



MATERIAL SAFETY DATA SHEET

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1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Id: Uradur 1119X
Chemical Family: Polyurethane Solution
Application: Coating Solution
Prepared By: Health, Safety and Environment Department
HMIS Classification: Health: 2 Flammability: 3 Physical Hazard: 0
HMIS Ratings: 0=Minimal 1=Slight 2=Moderate 3=Serious 4=Severe
(* Chronic Health Hazard)

For Chemical Emergency

Chemtrec Day & Night International 800-424-9300
703-527-3887

2. COMPOSITION / INFORMATION ON INGREDIENTS

INGREDIENT NAME/ CAS NUMBER	WEIGHT %	OSHA PEL	ACGIH TLV (8 hr.)
Polyurethane Polymer	50 to 70	N/A	N/A
Methyl Ethyl Ketone 78-93-3	30 to 40	200 ppm 590 mg/m ³	200 ppm

Other Information: Not Applicable

3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW: DANGER: Clear to amber Liquid with a strong solvent odor. Flammable liquid and vapor. Vapors can travel a long distance to an ignition 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.

Inhalation: May cause mild respiratory irritation. High vapor concentrations may cause central nervous system depression.

Skin Contact: MEK - Studies show that MEK causes no or mild irritation.

Eye Contact: MEK - Studies show that MEK causes moderate to severe eye irritation.

Ingestion: Harmful if swallowed. May cause headache, dizziness, nausea, vomiting, gastrointestinal irritation and central nervous system depression.

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:	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. Remove contaminated clothing and launder before reuse. Remove contaminated shoes and discard.
Eye Contact:	In case of contact, immediately flush eyes with plenty of water for at least 15 minutes and get medical attention.
Ingestion:	If swallowed, give 1-2 glasses of water, but do not induce vomiting. Do not give anything by mouth to an unconscious or convulsing person. Get medical attention.

5. FIRE FIGHTING MEASURES

Lowest Component Flash Point (°F):	MEK = 23 F
Flash Point Method:	Closed Cup
FLAMMABILITY	(Lowest Component Information)
LFL (% Vol):	MEK = 1.8%
UFL (% Vol):	MEK = 10.0%
Extinguishing Media:	Water fog, carbon dioxide, foam, dry chemical.
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 2, 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. 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. 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.

7. HANDLING AND STORAGE

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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:	Flammable Storage Keep containers tightly closed. Store in a cool dry place. Ground equipment to prevent static build-up. Ground containers when pouring or transferring.

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:	Butyl rubber.
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:	AMBER-CLEAR
Odor:	SOLVENT ODOR
% Solids by Weight:	65%
% Volatile by Volume:	47%
pH:	Not Applicable
Specific Gravity:	1.06
Density:	8.98 lbs/gal
Solubility in Water:	Nil
Molecular Weight:	Not Determined
VOCs (lbs/gallon):	3.12 lbs./gal
Evaporation Rate (Highest Component Information):	(Normal Butyl Acetate = 1) MEK= 3.8
Boiling Point (°F) (Lowest Component Information):	MEK = 176 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.

10. STABILITY AND REACTIVITY

Hazardous Decomposition Products:
Additional Guidelines:

Combustion of the dried polymer may release : Carbon Dioxide, Carbon Monoxide, Oxides of Nitrogen, Traces of HCN.
Avoid Heat and Spark sources.

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.

Chronic Effects:

Chronic Health Effects of this product have not been determined. The following information is available on major components: 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.

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.

Mutagenicity:

Mutagenicity of this product has not been determined. The following information is available on major components: None Available

Other:

None known.

12. ECOLOGICAL INFORMATION

**Methyl Ethyl Ketone
78-93-3 (30 to 40)**

Water Flea Data	5091 mg/L EC50 Daphnia magna 48 h 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 Lepomis macrochirus 96 h 3220 mg/L LC50 Pimephales promelas 96 h

13. DISPOSAL CONSIDERATIONS

Other Disposal Considerations:

Empty containers may contain residual flammable vapors. Keep away from spark, heat, and flame sources.

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 III
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
Polyurethane Polymer (50 to 70)	N/A	N/A	Not Listed.	
Methyl Ethyl Ketone 78-93-3 (30 to 40)	2270 kg final RQ 5000 lb final RQ	N/A	Not Listed.	

STATE REGULATIONS

PROPOSITION 65 STATUS: No components present in this product are known to the State of California to cause cancer and/or reproductive toxicity and subject to warning and discharge requirements under the "Safe Drinking Water and Toxic Enforcement Act of 1986.

INGREDIENT NAME/ CAS NUMBER	RI Hazardous Substance List	MN Right to Know List	NJ Right to Know List	MA Right to Know List	PA Right to Know List
Polyurethane Polymer (50 to 70)	Not Present	Not Present	TSRN 050250533-5025	Not Present	Not Present
Methyl Ethyl Ketone 78-93-3 (30 to 40)	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



OTHER REGULATIONS

16. OTHER INFORMATION

The following has been revised since the last issue of this MSDS: New Address

Label Number:

#31

Additional Information:

Not Applicable

Important Note:

This company makes no warranty regarding the safety of this product when used incorrectly.

*****END OF MSDS*****