:	Liquid
Color:	HAZY OFF WHITE
Odor:	SOLVENT ODOR
% Solids by Weight:	20%
% Volatile by Volume:	85%
pH:	Not Determined
Specific Gravity:	0.87
Density:	7.27 lbs/gal
Solubility in Water:	Nil
Molecular Weight:	Not Determined
VOCs (lbs/gallon):	5.81 lbs/gal
Evaporation Rate (Highest Component Information):	(Normal Butyl Acetate = 1) MEK= 3.8
Boiling Point (°F) (Lowest Component Information):	IPA = 82 F
Flash Point (°F/C) (Lowest Component Information):	MEK = 25 F (-4 C)

10. STABILITY AND REACTIVITY

Chemical Stability:	Stable under normal conditions of handling, use and transportation.
Hazardous Polymerization:	Will not occur under normal conditions.
Conditions to Avoid:	Avoid contact with heat, sparks, open flame, and static discharge.
Materials to Avoid:	Strong oxidizing agents.
Hazardous Decomposition Products:	Combustion of the dried polymer may release : Carbon Dioxide, Carbon Monoxide, Oxides of Nitrogen, Traces of HCN.
Additional Guidelines:	Not Applicable

11. TOXICOLOGICAL INFORMATION

Acute Effects:	Acute Health Effects of this product have not been determined. The following information is available on major components: MEK - LD50, Oral-Rat 2900 mg/kg; LD50, Dermal-Rabbit 5000 mg/kg; LD50, Inhalation-Rat 5000 ppm / 7 hr. TOLUENE - Causes severe skin irritation. Toxic if absorbed through the skin, Causes severe eye irritation. Toxic if inhaled. High concentrations are extremely destructive to the tissue of the mucous membranes and upper respiratory tract. Toxic if swallowed. Exposure may cause: Lung irritation, chest pain and edema which may be fatal. Inhalation studies on toluene have demonstrated the development of inflammatory and ulcerous lesions of the penis, prepuce and scrotum in animals. may cause central nervous system disturbances. LD50, Oral-Rat 636 mg/kg; LD50, Dermal-Rabbit 14100 UL/kg; LD50, Inhalation-Rat 49 gm / m3 / 4 hr. IPA - LD50, Oral-Rat 4720 mg/kg; LD50, Dermal-Rabbit 12900 mg/kg; LC50, Inhalation-Rat 12000 ppm / 8 hrs.
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Chronic Effects: Chronic Health Effects of this product have not been determined. The following information is available on major components: IPA - Target organs; Nerves, Kidneys, Cardiovascular System, G.I. System. TOLUENE - Breathing large amounts of toluene for short periods of time adversely effect the human nervous system, the kidneys, liver, and the heart. Repeatedly breathing large amounts of toluene as when "sniffing glue" or paint can cause permanent brain damage. Human exposure studies suggest that exposure to large amounts of toluene during pregnancy can adversely effect the developing fetus. MEK - Target organs include central nervous system.

Aggravated Conditions: Unknown

Carcinogenicity: Carcinogenic effects of this product have not been determined. The following information is available on major components: MEK - According to the information presently available Methyl Ethyl Ketone has not been tested for its ability to cause cancer in animals. TOLUENE - Not Classified as a Carcinogen. IPA - IARC Group 3 (Not Classifiable).

Reproductive/Developmental Toxicity: Reproductive / Developmental health effects of this product have not been determined. The following information is available on major components: MEK - There is limited evidence that Methyl Ethyl Ketone is a teratogen in animals. Until further testing has been done it should be treated as a possible teratogen in humans. TOLUENE - California Proposition 65 Reproductive Hazard. IPA - was not a primary reproductive or developmental toxicant in animal studies, but pregnant rabbits seemed more susceptible to IPA toxicity than non-pregnant animals.

Mutagenicity: Mutagenicity of this product has not been determined. The following information is available on major components: TOLUENE - negative MEK - No additional test data found for this product. IPA - No additional test data found for this product.

Other: None known.

12. ECOLOGICAL INFORMATION

INGREDIENT NAME/ CAS NUMBER	Toluol 108-88-3 (20 to 25)
Water Flea Data	= 11.3 mg/L EC50 water flea 48 h = 310 mg/L EC50 water flea 48 h
Microtox Data	= 19.7 mg/L EC50 Photobacterium phosphoreum 30 min
Freshwater Fish Species Data	= 24.0 mg/L LC50 bluegill 96 h Static = 24.0 mg/L LC50 rainbow trout 96 h Static = 25 mg/L LC50 fathead minnow (1 day old) 96 h flow-through = 31.7 mg/L LC50 fathead minnow 96 h flow-through
INGREDIENT NAME/ CAS NUMBER	Isopropyl Alcohol 67-63-0 (20 to 25)
Microtox Data	= 35390 mg/L EC50 Photobacterium phosphoreum 5 min
Freshwater Fish Species Data	= 61200 mg/L LC50 fathead minnow (31 days old) 96 h flow-through = 94900 mg/L LC50 fathead minnow (29 days old) 96 h flow-through
INGREDIENT NAME/ CAS NUMBER	Methyl Ethyl Ketone 78-93-3 (25 to 30)
Water Flea Data	= 520 mg/L EC50 water flea 48 h
Microtox Data	= 3403 mg/L EC50 Photobacterium phosphoreum 30 min = 3426 mg/L EC50 Photobacterium phosphoreum 5 min
Freshwater Fish Species Data	= 1690 mg/L LC50 bluegill 96 h = 3220 mg/L LC50 fathead minnow 96 h flow-through

13. DISPOSAL CONSIDERATIONS

Other Disposal Considerations: None
Contaminated Packaging: Empty drums may contain harmful vapors and residue. If empty container retains product residues, all label precautions must be observed. Transport with all closures in place. Dispose according to national or local regulations. Empty containers may contain explosive vapors. Keep from spark, flame, and heat sources. Do not Cut or Weld.
RCRA Status: (Classification applies to the product as sold.) D001 (Ignitable) D035 (Methyl Ethyl Ketone)

14. TRANSPORT INFORMATION

DOT:
DOT Shipping Name: COATING SOLUTION
DOT Information: 3, UN1139, PG II
DOT Label: FLAMMABLE LIQUID
DOT ERG: 127

15. REGULATORY INFORMATION

U.S. REGULATORY RULES

TSCA Inventory Status: All components are included in the EPA Toxic Substance Control Act (TSCA) Chemical Substance Inventory.

INGREDIENT NAME/ CAS NUMBER	CERCLA Reportable Quantity	CERCLA/SARA - 302 Ext. Haz. Substances	TSCA - Sect. 12(b) Export Notification	SARA 313 Chemicals
Toluol 108-88-3 (20 to 25)	= 0.454 kg final RQ = 1 lb final RQ = 10 lb final RQ = 100 lb final RQ = 1000 lb final RQ = 4.54 kg final RQ = 45.4 kg final RQ = 454 kg final RQ			= 1.0 percent de minimis concentration
Isopropyl Alcohol 67-63-0 (20 to 25)				= 1.0 percent de minimis concentration only if manufactured by the strong acid process, no supplier notification
Methyl Ethyl Ketone 78-93-3 (25 to 30)	= 100 lb final RQ = 2270 kg final RQ = 45.4 kg final RQ = 5000 lb final RQ			= 1.0 percent de minimis concentration

STATE REGULATIONS

PROPOSITION 65 STATUS: WARNING: One or more components present in this product are known to the State of California to cause cancer and/or reproductive toxicity and is subject to warning and discharge requirements under the "Safe Drinking Water and Toxic Enforcement Act of 1986.

INGREDIENT NAME/ CAS NUMBER	FL Hazardous Substance List	RI Hazardous Substance List	MN Right to Know List	NJ Right to Know List	MA Right to Know List	PA Right to Know List
Toluol 108-88-3 (20 to 25)	Not Present	Toxic, Flammable; skin	Skin	sn 1866	Present	environmental hazard
Isopropyl Alcohol 67-63-0 (20 to 25)	Not Present	Toxic, Flammable	Present	sn 1076; sn 2381 (strong-acid process manufacture)	Present	environmental hazard
Methyl Ethyl Ketone 78-93-3 (25 to 30)	Not Present	Toxic, Flammable	Present	sn 1258	Present	environmental hazard

CANADIAN REGULATIONS

Canadian Inventory: All components are included on the Canadian DSL.
WHMIS Hazard Classification: B2 FLAMMABLE LIQUIDS
D2A VERY TOXIC MATERIALS
D2B TOXIC MATERIALS



OTHER REGULATIONS

16. OTHER INFORMATION

The following has been revised since the last issue of this MSDS: General revision and clarification.

Label Number: #28
Additional Information: Not Applicable
Important Note: This company makes no warranty regarding the safety of this product when used incorrectly.

Disclaimer: The information contained herein is accurate to the best of our knowledge. My Company makes no warranty of any kind, express or implied, concerning the safe use of this material in your process or in combination with other substances.