

# MATERIAL SAFETY DATA SHEET

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		HMIS RATING
HEALTH .....	2	4 = SEVERE
FLAMMABILITY ...	3	3 = SERIOUS
REACTIVITY .....	0	2 = MODERATE
PROTECTION .....	X	1 = SLIGHT
		0 = MINIMAL
		X = SEE SECTION

PRODUCT IDENTITY.....: URESOLVE PLUS SG  
PRODUCT CODE NUMBER .....: J003D

PRODUCT USE .....:  
DOT HAZARD CLASSIFICATION.: FLAMMABLE LIQUIDS, CORROSIVE, NOS, (2-METHOXYETHANOL, POTASSIUM HYDROXIDE), 3, UN2924, 111

## SECTION 1 - HAZARDOUS INGREDIENTS

HAZARDOUS INGREDIENTS	CAS NUMBER	Wgt. %	PEL-OSHA	EXPOSURE LIMITS TLV-ACGIH	OTHER	CARCINOGEN	NOTE
2-METHOXYETHANOL	109-86-4	60-100	25 ppm	25 ppm (OSH)	N/AV	NO	**
CYCLIC AMIDE	872-50-4	10-30	N/AV	N/AV	N/AV	N/AV	**
POTASSIUM HYDROXIDE	1310-58-3	1-5	2 mg/m3	2 mg/m3	N/AV	NO	

\*\*SUBJECT TO THE REPORTING REQUIREMENTS OF SECTION 313 OF SARA TITLE III, SEE SECTION 8 - REGULATORY INFORMATION.  
All components of this product are listed on the TSCA registry.

## SECTION 2 - PHYSICAL AND CHEMICAL CHARACTERISTICS

PHYSICAL STATE .....: LIQUID	VAPOR PRESSURE (mmHg)...: 6.2 @ 20°C	pH .....: >13
ODOR AND APPEARANCE.: BLUE W/SLIGHT PLEASANT ODOR	VAPOR DENSITY (Air=1)...: 2.62	BOILING POINT (F)....: 256
SPECIFIC GRAVITY (water=1): 1.00	ODOR THRESHOLD .....: N/AV	FREEZING POINT (F)...: N/A
SOLUBILITY IN WATER .....: COMPLETE	EVAP. RATE (n-BUTYL ACETATE=1): 0.62	
(lbs/gal).....: 8.39		

## SECTION 3 - FIRE AND EXPLOSION HAZARD DATA

FLASH POINT AND METHOD....: 103°F (39°C) TCC lowest flashing component FLAMMABLE LIMITS: LEL = 1.8% UEL = 14%

EXTINGUISHING MEDIA: Use water, carbon dioxide, foam or dry chemical type extinguishers. Keep containers cool with water spray.

SPECIAL FIRE FIGHTING PROCEDURES: Wear self-contained breathing apparatus with full facepiece operated in the positive pressure demand mode and full protective clothing when fighting fires.

UNUSUAL FIRE AND EXPLOSION HAZARDS: Vapors are heavier than air and may travel along the ground or be moved by ventilation and ignited by high intensity energy source. Never use welding or cutting torch on or near containers (even empty) because product or its residue can ignite explosively.

## SECTION 4 - REACTIVITY DATA

IS THE PRODUCT STABLE? YES CONDITIONS TO AVOID FOR STABILITY: None known

INCOMPATIBILITY (Materials to Avoid): Avoid contact with strong alkalines, acids, and other oxidizers and reactive metals.

HAZARDOUS DECOMPOSITION PRODUCTS.....: CO and CO2.

WILL HAZARDOUS POLYMERIZATION OCCUR? NO CONDITIONS TO AVOID FOR POLYMERIZATION: N/AV

KEEP OUT OF REACH OF CHILDREN

N/AP - Not Applicable

N/AV - Not Available

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## SECTION 5 - HEALTH HAZARD DATA

ROUTE OF ENTRY: a) Skin b) Inhalation c) Eye contact

EFFECTS OF ACUTE EXPOSURE: a) EYES - Can cause severe irritation, redness, tearing, blurred vision. b) SKIN - Prolonged or repeated contact can cause moderate irritation, defatting and dermatitis. c) INHALATION - Excessive inhalation of vapors can cause nasal and respiratory irritation, Central Nervous System effects including dizziness, weakness, fatigue, nausea, headache and possible unconsciousness, and even death. d) INGESTION - Can cause gastrointestinal irritation, nausea, vomiting and diarrhea. Aspiration of material into the lungs can cause chemical pneumonitis which can be fatal.

EFFECTS OF CHRONIC EXPOSURE: Repeated overexposure to this product (or its components) may cause toxic effects on the liver, kidneys bone marrow, blood cells and testes. Increased frequency of miscarriages and increased time to pregnancy have been reported in Epidemiology studies of women working in semiconductor manufacturing activities involving the use of Photoresist/Developer solvents. 2-methoxyethanol MAY have been included in these studies. In Laboratory inhalation studies, birth defects, increased fetal lethality, and delayed fetal development have been observed in offspring of female animals exposed to 2-methoxyethanol concentrations in air of 50 ppm and higher.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: Inhalation material may aggravate asthma & inflammatory or Fibrotic Pulmonary disease.

### EMERGENCY AND FIRST AID PROCEDURES:

- a) SKIN - Thoroughly wash with plenty of soap and water. Remove contaminated clothing and shoes. Wash clothing before reuse. Consult a physician.
- b) EYES - Immediately flush with plenty of clear, running water for at least 15 minutes, lifting upper and lower lids occasionally. Get medical attention.
- c) INHALATION - If affected remove individual to fresh air. If breathing is difficult give oxygen. If breathing has stopped, administer artificial respiration. Keep person warm and quiet and get medical attention.
- d) INGESTION - If swallowed, call a physician immediately. Give two glasses of water and induce vomiting. Never give anything by mouth to an unconscious person. Aspiration of material into the lungs due to vomiting can cause chemical pneumonitis which can be fatal.

## SECTION 6 - CONTROL AND PROTECTIVE MEASURES

### PERSONAL PROTECTIVE EQUIPMENT:

GLOVES....: Butyl \*\* (Latex <1 hr.)\*\*  
FOOTWEAR...: Boots

RESPIRATOR...: NIOSH-Approved (fume/mist/dust)  
CLOTHING....: Impervious

EYE....: Chemical splash goggles  
OTHER...: Use SCBA in high vapor conc

VENTILATION: LOCAL EXHAUST: Below TLV MECHANICAL (General): Explosion proof.

WORK/HYGIENIC PRACTICES: Eye wash and safety shower should be easily accessible. Provide adequate ventilation. Wash thoroughly after handling and before eating, drinking or smoking. Remove contaminated clothing promptly and wash it before reuse.

## SECTION 7 - PRECAUTIONS FOR SAFE HANDLING AND USE

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: Eliminate all ignition sources. Absorb small spills on suitable absorbant and transfer to hood. Stop large spills at source, dike area to prevent spreading, and pump liquid to salvage tank. Absorb remaining liquid on suitable absorbent and collect for proper disposal. Prevent run-off to sewers, streams or other bodies of water. If run-off occurs, notify proper authorities that a spill has occurred.

WASTE DISPOSAL METHOD: Contaminated absorbant must be disposed of according to local, state and federal regulations.

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE: Keep away from high intensity energy sources. Protect from physical damage and keep tightly closed. Do not store under freezing conditions or above 120 degrees F.

MAINTENANCE PRECAUTIONS: When working with combustible or flammable material, electrically ground all equipment and use only non-sparking tools.

OTHER PRECAUTIONS: Empty containers retain product residue and vapors. Always obey hazard warnings.

## SECTION 8 - REGULATORY INFORMATION

This product contains the following chemical or chemicals subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act (SARA) of 1986 and 40 CFR Part 372:

2-METHOXYETHANOL  
CYCLIC AMIDE

CAS# 109-86-4  
CAS# 872-50-4

60-100%  
10-30%

KEEP OUT OF REACH OF CHILDREN

N/AP - Not Applicable

N/AV - Not Available