

PRODUCT NAME: MICRO SEAL CLEAR URETHANE, PART A

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## MATERIAL SAFETY DATA SHEET

### 24 HOUR EMERGENCY ASSISTANCE

1-800-660-6729

**HEALTH:** 1

#### HAZARD RATING

**FIRE:** 0

LEAST = 0      SLIGHT = 1      MODERATE = 2

**REACTIVITY:** 0

HIGH = 3      EXTREME = 4

### SECTION I

**PRODUCT:** MICRO SEAL CLEAR URETHANE, PART A

CHEMICAL NAME: POLYACRYLATE RESIN

CHEMICAL FAMILY: POLYACRYLATE RESIN

PRODUCT DESCRIPTION: WATER BORNE RESIN DISPERSION

### SECTION II-A

#### PRODUCT / INGREDIENT

<u>No.</u>	<u>COMPOSITION</u>	<u>CAS NUMBER</u>	<u>PERCENT</u>
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THIS PRODUCT CONTAINS NO HAZARDOUS INGREDIENTS

### SECTION II-B

#### ACUTE TOXICITY DATA

<u>No.</u>	<u>ACUTE ORAL LD50</u>	<u>ACUTE DERMAL LD50</u>	<u>ACUTE INHALATION LC50</u>
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THIS PRODUCT CONTAINS NO HAZARDOUS INGREDIENTS AS DEFINED UNDER THE CRITERIA OF THE FEDERAL OSHA COMMUNICATION STANDARD 29 CFR 1910.1200.

### SECTION III

#### HEALTH INFORMATION

THE HEATH EFFECTS NOTED BELOW ARE CONSISTENT WITH REQUIREMENTS UNDER THE OSHA HAZARD COMMUNICATION STANDARD (29 CFR 1910-1200).

**EYE CONTACT:** EYE CONTACT CAN CAUSE MODERATE IRRITATION, WITH REDNESS, TEARING AND BLURRED VISION. PROLONGED CONTACT MAY CAUSE CORNEAL INFLAMMATION WHICH IS USUALLY REVERSIBLE..

**SKIN CONTACT:** PROLONGED OR REPEATED CONTACT CAN CAUSE MODERATE IRRITATION , REDDENING, SCALING AND DERMATTIS.

**INHALATION:** PROLONGED OR REPEATED EXPOSURE TO VAPOR CAN CAUSE IRRITATION TO THE NASL PASSAGES, THROAT, DIZZINESS AND HEADACHES. HIGH CONCENTRATION MAY RESULT IN NARCOSIS.

**INGESTION:** CAN CAUSE GASTROINTESTINAL IRRITON, NAUSEA, VOMITING AND DIARRHA

**AGGRAVATED MEDICAL CONDITIONS:** NONE KNOWN

### SECTION IV

#### OCCUPATIONAL EXPOSURE LIMITS

<u>No.</u>	<u>OSHA</u>		<u>ACGIH</u>		<u>OTHER</u>
	<u>PEL/TWA</u>	<u>PEL/CEILING</u>	<u>TLV/TWA</u>	<u>TLV/STEL</u>	

NOT ESTABLISHED FOR THE PRODUCT

### SECTION V

#### EMERGENCY AND FIRST AID PROCEDURES

**EYE CONTACT:** CHECK FOR AND REMOVE CONTACT LENSES. IMMEDIATELY FLUSH EYES WITH RUNNING WATER FOR AT LEAST 15 MINUTES, KEEPING EYELIDS OPEN. IF IRRITATION PERSISTS, CONSULT A PHYSICAN.

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**SKIN CONTACT:** WASH GENTLY AND THOROUGHLY THE CONTAMINATED SKIN WITH RUNNING WATER AND NON-ABRASSIVE SOAP. IF IRRITATION PERSISTS, SEEK MEDICAL ATTENTION.

**INHALATION:** NO KNOWN EFFECT ACCORDING TO OUR DATABASE.

**INGESTION:** **DO NOT INDUCE VOMITING.** HAVE A CONSCIOUS PERSON DRINK SEVERAL GLASSES OF WATER OR MILK. SEEK IMMEDIATE MEDICAL ATTENTION.

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## **SECTION VI**

## **SUPPLEMENTAL HEALTH INFORMATION**

**CONTACT A POISON CONTROL CENTER FOR ADDITIONAL TREATMENT INFORMATION.**

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## **SECTION VII**

## **PHYSICAL DATA**

BOILING POINT (°F): 212F (100C)      SPECIFIC GRAVITY (H<sub>2</sub>O = 1): 1.06

VAPOR PRESSURE (mm Hg @ 20°C): 29.33 MM HG @ 68F

SOLUBILITY (IN WATER): DISPERSIBLE

VAPOR DENSITY (AIR = 1): .569 (AIR=1)

EVAPORATION RATE (N-BUTYL ACETATE = 1): .07

APPEARANCE AND ODOR: LIGHT STRAW COLORED LIQUID, AMMONIA ODOR

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## **SECTION VIII**

## **FIRE AND EXPLOSION HAZARDS**

FLASH POINT AND METHOD: GREATER THAN 250 F (121 C) SETAFLASH

FLAMMABLE LIMITS /% VOLUME IN AIR:

UPPER EXPLOSIVE LIMIT (UEL) (%) 25

LOWER EXPLOSIVE LIMIT (LEL) (%) 16

**EXTINGUISHING MEDIA:** WATER, CARBON DIOXIDE, DRY CHEMICAL, FOAM

**SPECIAL FIRE FIGHTING PROCEDURES AND PRECAUTIONS:** FULL EMERGENCY EQUIPMENT WITH SELF-CONTAINED BREATHING APPARATUS AND FULL PROTECTIVE CLOTHING SHOULD BE WORN BY THE FIRE - FIGHTERS. USE COLD WATER SPRAY TO COOL FIRE-EXPOSED CONTAINERS TO MINIMIZE RISK OF RUPTURE. MATERIAL SUPPORTS COMBUSTION. DURING A FIRE, IRRITATING AND TOXIC GASES SUCH AS CARBON MONOXIDE MAY BE GENERATED BY THERMAL DECOMPOSITION OR COMBUSTION. SEE SECTION VIII. DO NOT SPRAY FIRE DIRECTLY. A SOLID STREAM DIRECTED INTO THE HOT BURNING LIQUID COULD CAUSE FROTHING.

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## **SECTION IX**

## **REACTIVITY**

**STABILITY:** THIS IS A STABLE MATERIAL

**HAZARDOUS POLYMERIZATION:** WILL NOT OCCUR

**CONDITIONS AND MATERIALS TO AVOID:** NONE FOUND

**HAZARDOUS DECOMPOSITION PRODUCTS:** BY FIRE: CO<sub>2</sub>, CO, AND OTHER ALIPHATIC FRAGMENTS.

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## **SECTION X**

## **EMPLOYEE PROTECTION**

EYE PROTECTION REQUIREMENTS: SAFETY GLASSES OR GOGGLES ARE RECOMMENDED

SKIN PROTECTION REQUIREMENTS: IMPERMEABLE GLOVES ARE RECOMMENDED

RESPIRATORY/VENTILATION REQUIREMENT: GENERAL DILUTION VENTILATION THAT MAINTAINS VAPOR LEVELS BELOW THE APPROPRIATE EXPOSURE LIMIT IS RECOMMENDED. RESPIRATORY PROTECTION IS NOT REQUIRED WHILE HANDLING THIS PRODUCT UNDER NORMAL CONDITIONS OF USE (SEE SECTION IV FOR THE TYPE OF RESPIRATORY PROTECTION NECESSARY IN A FIRE SITUATION). IF THIS PRODUCT IS USED IN CONJUNCTION WITH OTHER MATERIALS, CONSULT THE APPROPRIATE MATERIAL SAFETY DATA SHEETS FOR RECOMMENDED RESPIRATORY PROTECTION.

ADDITIONAL MEASURES SAFETY SHOWERS AND EYE WASH STATIONS SHOULD BE EASILY ACCESSIBLE TO THE WORK AREA. EMPLOYEE TRAINING AND EDUCATION IN THE SAFE HANDLING AND USE OF THIS PRODUCT IS ESSENTIAL.

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**SECTION XI****ENVIRONMENTAL PROTECTION**

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**SPILL OR LEAK PROCEDURES:**

COVER SPILL WITH ABSORBENT MATERIAL, SUCH A SAND, SWEEPING COMPOUND OR DIATOMACEOUS EARTH; COLLECT MATERIAL FOR DISPOSAL. WASH SPILL AREA WITH HOT WATER.

WASTE DISPOSAL METHOD.....WASTE MUST BE DISPOSED OF OR INCINERATED IN COMPLIANCE WITH FEDERAL, STATE OR LOCAL ENVIRONMENTAL CONTROL REGULATIONS.

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**SECTION XII****SPECIAL PRECAUTIONS**

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GROUND ALL TRANSFER EQUIPMENT. TAKE PRECAUTIONARY MEASURES AGAINST STATIC DISCHARGE. HANDLE AS AN INDUSTRIAL CHEMICAL. KEEP CONTAINER TIGHTLY CLOSED WHEN NOT IN USE. PRACTICE GOOD CAUTION AND PERSONAL CLEANLINESS TO AVOID SKIN AND EYE CONTACT. HOLD BULK STORAGE UNDER NITROGEN BLANKET. STORE IN A COOL, DRY PLACE WITH ADEQUATE VENTILATION. KEEP AWAY FROM OPEN FLAMES AND HIGH TEMPERATURES.

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**SECTION XIII****TRANSPORTATION REQUIREMENTS**

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**TECHNICAL SHIPPING NAME:** POLYACRYLATE DISPERSION

**FREIGHT CLASS BULK:** SYNTHETIC RESIN

**FREIGHT CLASS PACKAGE:** RESIN, COAL TAR OR PETROLEUM

**PRODUCT LABEL:** WATERBORNE URETHANE

DOT DOMESTIC SURFACE

HAZARD CLASS OR DIVISION.....NON-REGULATED

IMO / IMDG CODE (OCEAN)

HAZARD CLASS DIVISION NUMBER....NON-REGULATED

ICAO / IATA (AIR)

HAZARD CLASS DIVISION NUMBER.....NON-REGULATED

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**SECTION XIV****OTHER REGULATORY CONTROLS**

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NOT MEANT TO BE ALL-INCLUSIVE. SELECTED REGULATIONS PRESENTED.

- A. SARA TITLE III SECTION 311/312 HAZARDS: NON-HAZARDOUS UNDER 311/312
- B. SARA TITLE III SECTION 313: TOXIC CHEMICALS: NONE
- C. WHMIS CLASSIFICATION:
- D. TSCA STATUS: ON TSCA INVENTORY
- E. OSHA HAZARD COMM. STD.:

ANIMAL TOXICITY DATA.....NO ANIMAL TOXICITY INFORMATION AVAILABLE

FEDERAL REGULATORY INFORMATION...

OSHA STATUS....THIS PRODUCT IS NOT HAZARDOUS UNDER THE CRITERIA OF THE FEDERAL OSHA HAZARD COMMUNICATION STANDARD 29 CFR 1910.1200

TSCA STATUS... ON THE TSCA INVENTORY  
CERCLA REPORTABLE QUANTITY NONE

OTHER REGULATORY INFORMATION

COMPONENT NAME

/CAS NUMBER

POLYACRYLATE RESIN

APPROX. 60-70 %

PA3, NJ4

NJ4=NEW JERSEY OTHER-INCLUDED IN 5 PREDOMINANT INGREDIENTS >1%

PA3=PENNSYLVANIA NON-HAZARDOUS PRESENT AT 3% OR GREATER.

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RCRA STATUS....IF DISCARDED IN ITS PURCHASED FORM, THIS PRODUCT WOULD NOT BE BE A HAZARDOUS WASTE EITHER BY LISTING OR BY CHARACTERISTIC. HOWEVER, UNDER RCRA, IT IS THE RESPONSIBILITY OF THE PRODUCT USER TO DETERMINE AT THE TIME OF DISPOSAL, WETHER A MATERIAL CONTAINING THE PRODUCT OF DERIVED FROM THE PRODUCT SHOULD BE CLASSIFIED AS A HAZARDOUS WASTE. (40CFR 261.20-24)

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## **SECTION XV**

## **STATE REGULATORY INFORMATION**

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NONE KNOWN

CA = CALIFORNIA HAZ. SUBST. LIST; CA65 = CALIFORNIA SAFE DRINKING WATER AND TOXICS ENFORCEMENT ACT LIST; CT = CONNECTICUT TOX. SUBST. LIST; FL = FLORIDA SUBST. LIST; IL = ILLINOIS TOX. SUBST. LIST; LA = LOUISIANA HAZ. SUBST. LIST; MA = MASSACHUSETTS SUBST. LIST; ME = MAINE HAZ. SUBST. LIST; MN = MINNESOTA HAZ. SUBST. LIST; NJ = NEW JERSEY HAZ. SUBST. LIST; PA = PENNSYLVANIA HAZ. SUBST. LIST; RI = RHODE ISLAND HAZ. SUBST. LIST.  
POLYESTER RESIN

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## **SECTION XVI**

## **SPECIAL NOTES**

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NEW MSDS.

THE INFORMATION CONTAINED HEREIN IS BASED ON THE DATA AVAILABLE TO US AND IS BELIEVED TO BE CORRECT. HOWEVER, MULTICOAT PRODUCTS, INC. MAKES NO WARRANTY, EXPRESSED OR IMPLIED REGARDING THE ACCURACY OF THESE DATA OR THE RESULTS TO BE OBTAINED FROM THE USE THEREOF. MULTICOAT PRODUCTS, INC. ASSUMES NO RESPONSIBILITY FOR INJURY FROM THE USE OF THE PRODUCT DESCRIBED HEREIN.

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DATED PREPARED:           SEPTEMBER 13, 2011  
MANUFACTURED FOR:       MULTICOAT PRODUCTS, INC.  
                                  2922 WINFIELD ROAD  
                                  WINFIELD, WV 25213

## MATERIAL SAFETY DATA SHEET

### 24 HOUR EMERGENCY ASSISTANCE

1-800-660-6729

<b>HEALTH:</b>	<b>2*</b>	<u>HAZARD RATING</u>
<b>FIRE:</b>	<b>1</b>	LEAST = 0      SLIGHT = 1      MODERATE = 2
<b>REACTIVITY:</b>	<b>1</b>	HIGH = 3      EXTREME = 4
		* = CHRONIC HEALTH HAZARD

### SECTION I

**PRODUCT:**    **MICRO SEAL CLEAR URETHANE HARDENER, PART B**  
**CHEMICAL NAME:**    ALIPHATIC POLYISOCYANATE  
**CHEMICAL FAMILY:**    1,6-HEXAMETHYLENE DIISOCYANATE BASED POLYISOCYANATE  
**PRODUCT DESCRIPTION:**    CATALYST

### SECTION II-A

### PRODUCT / INGREDIENT

<u>No.</u>	<u>COMPOSITION</u>	<u>CAS NUMBER</u>	<u>PERCENT</u>
1	ALIPHATIC POLYISOCYANATES		15-25%

SPECIFIC CHEMICAL IDENTITY IS WITHHELD AS A TRADE SECRET.  
 THE RECOMMENDED MANUFACTURER GUIDELINE FOR HDI BASED POLYISOCYANATES: 0.5 MG/M3 (TWA- AVERAGED OVER 8 HOURS) AND 1.0MG/M3 SHORT TERM EXPOSURE: (STEL-AVERAGED OVER 15 MINUTES.)

2	HEXAMETHYLENE DIISOCYANATE (HDI)	28182-81-2	75-85%
	OSHA: NOT ESTABLISHED      ACGIH: 0.005 PPM TWA		
	* MONOMER CONTENT IS LESS THAN 0.2% BASED ON RESIN SOLIDS AT THE TIME MANUFACTURE. MULTICOAT ALSO RECOMMENDS A CEILING LEVEL OF 0.02PPM (MANUFACTURER'S GUIDELINE LEVEL (MGL)).		

### SECTION II-B

### ACUTE TOXICITY DATA

<u>No.</u>	<u>ACUTE ORAL LD50</u>	<u>ACUTE DERMAL LD50</u>	<u>ACUTE INHALATION LC50</u>
	>10,000 MG/KG (RAT)	>5,000 MG/KG (RABBIT)	130-1150 MG/M3

### SECTION III

### HEALTH INFORMATION

THE HEATH EFFECTS NOTED BELOW ARE CONSISTENT WITH REQUIREMENTS UNDER THE OSHA HAZARD COMMUNICATION STANDARD (29 CFR 1910-1200).

#### **EYE CONTACT:**

**ACUTE:**    LIQUID, AEROSOLS OR VAPORS OF THIS PRODUCT (ISOCYANATE) ARE IRRITATING AND CAN CAUSE TEARING, REDDENING AND SWELLING ACCOMPANIED BY A STINGING SENSATION AND MAY BE A FEELING LIKE THAT OF FINE DUST IN THE EYES.

**CHRONIC:**    MAY RESULT IN CORNEAL OPACITY (CLOUDING OF THE EYE SURFACE.)

#### **SKIN CONTACT:**

**ACUTE:** ISOCYANATES REACT WITH SKIN PROTEIN AND MOISTURE AND CAN CAUSE IRRITATION. SYMPTOMS OF SKIN IRRITATION MAY BE REDDENING, SWELLING, RASH, SCALING OR BLISTERING. SOME PERSONS MAY DEVELOP SKIN SENSITIZATION FROM SKIN CONTACT. CURED MATERIAL IS DIFFICULT TO REMOVE.

**CHRONIC:** PROLONGED CONTACT WITH THE ISOCYANATE CAN CAUSE REDDENING, SWELLING, RASH, SCALING OR BLISTERING. IN THOSE WHO HAVE DEVELOPED A SKIN SENSITIZATION, THESE SYMPTOMS CAN DEVELOP AS A RESULT OF CONTACT WITH VERY SMALL AMOUNTS OF LIQUID MATERIAL OR EVEN AS A RESULT OF VAPOR-ONLY EXPOSURE.

#### **INHALATION:**

**ACUTE:** HDI VAPORS OR MIST AT CONCENTRATIONS ABOVE THE TLV CAN IRRITATE (BURNING SENSATION) THE MUCOUS MEMBRANES IN THE RESPIRATORY TRACT (NOSE, THROAT, LINGS) CAUSING

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RUNNY NOSE, SORE THROAT, COUGHING, CHEST DISCOMFORT, SHORTNESS OF BREATH AND REDUCED LUNG FUNCTION (BREATHING OBSTRUCTION). PERSONS WITH PREEXISTING, NONSPECIFIC BRONCHIAL HYPERACTIVITY CAN RESPOND TO CONCENTRATIONS BELOW THE TLV WITH SIMILAR SYMPTOMS AS WELL AS AN ASTHMA ATTACK. EXPOSURE WELL ABOVE THE TLV MAY LEAD TO BRONCHITIS, BRONCHIAL SPASM AND PULMONARY EDEMA (FLUID IN LUNGS). THESE EFFECTS ARE USUALLY REVERSIBLE. CHEMICAL OR HYPERSENSITIVE PNEUMONITIS, WITH FLU-LIKE SYMPTOMS (E.G., FEVER, CHILLS) HAS ALSO BEEN REPORTED.

**CHRONIC:** AS A RESULT OF PREVIOUS REPEATED OVEREXPOSURES OR A SINGLE LARGE DOSE, CERTAIN INDIVIDUALS WILL DEVELOP ISOCYANATE SENSITIZATION (CHEMICAL ASTHMA) WHICH WILL CAUSE THEM TO REACT TO A LATER EXPOSURE TO ISOCYANATE AT LEVELS WELL BELOW THE TLV. THESE SYMPTOMS, WHICH INCLUDE: CHEST TIGHTNESS, WHEEZING, COUGH, SHORTNESS OF BREATH OR ASTHMATIC ATTACK, COULD BE IMMEDIATE OR DELAYED UP TO SEVERAL HOURS AFTER EXPOSURE. SIMILAR TO MANY NON-SPECIFIC ASTHMATIC RESPONSES THERE ARE REPORTS THAT ONCE SENSITIZED AN INDIVIDUAL CAN EXPERIENCE THESE SYMPTOMS UPON EXPOSURE TO DUST, COLD AIR OR OTHER IRRITANTS. THIS INCREASED LUNG SENSITIVITY CAN PERSIST FOR WEEKS AND IN SEVERE CASES FOR SEVERAL YEARS. CHRONIC OVEREXPOSURE TO ISOCYANATES HAS ALSO BEEN REPORTED TO CAUSE LUNG DAMAGE, INCLUDING DECREASE IN LUNG FUNCTION, WHICH MAY BE PERMANENT. SENSITIZATION MAY BE EITHER TEMPORARY OR PERMANENT.

**INGESTION:**

**ACUTE:** CAN RESULT IN IRRITATION AND POSSIBLE CORROSIVE ACTION IN THE MOUTH, STOMACH TISSUE AND DIGESTIVE TRACT.

**CHRONIC:** NONE FOUND.

**AGGRAVATED MEDICAL CONDITIONS:**

**BY EXPOSURE:** ASTHMA AND ANY OTHER RESPIRATORY DISORDERS (BRONCHITIS, EMPHYSEMA, HYPERREACTIVITY), SKIN ALLERGIES, ECZEMA.

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<b>SECTION IV</b>		<b>OCCUPATIONAL EXPOSURE LIMITS</b>		
OSHA		ACGIH		OTHER
No.	PEL/TWA	PEL/CEILING	TLV/TWA	TLV/STEL
NOT ESTABLISHED FOR THIS PRODUCT AS A WHOLE, REFER TO SECTION II FOR EXPOSURE LIMITS OF HAZARDOUS CONSTITUENTS.				

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**SECTION V** **EMERGENCY AND FIRST AID PROCEDURES**

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**EYE CONTACT:** FLUSH WITH CLEAN, LUKEWARM WATER (LOW PRESSURE) FOR AT LEAST 15 MINUTES WHILE LIFTING EYELIDS. REFER INDIVIDUAL TO PHYSICIAN OR OPHTHALMOLOGIST FOR IMMEDIATE FOLLOW-UP.

**SKIN CONTACT:** REMOVE CONTAMINATED CLOTHING IMMEDIATELY. WASH AFFECTED AREAS THOROUGHLY WITH SOAP (GREEN TINCTURE SOAP IS RECOMMENDED) AND WATER. WASH CONTAMINATED CLOTHING THOROUGHLY BEFORE REUSE. FOR SEVERE EXPOSURES, GET UNDER SAFETY SHOWER AFTER REMOVING CLOTHING, THEN GET MEDICAL ATTENTION. FOR LESSER EXPOSURES, SEEK MEDICAL ATTENTION IF IRRITATION DEVELOPS OR PERSISTS.

**INHALATION:** MOVE TO AN AREA FREE FROM RISK OF FURTHER EXPOSURE. ADMINISTER OXYGEN OR ARTIFICIAL RESPIRATION AS NEEDED. OBTAIN MEDICAL ATTENTION. ASTHMATIC-TYPE SYMPTOMS MAY DEVELOP AND MAY BE IMMEDIATE OR DELAYED UP TO SEVERAL HOURS. TREATMENT IS ESSENTIALLY SYMPTOMATIC. CONSULT PHYSICIAN.

**INGESTION:** **DO NOT INDUCE VOMITING.** GIVE 1 TO 2 CUPS OF MILK OR WATER TO DRINK. DO NOT GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS OR CONVULSING PERSON. CONSULT PHYSICIAN.

**NOTE TO PHYSICIAN:**

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**EYES:** STAIN FOR EVIDENCE OF CORNEAL INJURY. IF CORNEA IS BURNED, INSTILL ANTIBIOTIC /STERIOD PREPARATION FREQUENTLY. WORKPLACE VAPORS COULD PRODUCE REVERSIBLE CORNEAL EPITHELIAL EEMA IMPAIRING VISION.

**SKIN:** HDI IS A KNOWN SKIN SENSITIZER. TREAT SYMPTOMATICALLY ALS FOR CINTACT DERMATITIS OR THERMAL BURN.

**INGESTION:** TREAT SYMPTOMATICALLY. THERE IS NO SPECIFIC ANTIDOTE. INDUCING VOMITING IS CONTRAINDICATED BECAUSE OF THE IRRITATING NATURE OF THE PRODUCT.

**INHALATION:** HDI IS A KNOWN PULMONARY SENSITIZER. TREATMENT IS ESSENTIALLY SYMPTOMATIC. AN INDIVIDUAL HAVING A DERMAL OR PULMONARY SENSITIZATION REACTION TO THIS MATERIAL MUST BE REMOVED FROM ANY FURTHER EXPOSURE TO ANY ISOCYANATE.

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**SECTION VI SUPPLEMENTAL HEALTH INFORMATION**

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**CONTACT A POISON CONTROL CENTER FOR ADDITIONAL TREATMENT INFORMATION.**

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**SECTION VII PHYSICAL DATA**

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BOILING POINT (°F): NOT ESTABLISHED SPECIFIC GRAVITY (H<sub>2</sub>O = 1): 1.16  
VAPOR PRESSURE (mm Hg @ 20°C): NOT ESTABLISHED  
SOLUBILITY (IN WATER): RESIN IS INSOLUABLE - REACTS SLOWLY WITH  
WATER TO LIBERATE CO<sub>2</sub> GAS  
VAPOR DENSITY (AIR = 1): NOT ESTABLISHED  
EVAPORATION RATE (N-BUTYL ACETATE = 1):  
APPEARANCE AND ODOR: CLEAR/PALE YELLOW SLIGHT

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**SECTION VIII FIRE AND EXPLOSION HAZARDS**

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**FLASH POINT AND METHOD:** GREATER THAN 200° F (93.3 C) PENSKY-MARTENS CLOSED CUP  
**FLAMMABLE LIMITS /% VOLUME IN AIR:**

**EXTINGUISHING MEDIA:** DRY CHEMICAL; CARBON DIOXIDE; FOAM; WATER SPRAY FOR LARGE FIRES.

**SPECIAL FIRE FIGHTING PROCEDURES AND PRECAUTIONS:** FULL EMERGENCY EQUIPMENT WITH SELF-CONTAINED BREATHING APPARATUS AND FULL PROTECTIVE CLOTHING SHOULD BE WORN Y FIRE FIGHTERS. DURING A FIRE, HDI VAPORS AND OTHER IRRITATING, HIGHLY TOXIC GASES MAY BE GENERATED BY THERMAL DECOMPOSITION OR COMBUSTION (SEE REACTIVITY DATA SECTION).

**UNUSUAL FIRE AND EXPLOSION HAZARDS:** CLOSED CONTAINER MAY CXPLODE WHEN EXPOSED TO EXTREME HEAT OR BURST WHEN CONTAMINATED WITH WATER (CO<sub>2</sub> EVOLVED).

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**SECTION IX REACTIVITY**

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**STABILITY:** THIS IS A STABLE MATERIAL.

**HAZARDOUS POLYMERIZATION:** MAY OCCUR; CONTACT WITH MOISTURE OR OTHER MATERIALS WHICH REACT WITH ISOCYANATES OR TEMPERATURES OVER 400° F (204 C) MAY CAUSE POLYMERIZATION.

**CONDITIONS AND MATERIALS TO AVOID:** WATER, AMINES, STRONG BASES, ALCOHOLS, MITAL COMPOUNDS AND SURFACE ACTIVE MATERIALS.

**HAZARDOUS DECOMPOSITION PRODUCTS:** BY HIGH HEAT AND FIRE: CARBON DIOXIDE, CARBON MONOXIDE, OXIDES OF NITROGEN, TRACES OF HCN, HDI.

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**SECTION X EMPLOYEE PROTECTION**

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**RESPIRATORY PROTECTION:** A RESPIRATOR THAT IS RECOMMENDED OR APPROVED FOR USE IN ISOCYANATE CONTAINING ENVIRONMENTS (AIR PURIFYING OR FRESH AIR SUPPLIED) MAY BE NECESSARY FOR SPRAY APPLICATIONS OR OTHER SITUATIONS SUCH AS HIGH TEMPERATURE USE WHICH MAY PRODUCE INHALATION EXPOSURES. A SUPPLIED AIR RESPIRATOR (EITHER POSITIVE PRESSURE OR CONTINUOUS FLOW TYPE) IS RECOMMENDED. BEFORE AN AIR-PURIFYING RESPIRATOR CAN BE USED, AIR MONITORING MUST BE PERFORMED TO MEASURE AIRBORNE CONCENTRATIONS OF HDI MONOMER, HDI POLYISOCYANATE AND ORGANIC SOLVENT(S). SEE THE OUTLINE BELOW FOR THE SPECIFIC CONDITIONS UNDER WHICH AIR-PURIFYING RESPIRATORS CAN BE USED. OBSERVE OSHA REGULATIONS FOR RESPIRATOR USE (29 CFR 1910.134).

**SPRAY APPLICATION:**

A. GOOD INDUSTRIAL HYGIENE PRACTICE DICTATES THAT WHEN ISOCYANATE BASED COATINGS ARE SPRAY APPLIED, SOME FORM OF RESPIRATORY PROTECTION SHOULD BE WORN. DURING THE SPRAY APPLICATION OF ORGANIC SOLVENT CONTAINING COATINGS SYSTEMS, THE USE OF A SUPPLIED-AIR (EITHER POSITIVE PRESSURE OR CONTINUOUS FLOW TYPE) RESPIRATOR IS MANDATORY WHEN ONE OR MORE OF THE FOLLOWING CONDITIONS EXISTS:

- THE AIRBORNE ISOCYANATE CONCENTRATIONS ARE NOT KNOWN; OR
- THE AIRBORNE ISOCYANATE MONOMER CONCENTRATIONS EXCEED 0.05 PPM (10 TIMES THE TLV); OR
- THE AIRBORNE POLYISOCYANATE (POLYMERIC, OLIGOMERIC) CONCENTRATIONS EXCEED 5 MG/M<sup>3</sup> AVERAGED OVER 8 HOURS OR 10 MG/M<sup>3</sup> AVERAGED OVER 15 MINUTES (10 TIMES THE MGL); OR
- NO AIRBORNE SOLVENT CONCENTRATION EXCEEDS ITS ODOR THRESHOLD; OR
- SPRAYING IS PERFORMED IN A CONFINED SPACE (SEE OSHA CONFINED SPACE STANDARD 29 CFR 1910.146).

A PROPERLY FITTED AIR-PURIFYING (COMBINATION ORGANIC VAPOR AND PARTICULATE) RESPIRATOR, PROVEN BY TEST TO BE EFFECTIVE IN ISOCYANATE-CONTAINING SPRAY PAINT ENVIRONMENTS, AND USES IN ACCORDANCE WITH ALL RECOMMENDATIONS MADE BY THE MANUFACTURER, CAN BE USED WHEN ALL OF THE FOLLOWING CONDITIONS ARE MET:

- THE AIRBORNE ISOCYANATE MONOMER CONCENTRATIONS ARE KNOWN TO BE BELOW 0.05 PPM (10 TIMES THE TLV); AND
- THE AIRBORNE POLYISOCYANATE (POLYMERIC, OLIGOMERIC) CONCENTRATIONS ARE KNOWN TO BE BELOW 5 MG/M<sup>3</sup> AVERAGED OVER 8 HOURS OR 10 MG/M<sup>3</sup> AVERAGED OVER 15 MINUTES (10 TIMES THE MGL); AND
- AT LEAST ONE SOLVENT HAS A PUBLISHED ODOR THRESHOLD\*; AND
- AT LEAST ONE AIRBORNE SOLVENT CONCENTRATION EXCEEDS ITS ODOR THRESHOLD AND THAT SOLVENT'S ODOR THRESHOLD IS LOWER THAN ITS TLV.

B. DURING THE SPRAY APPLICATION OF A COATINGS SYSTEM NOT CONTAINING ORGANIC SOLVENTS A SUPPLIED-AIR (EITHER POSITIVE PRESSURE OR CONTINUOUS FLOW TYPE) RESPIRATOR IS MANDATORY WHEN ONE OR MORE OF THE FOLLOWING CONDITIONS EXISTS:

- THE AIRBORNE ISOCYANATE CONCENTRATIONS ARE NOT KNOWN; OR
- THE AIRBORNE ISOCYANATE MONOMER CONCENTRATION EXCEEDS THE TLV OF 0.005 PPM; OR
- THE AIRBORNE POLYISOCYANATE (POLYMERIC, OLIGOMERIC) CONCENTRATION EXCEEDS THE MGL OF 0.5 MG/M<sup>3</sup> AVERAGED OVER 8 HOURS OR 1 MG/M<sup>3</sup> AVERAGED OVER 15 MINUTES; OR
- SPRAYING IS PERFORMED IN A CONFINED SPACE (SEE OSHA CONFINED SPACE STANDARD 29 CFR 1910.146)

UNDER ANY OTHER CIRCUMSTANCES, DURING SPRAY APPLICATION OF A COATINGS SYSTEM NOT CONTAINING SOLVENTS, GOOD INDUSTRIAL HYGIENE PRACTICE AIR-PURIFYING RESPIRATOR SHOULD BE WORN.

**NON-SPRAY OPERATIONS:**

A. DURING NON-SPRAY OPERATIONS SUCH AS MIXING, BATCH MAKING, BRUSH OR ROLLER APPLICATION, ETC., AT ELEVATED TEMPERATURES (FOR EXAMPLE, HEATING OF MATERIAL OR APPLICATION TO A HOT SUBSTRATE), IT IS POSSIBLE TO BE EXPOSED TO AIRBORNE ISOCYANATE VAPORS. THEREFORE,



PRODUCT NAME: **MICRO SEAL CLEAR URETHANE HARDENER, PART B**

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WHEN THE COATINGS SYSTEM HT AIRBORNE ISOCYANATE VAPORS. THEREFORE, WHEN THE CAOTINGS SYSTEM CONTAINS SOLVENTS AND WILL BE APPLIED IN A NON-SPRAY MANNER, A SUPPLIED-AIR (EITHER POSITIVEPRESSURE OR CONTINUOUS FLOW THPE) RESPIRATOR IS MANDATORY WHEN ONE OR MORE OF THE FOLLOWING CONDITIONS EXISTS:

- THE AIRBORNE ISOCYANTE CONCENTRATIONS ARE NOT KNOWN; OR
- THE AIRBORNE ISOCYANATE MONOMER CONCENTRATIONS EXCEED 0.05 PPM (10 TIMES THE TLV); OR
- THE POLYISOCYANATE (POLYMERIC, OLIGOMERIC) CONCENTRATIONS EXCEED 5 MG/M3 AVERAGED OVER 8 HOURS OR 10 MG/M3 AVERAGED OVER 15 MINUTES (10 TIMES THE MGL) ; OR
- NO AIRBORNE SOLVENT CONCENTRATION EXCEEDS ITS ODOR THRESHOLD; OR
- OPERATIONS ARE PERFORMED IN A CONFINED SPACE (SEE OSHA CONFINED SPACE STANDARD 49 CFR 1910.146).

A PROPERLY FITTED AIR PURIFYING (COMBINATION ORGANIC VAPOR AND PARTICULATE) RESPIRATOR, PROVEN BY TEST TO BE EFFECTIVE IN ISOCYANATE-CONTAINING PAINT ENVIROMENTS, AND USED IN ACCORDANCE WITH ALL RECOMMENDATIONS MADE BY THE MANUFACTURER, CAN BE USED WHEN ALL OF THE FOLLOWING CONDITIONS ARE MET:

- THE AIRBORNE CONCENTRATIONS OF THE ISOCYANATE MONOMER ARE BELOW 0.05 PPM (10 TIMES THE TLV) ; AND
- THE AIRBORNE POLYISOCYANATE (POLYMERIC, OLIGOMERIC) CONCENTRATIONS ARE KNOWN TO BE BELOW 5 MG/M3 AVERATED OVER 8 HOURS OR 10 MG/M3 AVERAGED OVER 15 MINUTES (10 TIMES THE MGL); AND
- AT LEAST ONE SOLVENT HAS A PUBLISHED ODOR THRESHOLD\*; AND
- AT LEAST ONE AIRBORNE SOLVENT CONCENTRATION EXCEEDS ITS ODOR THRESHOLD AND THAT SOLVENT'S ODOR THRESHOLD IS LOWER THAN ITS TLV.

B. DURING NON-SPRAY OPERATIONS USING A SOLVENT-FREE COATINGS SYSTEM, A SUPPLIED-AIR (EITHER POSITIVE PRESSURE OR CONTINUOUS FLOW TYPE) RESPIRATOR IS MANADATORY WHEN ONE OR MORE OF THE FOLLOWING CONDITOWNS EXISTS:

- THE AIRBORNE ISOCYANATE CONCENTRATIONS ARE NOT KNOWN; OR
- THE AIRBORNE ISOCYANATE MONOMER CONCENTRATIONS EXCEED THE T. V OF 0.005 PPM; OR
- THE AIRBORNE PLOYIOSCYANTE (POLYMERIC, OLIGOMERIC) CONCENTRATIONS EXCEED THE MGL OF 0.5 MG/M3 AVERAGED OVER 8 HOURS, OR 1.0 MG.M3 AVERAGED OVER 15 MINUTES; OR
- OPERATIONS ARE PERFORMED IN ACONFINED SPACE (SEE OSHA CONFINED SPACE STANDARD 49 CFR 1910.146).

**VENTILATION REQUIRMENTS:** GOOD INDUSTRIAL HYGIENE PRACTICE DICTATES THAT WORKER PROTECTION SHOULD BE ACHIEVED THROUGH ENGINEERING CONTROLS SUCH AS VENTILATION WHENEVER FEASIBLE. WHEN SUCH CONTROLS ARE NOT FEASIBLE TO ACHIEVE FULL PROTETION, THE USE OF RESPIRATORS AND OTHER PERSONAL PROTECTIVE EQUIPMENT IS MANDATED (SEE RESPIRATOR REQUIREMENTS). EXHAUST AIR MAY NEED TO BE CLEANED BY SCRUBBERS OR FILTERS TO REDUCE ENVIROMENTLA CONTAMINATION. CURING OVENS MUST BE VENTILLATED TO PREVENT EMISSIONS INTO THE WORKPLACE. IF OVEN OFF-GASES ARE NOT VENTED PROPERLY (I.E. THEY ARE RELEASED INTO THE WORK AREA), IT IS POSSIBLE TO BE EXPOSED TO AIRBORNE MONOMERIC HDI

**MONITORING:** REFER TO PATTY'S INDUSTRIAL HYGIENE AND TOXICOLOGY-VOLUME 1 (3RD EDITION) CHAPTER 17 AND VOLUME III (1ST EDITION) CHAPTER 3-FOR GUIDANCE CONCERNING APPROPRIATE AIR SAMPLING STRATEGY TO DETERMINE AIRBORNE CONCENTRATIONS OF ISOCYANATES AND SOLVENT.

**MEDICAL SURVEILLANCE:** MEDICAL SUPERVISION OF ALL EMPLOYEES WHO HANDLE OR COME IN CONTACT WITH THIS PRODUCT IS RECOMMENDED. THIS SHOULD INCLUDE PREEMPLOYMENT AND PERIODIC MEDICAL EXAMINATOINS WITH RESPIRATORY FUNCTION TESTS (FEV, FVC AS A MINIMUM). PERSONS WITH ASTHMA-TYPE CONDITIONS, CHRONIC BRONCHITIS, OTHER CHRONIC RESPIRATORY DESEASES OR RECURRENT SKIN ECZEMA OR SENSITIZATION SHOULD BY EXCLUDED FROM WORKING WITH ISOCYANATES.

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ONCE A PERSON IS DIAGNOSED AS SENSITIZED TO AN ISOCYANATE, NO FURTHER EXPOSURE CAN BE PERMITTED.

**ADDITIONAL PROTECTIVE MEASURES:** SAFETY SHOWERS AND EYEWASH STATIONS SHOULD BE AVAILABLE. EDUCATE AND TRAIN EMPLOYEES IN SAFE USE OF PRODUCT. FOLLOW ALL LABEL INSTRUCTIONS. FOR ADDITIONAL INFORMATION, SEE BAYER'S "HEALTH AND SAFETY INFORMATION FOR HEXAMETHYLENE DIISOCYANATE BASED POLYISOCYANATES".

\* WE RECOMMEND USING THE GEOMETRIC MEAN AIR ODOR THRESHOLD FOUND IN TABLE 5.1 OF "ODOR THRESHOLDS FOR CHEMICALS WITH ESTABLISHED OCCUPATIONAL HEALTH STANDARDS," - AIHA

**PROTECTIVE CLOTHING:**

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## **SECTION XI**

## **ENVIRONMENTAL PROTECTION**

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**SPILL OR LEAK PROCEDURES:** EVACUATE NONESSENTIAL PERSONNEL. REMOVE ALL SOURCES OF IGNITION AND VENTILATE THE AREA. DIKE OR IMPOUND SPILLED MATERIAL AND CONTROL FURTHER SPILLAGE IF FEASIBLE. NOTIFY APPROPRIATE AUTHORITIES IF NECESSARY. COVER THE SPILL WITH SAWDUST, VERMICULITE, FULLER'S EARTH OR OTHER ABSORBENT MATERIAL. POUR DECONTAMINATION SOLUTION OVER SPILL AREA AND ALLOW TO REACT FOR AT LEAST 10 MINUTES. COLLECT MATERIAL IN OPEN CONTAINERS AND ADD FURTHER AMOUNTS OF DECONTAMINATION SOLUTION. REMOVE CONTAINERS TO A SAFE PLACE, COVER LOOSELY, AND ALLOW TO STAND FOR 24 TO 48 HOURS. WASH DOWN SPILL AREA WITH DECONTAMINATION SOLUTIONS. DECONTAMINATION SOLUTIONS: NONIONIC SURFACTANT UNION CARBIDE'S TERGITOL TMN-10 (20%) AND WATER (80%); CONCENTRATED AMMONIA (3-8%), DETERGENT (2%) AND WATER (90-95%). RESPIRATORY PROTECTION IS RECOMMENDED DURING SPILL CLEANUP (SEE RESPIRATORY PROTECTION RECOMMENDATIONS).

**WATER DISPOSAL METHOD:** WASTE MUST BE DISPOSED OF IN ACCORDANCE WITH FEDERAL, STATE, AND LOCAL ENVIRONMENTAL CONTROL REGULATIONS. INCINERATION IS THE PREFERRED METHOD. EMPTY CONTAINERS MUST BE HANDLED WITH CARE DUE TO PRODUCT RESIDUE. DECONTAMINATE CONTAINERS PRIOR TO DISPOSAL. DO NOT HEAT OR CUT EMPTY CONTAINER WITH ELECTRIC OR GAS TORCH (SEE FOG AND EXPLOSION DATA AND REACTIVITY DATA SECTIONS)

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## **SECTION XII**

## **SPECIAL PRECAUTIONS**

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GROUND ALL TRANSFER EQUIPMENT. TAKE PRECAUTIONARY MEASURES AGAINST STATIC DISCHARGE. HANDLE AS AN INDUSTRIAL CHEMICAL. KEEP CONTAINER TIGHTLY CLOSED WHEN NOT IN USE. PRACTICE GOOD CAUTION AND PERSONAL CLEANLINESS TO AVOID SKIN AND EYE CONTACT. HOLD BULK STORAGE UNDER NITROGEN BLANKET. STORE IN A COOL, DRY PLACE WITH ADEQUATE VENTILATION. KEEP AWAY FROM OPEN FLAMES AND HIGH TEMPERATURES.

**STORAGE TEMPERATURE (MIN/MAX):** -33° F (-36 C)/122 °F (50 C)

**SHELF LIFE:** 12 MONTHS

**SPECIAL SENSITIVITY:** IF CONTAINER IS EXPOSED TO HIGH HEAT, IT CAN BE PRESSUREIZED AND POSSIBLY RUPTURE EXPLOSIVELY. HDI REACTS SLOWLY WITH WATER TO FORM CO<sub>2</sub> GAS. THIS GAS CAN CAUSE SEALED CONTAINERS TO EXPAND AND POSSIBLY RUPTURE EXPLOSIVELY.

**HANDLING/STORAGE PRECAUTIONS:** KEEP AWAY FROM HEAT, SPARKS AND OPEN FLAME. GROUND CONTAINERS DURING STORAGE AND TRANSFER OPERATIONS. STORE IN TIGHTLY CLOSED CONTAINERS TO PREVENT MOISTURE CONTAMINATION. DO NOT RESEAL IF CONTAMINATION IS SUSPECTED. AT MAXIMUM STORAGE TEMPERATURES NOTED MATERIAL MAY SLOWLY POLYMERIZE WITHOUT HAZARD. IDEAL STORAGE TEMPERATURE RANGE FOR EASE OF HANDLING IS 50-81°F (10-27 C). AVOID CONTACT WITH SKIN AND EYES. EMPLOYEE EDUCATION AND TRAINING IN THE SAFE USE AND HANDLING OF THIS COMPOUND ARE REQUIRED UNDER THE OSHA HAZARD COMMUNICATION STANDARD.

**OTHER NOTES:** WHEN WORKING WITH A TWO-COMPONENT WATERBORNE POLYURETHANE SYSTEM, TAKE PRECAUTIONS TO ASSURE THAT CONTAINERS OF MIXED MATERIAL ARE WELL VENTED. POLYISOCYANATES WILL REACT WITH THE WATER IN THE SYSTEM TO FORM CO<sub>2</sub> GAS WHICH CAN BE RELEASED BY VENTING THE CONTAINER. IT IS RECOMMENDED TO OCCASIONALLY AGITATE THE COATING

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SYSTEM WHEN IN USE TO PREVENT POTENTIAL OVERFLOW. THE FORMATION OF CO<sub>2</sub> WILL GENERATE PRESSURE IN A SEALED CONTAINER CAUSING THE CONTAINER TO EXPAND AND POSSIBLY RUPTURE EXPLOSIVELY. WHEN WORKING WITH A PRESSURE POT, INSURE THAT PRESSURE RELEASE VALVES ARE CLEAN AND PROPER WORKING CONDITION.

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**SECTION XIII** **TRANSPORTATION REQUIREMENTS**

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IMPORTANT NOTE: SHIPPING DESCRIPTIONS MAY VARY BASED ON MODE OF TRANSPORT, QUANTITIES, PACKAGE SIZE, AND/OR ORIGIN AND DESTINATION. CONSULT YOUR COMPANY'S HAZARDOUS MATERIALS/DANGEROUS GOODS EXPERT FOR INFORMATION SPECIFIC TO YOUR SITUATION.

GROUND (DOT): NOT REGULATED, LIMITED QUANTITY

AIR (IATA) : NOT REGULATED, LIMITED QUANTITY

OCEAN (IMDG) : NOT REGULATED, LIMITED QUANTITY

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**SECTION XIV** **OTHER REGULATORY CONTROLS**

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NOT MEANT TO BE ALL-INCLUSIVE. SELECTED REGULATIONS PRESENTED.

- A. SARA TITLE III SECTION 311/312 HAZARDS: IMMEDIATE HEALTH HAZARD; DELAYED HEALTH HAZARD; REACTIVE HAZARD
- B. SARA TITLE III SECTION 313: TOXIC CHEMICALS: NONE  
RCRA STATUS: IF DISCARDED IN ITS PURCHASED FORM, THIS PRODUCT WOULD NOT BE A HAZARDOUS WASTE EITHER BY LISTING OR BY CHARACTERISTIC. HOWEVER, UNDER RCRA, IT IS THE RESPONSIBILITY OF THE PRODUCT USER TO DETERMINE AT THE TIME OF DISPOSAL, WHETHER A MATERIAL CONTAINING THE PRODUCT OR DERIVED FROM THE PRODUCT SHOULD BE CLASSIFIED AS A HAZARDOUS WASTE. (40 CFR 261.20-24)
- C. WHMIS CLASSIFICATION:
- D. TSCA STATUS: ON TSCA INVENTORY
- E. OSHA HAZARD COMM. STD.: THIS PRODUCT IS HAZARDOUS UNDER THE CRITERIA OF THE FEDERAL OSHA HAZARD COMMUNICATION STANDARD 29 CFR 1910.1200.

**OTHER REGULATORY INFORMATION:** THE FOLLOWING CHEMICALS ARE SPECIFICALLY LISTED BY INDIVIDUAL STATES; OTHER PRODUCT SPECIFIC HEALTH AND SAFETY DATA IN OTHER SECTIONS OF THE MSDS MAY ALSO BE APPLICABLE FOR STATE REQUIREMENTS. FOR DETAILS ON YOUR REGULATORY REQUIREMENTS YOU SHOULD CONTACT THE APPROPRIATE AGENCY IN YOUR STATE.

COMPONENT NAME /CAS NUMBER	CONCENTRATION	STATE CODE
ALIPHATIC POLYISOCYANATES NJTSRN (31765300002)-7684P	15-25%	PA3, NJ4
HEXAMETHYLENE DIISOCYANATE (HDI) 28182-81-2	75-85%	PA1, MA, NJ1

MA = MASSACHUSETTS HAZARDOUS SUBSTANCE LIST

NJ1 = NEW JERSEY HAZARDOUS SUBSTANCE LIST

NJ4 = NEW JERSEY OTHER - INCLUDED IN 5 PREDOMINANT INGREDIENTS > 1%

PRODUCT NAME: **MICRO SEAL CLEAR URETHANE HARDENER, PART B**

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NJTSRN = NEW JERSEY TRADE SECRET REGISTRY NUMBER

PA1 = PENNSYLVANIA HAZARDOUS SUBSTANCE LIST

PA3 = PENNSYLVANIA NON-HAZARDOUS PRESENT AT 3% OR GREATER.

\*LESS THAN 0.05% BASED ON RESIN SOLIDS AT THE TIME OF MANUFACTURE.

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**SECTION XV****STATE REGULATORY INFORMATION**

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NONE KNOWN

CA = CALIFORNIA HAZ. SUBST. LIST; CA65 = CALIFORNIA SAFE DRINKING WATER AND TOXICS ENFORCEMENT ACT LIST; CT = CONNECTICUT TOX. SUBST. LIST; FL = FLORIDA SUBST. LIST; IL = ILLINOIS TOX. SUBST. LIST; LA = LOUISIANA HAZ. SUBST. LIST; MA = MASSACHUSETTS SUBST. LIST; ME = MAINE HAZ. SUBST. LIST; MN = MINNESOTA HAZ. SUBST. LIST; NJ = NEW JERSEY HAZ. SUBST. LIST; PA = PENNSYLVANIA HAZ. SUBST. LIST; RI = RHODE ISLAND HAZ. SUBST. LIST.

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**SECTION XVI****SPECIAL NOTES**

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NEW MSDS.

THE INFORMATION CONTAINED HEREIN IS BASED ON THE DATA AVAILABLE TO US AND IS BELIEVED TO BE CORRECT. HOWEVER, MULTICOAT PRODUCTS, INC. MAKES NO WARRANTY, EXPRESSED OR IMPLIED REGARDING THE ACCURACY OF THESE DATA OR THE RESULTS TO BE OBTAINED FROM THE USE THEREOF. MULTICOAT PRODUCTS, INC. ASSUMES NO RESPONSIBILITY FOR INJURY FROM THE USE OF THE PRODUCT DESCRIBED HEREIN.

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DATE PREPARED:           SEPTEMBER 13, 2011  
MANUFACTURED FOR:    MULTICOAT PRODUCTS, INC.  
                                  2922 WINFIELD ROAD  
                                  WINFIELD, WV 25213

## **MATERIAL SAFETY DATA SHEET**

### **24 HOUR EMERGENCY ASSISTANCE**

1-800-660-6729

<b>HEALTH:</b>	<b>2</b>		<u>HAZARD RATING</u>
<b>FIRE:</b>	<b>1</b>	LEAST = 0	SLIGHT = 1    MODERATE = 2
<b>REACTIVITY:</b>	<b>0</b>	HIGH = 3	EXTREME = 4

### **SECTION I**

<b>PRODUCT:</b>	<b>MICRO SEAL EPOXY BASE COAT, PART A</b>
<b>CHEMICAL NAME:</b>	MIXTURE
<b>CHEMICAL FAMILY:</b>	EPOXY
<b>PRODUCT DESCRIPTION:</b>	EPOXY RESIN

### **SECTION II-A** **PRODUCT / INGREDIENT**

<u>No.</u>	<u>COMPOSITION</u>	<u>CAS NUMBER</u>	<u>PERCENT</u>
1	REACTION PRODUCTS OF EPICHLOROHYDRIN AND BISPHENOL A	25085-99-8	60-70%
2	ISOPROPANOL	67-63-0	1-10%
3	GLYCIDYL NEODECONATE	26761-45-5	20-30%

### **SECTION II-B** **ACUTE TOXICITY DATA**

<u>No.</u>	<u>ACUTE ORAL LD50</u>	<u>ACUTE DERMAL LD50</u>	<u>ACUTE INHALATION LC50</u>
1	>5.0 G/KG	20.0 G/KG (RABBIT)	NO DEATHS IN SAT'D AIR, 8 HR
2	4.7 G/KG (RAT)	12.7 G/KG (RABBIT)	19.0 G/KG (RAT)
3	9.6 G/KG (RAT)	38.0 G/KG (RAT)	NOT AVAILABLE

### **SECTION III** **HEALTH INFORMATION**

THE HEATH EFFECTS NOTED BELOW ARE CONSISTENT WITH REQUIREMENTS UNDER THE OSHA HAZARD COMMUNICATION STANDARD (29 CFR 1910-1200).

**EYE CONTACT:** IRRITATING AND WILL INJURE EYE TISSUE IF NOT REMOVED PROMPTLY.

**SKIN CONTACT:** MAY CAUSE SEVERE IRRITATION. HAS BEEN KNOWN TO CAUSE ALLERGIC SKIN REACTION IN HUMANS. PROLONGED CONTACT MAY CAUSE BLISTERS.

**INHALATION:** HIGH VAPOR CONCENTRATIONS ARE IRRITATING TO THE EYES AND RESPIRATORY TRACT, MAY CAUSE HEADACHES AND DIZZINESS, ARE ANESTHETIC, AND MAY HAVE OTHER CENTRAL NERVOUS SYSTEM EFFECTS, INCLUDING DEATH.

**INGESTION:** MAY BE MODERATELY TOXIC IF SWALLOWED.

**SIGNS AND SYMPTOMS:** IRRITATION AS NOTED ABOVE. SKIN SENSITIZATION (ALLERGY) MAY BE EVIDENCED BY RASHES, ESPECIALLY HIVES.

**AGGRAVATED MEDICAL CONDITIONS:** PRE-EXISTING SKIN AND EYE DISORDER MAY BE AGGRAVATED BY EXPOSURE TO THIS PRODUCT. PRE-EXISTING SKIN AND LUNG ALLERGIES MAY INCREASE THE CHANCE OF DEVELOPING INCREASED ALLERGY SYMPTOMS FROM EXPOSURE TO THIS PRODUCT.

**OTHER HEALTH EFFECTS:** BASED ON ANIMAL STUDIES, REPEATED EXPOSURE TO COMPONENTS OF THIS PRODUCT MAY CAUSE DAMAGE TO LIVER, KIDNEY, AND RESPIRATORY SYSTEMS. REPORTS HAVE ASSOCIATED REPEATED AND PROLONGED OCCUPATIONAL EXPOSURE TO SOLVENTS WITH PERMANENT BRAIN AND NERVOUS SYSTEM DAMAGE. INTENTIONAL MISUSE BY DELIBERATELY CONCENTRATING AND INHALING VAPORS MAY BE HARMFUL OR FATAL.

SECTION IV		OCCUPATIONAL EXPOSURE LIMITS			
No.	OSHA		ACGIH		OTHER
	PEL/TWA	PEL/CEILING	TLV/TWA	TLV/STEL	
1	NONE ESTABLISHED				
2	400 PPM		400 PPM	500 PPM	
3	NONE ESTABLISHED				

**SECTION V EMERGENCY AND FIRST AID PROCEDURES**

**EYE CONTACT:** REMOVE CONTACT LENSES AT ONCE. IMMEDIATELY FLUSH EYES WITH LARGE AMOUNTS OF WATER OR NORMAL SALINE FOR AT LEAST 30 MINUTES. HOLD EYELIDS APART WHILE FLUSHING TO RINSE ENTIRE SURFACE OF EYE AND LIDS WITH WATER. **PROMPT MEDICAL ATTENTION IS ESSENTIAL.**

**SKIN CONTACT:** IMMEDIATELY FLUSH SKIN WITH PLENTY OF WATER FOR AT LEAST 15 MINUTES WHILE REMOVING CONTAMINATED CLOTHING AND SHOES. CALL A HYSICIAN IF IRRITATION PRESISTS. WASH CLOTHING BEFORE REUSE. ONTAMINATED LEATHER ARTICLES, INCLUDING SHOES, CANNOT BE ECONTAMINATED AND SHOULD BE DESTROYED TO PREVENT REUSE.

**INHALATION:** REMOVE VICTIM TO FRESH AIR IF EFFECTS OCCUR. IF NOT BREATHING, GIVE ARTIFICAL RESPIRATION. **GET IMMEDIATE MEDICAL ATTENTION.**

**INGESTION:** **DO NOT INDUCE VOMITING.** IF PATIENT IS CONSCIOUS AND CAN SWALLOW, GIVE TWO GLASSES OF WATER (16OZ.) . **GET IMMEDIATE MEDICAL ATTENTION.** NEVER GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS OR CONVLUSING PERSON.

**SECTION VI SUPPLEMENTAL HEALTH INFORMATION**

**CONTACT A POISON CONTROL CENTER FOR ADDITIONAL TREATMENT INFORMATION.** HEALTH STUDIES HAVE SHOWN THAT MANY PETROLIUM HYDROCARBONS POSE POTENTIAL HUMAN HEALTH RISKS WHICH VARY FROM PERSON TO PERSON. AS A PRECAUTION, EXPOSRE TO LIQUIDS, VAPORS, MISTS, OR FUMES SHOULD BE MINIMIZED. INGESTION OF LARGE QUANTITIES (1% OF DIET) OF COMPONENT 8 PRODUCED BODY WEIGHT CHANGES IN EXPERIMENTAL ANIMALS AND IN THE LIVER AND KIDNEY. LEVELS OF 0.5% AND 1.0% WT IN THE DIET ALSO CAUSED BLOOD CHANGES AND REDUCED ERYTHROCYTE COUNT AND HEMATOCRIT.

**SECTION VII PHYSICAL DATA**

PRODUCT NAME: **MICRO SEAL EPOXY BASE COAT, PART A**

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BOILING POINT (°F):	(ALCOHOL) 180	SPECIFIC GRAVITY (H <sub>2</sub> O = 1):	1.07
VAPOR PRESSURE (mm Hg @ 20°C):		NOT ESTABLISHED	
SOLUBILITY (IN WATER):		PARTIALLY SOLUBLE	
VAPOR DENSITY (AIR = 1):		>1	
EVAPORATION RATE (N-BUTYL ACETATE = 1):		(ALCOHOL) 2.3	
APPEARANCE AND ODOR:		PIGMENTED, OPAQUE, VISCOUS LIQUID WITH MILD ODOR.	

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**SECTION VIII** **FIRE AND EXPLOSION HAZARDS**

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FLASH POINT AND METHOD: 201° F TCC

FLAMMABLE LIMITS /% VOLUME IN AIR: LEL = 2.0 UEL = 12.7 @ 77 DEGREE'S F

EXTINGUISHING MEDIA: USE ALCOHOL THPE FOAM, DRY CHEMICAL, OR CO<sub>2</sub>.

SPECIAL FIRE FIGHTING PROCEDURES AND PRECAUTIONS: USE WATER SPRAY TO COOL FIRE EXPOSED SURFACES AND TO PROTECT PERSONNEL. IF A LEAK OR SPILL HAS NOT IGNITED, USE WATER SPRAY TO DISPERSE THE VAPORS. CONTAIN THE RUNOFF STREAM. TRY TO COVER LIQUID SPILLS WITH FOAM. DO NOT ENTER CONFINED FIRE SPACE WITHOUT FULL BUNKER GEAR (HELMENT WITH FACE SHIELD, BUNKER COATS , GLOVES, AD RUBBER BOOTS), INCLUDING A POSITIVE PRESSURE OSHA APPROVED SELF CONTAINED BREATHING APPARATUS.

UNUSUAL FIRE AND EXPLOSION HAZARDS: NONE KNOWN.

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**SECTION IX** **REACTIVITY**

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STABILITY: EXCESS HEATING OVER LONG PERIODS OF TIME DEGRADES THE RESIN.

HAZARDOUS POLYMERIZATION: WILL NOT OCCUR BY ITSELF, BUT MASSES OF MORE THAN 1 POUND OF PRODUCT PLUS AN ALIPHATIC AMINE WILL CAUSE IRREVERSIBLE POLYMERIZATION WITH CONSIDERABLE HEAT BUILDUP.

CONDITIONS AND MATERIALS TO AVOID: AVOID EXPOSURE TO HEAT, LIGHT, FLAME, OR OTHER SOURCES OF IGNITION. CAN REACT VIGOROUSLY WITH STRONG OXIDIZING AGENTS, STRONG LEWIS OR MINERAL ACIDS, AND STRONG MINERAL AND ORGANIC BASE/ESPECIALLY PRIMARY AND SECONDARY AMINES. REACTION WITH SOME CURING AGENT MAY PRODUCE CONSIDERABLE HEAT.

HAZARDOUS DECOMPOSITION PRODUCTS: HAZARDOUS COMBUSTION PRODUCTS MAY INCLUDE INTENSE HEAT, DENSE BLACK SMOKE, CARBON MONOXIDE, CARBON DIOXIDE, ALDEHYDES, ACIDS, PHENOLICS, WATER, AND HYDROCARBON FRAGMENTS.

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**SECTION X** **EMPLOYEE PROTECTION**

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RESPIRATORY PROTECTION: PROVIDE ADEQUATE VENTILATION. AVOID BREATHING OF VAPORS OR MISTS. AIRBORNE CONCENTRATIONS SHOULD BE KEPT TO LOWEST LEVELS POSSIBLE. WHEN EXPOSURES ARE NOT ADEQUATELY CONTROLLED, USE AN APPROVED RESPIRATOR. SELECTION OF AIR-PURIFYING OR POSITIVE-PRESSURE SUPPLIED AIR WILL DEPEND ON THE SPECIFIC OPERATION AND THE POTENTIAL AIRBORNE CONCENTRATION OF MATERIAL. FOR EMERGENCY CONDITIONS, USE AN APPROVED POSITIVE-PRESSURE SELF-CONTAINED BREATHING APPARATUS.

PRODUCT NAME: **MICRO SEAL EPOXY BASE COAT, PART A**

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PROTECTIVE CLOTHING: PROTECTIVE CLOTHING SUCH AS UNIFORMS, COVERALLS, OR LAB COATS MUST BE WORN. LAUNDRY OR DRY-CLEAN WHEN SOILED. GLOVES AND GOGGLES RESISTANT TO CHEMICALS AND PETROLEUM DISTILLATES REQUIRED. WHEN HANDLING LARGE QUANTITIES, IMPERVIOUS SUITS, GLOVES, AND RUBBER BOOTS MUST BE WORN.

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**SECTION XI ENVIRONMENTAL PROTECTION**

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SPILL OR LEAK PROCEDURES: VENTILATE THE AREA. AVOID BREATHING VAPOR. USE SELF-CONTAINED BREATHING APPARATUS OR SUPPLIED AIR FOR LARGE SPILLS OR CONFINED AREAS. CONTAIN SPILL IF POSSIBLE. WIPE UP OR ABSORB ON SUITABLE MATERIAL AND PICK UP WITH SHOVELS. DO NOT USE SAWDUST, WOOD CHIPS, OR OTHER CELLULOSIC MATERIALS TO ASORB THE SPILL. PREVENT ENTRY INTO SEWERS AND WATERWAYS. DISPOSE OF IN ACCORDANCE WITH FEDERAL, STATE, AND LOCAL REGULATIONS.

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**SECTION XII SPECIAL PRECAUTIONS**

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GROUND ALL TRANSFER EQUIPMENT. TAKE PRECAUTIONARY MEASURES AGAINST STATIC DISCHARGE. HANDLE AS AN INDUSTRIAL CHEMICAL. KEEP CONTAINER TIGHTLY CLOSED WHEN NOT IN USE. PRACTICE GOOD CAUTION AND PERSONAL CLEANLINESS TO AVOID SKIN AND EYE CONTACT. HOLD BULK STORAGE UNDER NITROGEN BLANKET. STORE IN A COOL, DRY PLACE WITH ADEQUATE VENTILATION. KEEP AWAY FROM OPEN FLAMES AND HIGH TEMPERATURES.

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**SECTION XIII TRANSPORTATION REQUIREMENTS**

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DEPARTMENT OF TRANSPORTATION CLASSIFICATION:

HAZARD CLASS:	3 -- COMBUSTIBLE LIQUID
PACKING GROUP:	III
IDENTIFICATION NUMBER:	NA 1993
LABEL REQUIRED:	NONE
D.O.T. PROPER SHIPPING NAME:	COMBUSTIBLE LIQUID, N.O.S., (ISOPROPNOL), 3, PG III, NA 1993

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**SECTION XIV OTHER REGULATORY CONTROLS**

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NOT MEANT TO BE ALL-INCLUSIVE. SELECTED REGULATIONS PRESENTED.

A.	SARA TITLE III SECTION 311/312 HAZARDS:	IMMEDIATE HEALTH, DELAYED HEALTH, FIRE
B.	SARA TITLE III SECTION 313:	
C.	WHMIS CLASSIFICATION:	CLASSES D2, D2B
D.	TSCA STATUS:	LISTED ON TSCA INVENTORY
E.	OSHA HAZARD COMM. STD.:	HAZARDOUS CHEMICAL

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**SECTION XV STATE REGULATORY INFORMATION**

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NONE KNOWN.

CA = CALIFORNIA HAZ. SUBST. LIST; CA65 = CALIFORNIA SAFE DRINKING WATER AND TOXICS ENFORCEMENT ACT LIST; CT = CONNECTICUT TOX. SUBST. LIST; FL = FLORIDA SUBST. LIST; IL = ILLINOIS TOX. SUBST. LIST; LA = LOUISIANA HAZ. SUBST. LIST; MA = MASSACHUSETTS SUBST. LIST; ME = MAINE HAZ. SUBST. LIST; MN = MINNESOTA HAZ. SUBST. LIST; NJ = NEW JERSEY HAZ. SUBST. LIST; PA = PENNSYLVANIA HAZ. SUBST. LIST; RI = RHODE ISLAND HAZ. SUBST. LIST.



PRODUCT NAME: **MICRO SEAL EPOXY BASE COAT, PART A**

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**SECTION XVI****SPECIAL NOTES**

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NEW MSDS.

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DATE PREPARED: OCTOBER 5, 2011

MANUFACTURED FOR: MULTICOAT PRODUCTS, INC.  
2922 WINFIELD ROAD  
WINFIELD, WV 25213

## **MATERIAL SAFETY DATA SHEET**

### **24 HOUR EMERGENCY ASSISTANCE**

1-800-660-6729

<b>HEALTH:</b>	<b>2</b>	<u>HAZARD RATING</u>		
<b>FIRE:</b>	<b>0</b>	LEAST = 0	SLIGHT = 1	MODERATE = 2
<b>REACTIVITY:</b>	<b>0</b>	HIGH = 3	EXTREME = 4	

### **SECTION I**

**PRODUCT:** MICRO SEAL EPOXY BASE COAT, PART B HARDENER  
**CHEMICAL NAME:** MIXTURE  
**CHEMICAL FAMILY:** MODIFIED ALIPHATIC AMINE AQUEOUS SOLUTION  
**PRODUCT DESCRIPTION:** EPOXY CURING AGENT

### **SECTION II-A**

### **PRODUCT / INGREDIENT**

<u>No.</u>	<u>COMPOSITION</u>	<u>CAS NUMBER</u>	<u>PERCENT</u>
1	POLYETHYLENE POLYAMINE ADDUCT	*	40-50%
2	2-PROPOXYETHANOL	2807-30-9	1-10%
3	ACETIC ACID	64-19-7	<5%
4	WATER	7732-18-5	50-60%

### **SECTION II-B**

### **ACUTE TOXICITY DATA**

<u>No.</u>	<u>ACUTE ORAL LD50</u>	<u>ACUTE DERMAL LD50</u>	<u>ACUTE INHALATION LC50</u>
1	NO DATA AVAILABLE		
2	301 G/KG (RAT)	870 MG/KG (RABBIT)	>2000 PPM/6H (RAT)
3	3.31 G/KG (RAT)	1.06 G/KG (RABBIT)	5620/1H (RAT)

### **SECTION III**

### **HEALTH INFORMATION**

THE HEATH EFFECTS NOTED BELOW ARE CONSISTENT WITH REQUIREMENTS UNDER THE OSHA HAZARD COMMUNICATION STANDARD (29 CFR 1910-1200).

**EYE CONTACT:** PRODUCT MAY BE SEVERLY IRRITATING TO THE EYES. MAY CAUSE CORNEAL DAMAGE.

**SKIN CONTACT:** PRODUCT MAY BE MODERATELY IRRITATING TO THE SKIN. PRODUCT MAY BE TOXIC AND MAY BE HARMFUL IF ABSORBED THROUGH THE SKIN. MAY PRODUCE DAMAGE TO RED BLOOD CELLS. MAY CAUSE SKIN SENSITIZATION.

**INHALATION:** PRODUCT MAY CAUSE IRRITATION TO THE NOSE, THROAT AND RESPIRATORY TRACT. PRODUCT MAY BE TOXIC IF INHALED; MAY PRODUCE DAMAGE TO RED BLOOD CELLS. MAY CAUSE RESPIRATORY TRACT SENSITIZATION.

**INGESTION:** PRODUCT MAY BE MODERATELY TOXIC AND MAY BE HARMFUL IF SWALLOWED; MAY PRODUCE DAMAGE TO RED BLOOD CELLS.

**SIGNS AND SYMPTOMS:** IRRITATION AS NOTED ABOVE. SKIN SENSITIZATION (ALLERGY) MAY BE EVIDENCED BY RASHES, ESPICALLY HIVES. RESPIRATORY TRACT SENSITIZATION (E.G., ALLERGY, ASTHMA) MAY BE EVIDENCED BY WHEEZING WITH SHORTNESS OF BREATH AND COUGH. DAMAGE TO BLOOD FORMING ORGANS MAY BY EVIDENCED BY EASY FATIGABILITY AND PALLOR (RBC EFFECT). DAMAGE TO BLOOD FORMING ORGANS MAY BE EVIDENCED BY

DECREASED RESISTANCE TO INFECTION (WBC EFFECT). DAMAGE TO BLOOD FORMING ORGANS MAY BE EVIDENCED BY EXCESSIVE BRUISING AND BLEEDING (PLATELET EFFECT).

**AGGRAVATED MEDICAL CONDITIONS:** PREEXISTING EYE, SKIN AND RESPIRATORY DISORDERS MAY BE AGGRAVATED BY EXPOSURE TO THIS PRODUCT. PREEXISTING SKIN AND RESPIRATORY TRACT ALLERGIES MAY INCREASE THE CHANCE OF DEVELOPING INCREASED ALLERGY SYMPTOMS FROM EXPOSURE TO THIS PRODUCT.

**OTHER HEALTH EFFECTS:** SEE SECTION VI FOR SUPPLEMENTAL HEALTH INFORMATION.

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**SECTION IV OCCUPATIONAL EXPOSURE LIMITS**

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No.	OSHA		ACGIH		OTHER
	PEL/TWA	PEL/CEILING	TLV/TWA	TLV/STEL	
1	NONE ESTABLISHED				
2					25 PPM
3	10 PPM		10 PPM	15 PPM	

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**SECTION V EMERGENCY AND FIRST AID PROCEDURES**

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**EYE CONTACT:** IMMEDIATELY FLUSH EYES WITH PLENTY OF WATER FOR AT LEAST 15 MINUTES WHILE HOLDING EYELIDS OPEN. GET MEDICAL ATTENTION.

**SKIN CONTACT:** IMMEDIATELY REMOVE CONTAMINATED CLOTHING OR SHOES, WIPE EXCESS FROM SKIN AND FLUSH WITH PLENTY OF WATER FOR AT LEAST 15 MINUTES. USE SOAP IF AVAILABLE OR FOLLOW BY WASHING WITH SOAP AND WATER. DO NOT REUSE CLOTHING UNTIL THOROUGHLY CLEANED. GET MEDICAL ATTENTION. CONTAMINATED LEATHER ARTICLES, INCLUDING SHOES, CANNOT BE DECONTAMINATED AND SHOULD BE DESTROYED TO PREVENT REUSE.

**INHALATION:** REMOVE VICTIM TO FRESH AIR AND PROVIDE OXYGEN IF BREATHING IS DIFFICULT. GIVE ARTIFICIAL RESPIRATION IF NOT BREATHING. GET MEDICAL ATTENTION.

**INGESTION:** DO NOT INDUCE VOMITING. IF VOMITING OCCURS SPONTANEOUSLY, KEEP HEAD BELOW HIPS TO PREVENT ASPIRATION OF LIQUID INTO THE LUNGS. GET MEDICAL ATTENTION.\*

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**SECTION VI SUPPLEMENTAL HEALTH INFORMATION**

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**CONTACT A POISON CONTROL CENTER FOR ADDITIONAL TREATMENT INFORMATION.**

**COMPONENT 1:** IT HAS GENERALLY BEEN OBSERVED THAT ALIPHATIC AMINES CAN CAUSE CHANGES IN THE LUNGS, LIVER, KIDNEYS, AND HEART.

**COMPONENT 2:** IN MALE AND FEMALE RATS EXPOSED TO GREATER OR EQUAL TO 400 PPM VAPOR CONCENTRATION OF 2-PROPOXYETHANOL (2PE), TOXIC EFFECTS ON THE RED BLOOD CELLS (BBCS) WITH SECONDARY EFFECTS ON THE SPLEEN AND TRANSIENT HEMOGLOBINURIA WERE OBSERVED. THE NOEL IN THIS STUDY WAS 200 PPM.

IN PREGNANT RATS EXPOSED TO 100 PPM TO 400 PPM VAPOR CONCENTRATION OF 2-PE, NO TERATOGENIC OR SIGNIFICANT

EMBRYO/FETOTOXICITY WAS OBSERVED AT ALL DOSE LEVELS DUE TO TOXIC EFFECTS ON THE RBCS.

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**SECTION VII****PHYSICAL DATA**

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BOILING POINT (°F): 212-301 SPECIFIC GRAVITY (H<sub>2</sub>O = 1): 1.08  
VAPOR PRESSURE (mm Hg @ 20°C): <20  
SOLUBILITY (IN WATER): MISCIBLE  
VAPOR DENSITY (AIR = 1): >1  
EVAPORATION RATE (N-BUTYL ACETATE = 1): <1  
APPEARANCE AND ODOR: OPAQUE COLORED VISCOUS LIQUID WITH AMMONIA AND SOLVENT ODOR.

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**SECTION VIII****FIRE AND EXPLOSION HAZARDS**

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FLASH POINT AND METHOD: 200 DEG F. (SETAFLASH)  
FLAMMABLE LIMITS % VOLUME IN AIR: LOWER <4 UPPER: NA  
EXTINGUISHING MEDIA: USE WATER FOG, "ALCOHOL" FOAM, DRY CHEMICAL OR CO<sub>2</sub>

SPECIAL FIRE FIGHTING PROCEDURES AND PRECAUTIONS: MATERIAL WILL NOT BURN UNLESS PREHEATED. DO NOT ENTER CONFINED FIRE SPACE WITHOUT FULL UNCKER GEAR (HELMET WITH FACE SHIELD, BUNKER COATS, GLOVES AND UBBER BOOTS), INCLUDING A POSITIVE PRESSURE NIOSH APPROVED SELF-ONTAINED BREATHING APPARATUS. COOL FIRE EXPOSED CONATIONERS WITH WATER.

UNUSUAL FIRE AND EXPLOSION HAZARDS: CONTAINERS EXPOSED TO HEAT FROM FIRES SHOULD BE COOLED WITH WATER TO PREVENT VAPOR PRESSURE WHICH COULD RESULT IN CONTAINER RUPTURE. CONTAINER AREAS EXPOSED TO DIRECT FLAME CONTACT SHOULD BE COOLED WITH LARGE QUANTITIES OF WATER AS NEEDED TO PREVENT WEAKENING OF CONTAINER STRUCTRE.

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**SECTION IX****REACTIVITY**

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STABILITY: STABLE  
HAZARDOUS POLYMERIZATION: WILL NOT OCCUR  
CONDITIONS AND MATERIALS TO AVOID: AVOID HEAT AND FLAMES. CAN REACT VIGOROUSLY WITH STRONG OXIDIZING AGENTS, STRONG LEWIS OR MINERAL ACIDS, AND STRONG MINERAL AND ORGANIC BASES/ESPECIALLY PRIMARY AND SECONDARY ALIPHATIC AMINES. REACTION WITH SOME CURING AGENTS MAY PRODUCE CONSIDERABLE HEAT.  
HAZARDOUS DECOMPOSITION PRODUCTS: CARBON MONOXIDE, ALDEHYDES, ACIDS AND OTHER ORGANIC COMPOUNDS MAY BE FORMED DURING COMBUSTION.

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**SECTION X****EMPLOYEE PROTECTION**

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RESPIRATORY PROTECTION: AVOID PROLONGED OR REPEATED BREATHING OF VAPORS OR MISTS. IF EXPOSURE MAY OR DOES EXCEED OCCUPATIONAL EXPOSURE LIMITS (SEC. IV) USE A NIOSH-APPROVED RESPIRATOR TO PREVENT OVEREXPOSURE. IN ACCORD WITH 29 CFR 1910.134 USE EITHER AN ATMOSPHERE-SUPLYING RESPIRATOR OR AN AIR-PURRIFYING RESPIRATOR FOR ORGANIC VAPORS.

PRODUCT NAME: **MICRO SEAL EPOXY BASE COAT, PART B HARDENER**

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PROTECTIVE CLOTHING: AVOID CONTACT WITH EYES. WEAR CHEMICAL GOGGLES IF THERE IS LIKELIHOOD OF CONTACT WITH EYES. AVOID PROLONGED OR REPEATED CONTACT WITH SKIN. WEAR CHEMICAL RESISTANT GLOVES AND OTHER CLOTHING AS REQUIRED TO MINIMIZE CONTACT.

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**SECTION XI ENVIRONMENTAL PROTECTION**

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SPILL OR LEAK PROCEDURES: MAY BURN ALTHOUGH NOT READILY IGNITABLE. USE CAUTIOUS JUDGEMENT WHEN CLEANING UP LARGE SPILLS. \*\*\*LARGE SPILLS \*\*\* WEAR RESPIRATOR AND PROTECTIVE CLOTHING AS APPROPRIATE. SHUT OFF SOURCE OF LEAK IF SAFE TO DO SO. DIKE AND CONTAIN. REMOVE WITH VACUM TRUCKS OR PUMP TO STORAGE/SALVAGE VESSELS. SOAK UP RESIDUE WITH AN ABSORBENT SUCH AS CLAY, SAND OR OTHER SUITABLE MATERIAL; DISPOSE OF PROPERLY. FLUSH AREA WITH WATER TO REMOVE TRACE RESIDUE. \*\*\*SMALL SPILLS\*\*\* TAKE UP WITH AN ABSORBENT MATERIAL AND DISPOSE OF PROPERLY.

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**SECTION XII SPECIAL PRECAUTIONS**

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GROUND ALL TRANSFER EQUIPMENT. TAKE PRECAUTIONARY MEASURES AGAINST STATIC DISCHARGE. HANDLE AS AN INDUSTRIAL CHEMICAL. KEEP CONTAINER TIGHTLY CLOSED WHEN NOT IN USE. PRACTICE GOOD CAUTION AND PERSONAL CLEANLINESS TO AVOID SKIN AND EYE CONTACT. HOLD BULK STORAGE UNDER NITROGEN BLANKET. STORE IN A COOL, DRY PLACE WITH ADEQUATE VENTILATION. KEEP AWAY FROM OPEN FLAMES AND HIGH TEMPERATURES.

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**SECTION XIII TRANSPORTATION REQUIREMENTS**

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DEPARTMENT OF TRANSPORTATION CLASSIFICATION: NOT REGULATED

THE DOT INFORMATION IN THIS SECTION IS BASED UPON AN EVALUATION OF THE PRODUCT AGAINST THE REQUIREMENTS OF 49 CFR 172 & 173 AS REVISED BY HM-181.

HAZARD CLASS:  
PACKING GROUP:  
IDENTIFICATION NUMBER:  
LABEL REQUIRED:

D.O.T. PROPER SHIPPING NAME:

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**SECTION XIV OTHER REGULATORY CONTROLS**

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NOT MEANT TO BE ALL-INCLUSIVE. SELECTED REGULATIONS PRESENTED.

THE COMPONENTS OF THIS PRODUCT ARE LISTED ON THE EPA/TSCA INVENTORY OF CHEMICAL SUBSTANCES.

PROTECTION OF STRATOSPHERIC OZONE (PURSUANT TO SECTION 611 OF THE CLEAN AIR ACT AMENDMENTS OF 1990): PER 40 CFR PART 82, THIS PRODUCT DOES NOT CONTAIN NOR WAS IT DIRECTLY MANUFACTURED WITH ANY CLASS I OR CLASS II OZONE DEPLETING SUBSTANCES.

PRODUCT NAME: **MICRO SEAL EPOXY BASE COAT, PART B HARDENER**

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IN ACCORDANCE WITH SARA TITLE III, SECTION 313, THE ATTACHED ENVIRONMENTAL DATA SHEET (EDS) SHOULD ALWAYS BE COPIED AND SENT WITH THE MSDS.

- A. SARA TITLE III SECTION 311/312 HAZARDS:
- B. SARA TITLE III SECTION 313:
- C. WHMIS CLASSIFICATION:
- D. TSCA STATUS:
- E. OSHA HAZARD COMM. STD.:

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## SECTION XV STATE REGULATORY INFORMATION

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THE FOLLOWING CHEMICALS ARE SPECIFICALLY LISTED BY INDIVIDUAL STATES; OTHER PRODUCT SPECIFIC HEALTH AND SAFETY DATA IN OTHER SECTIONS OF THE MSDS MAY ALSO BE APPLICABLE FOR STATE REQUIREMENTS. FOR DETAILS ON YOUR REGULATORY REQUIREMENTS YOU SHOULD CONTACT THE APPROPRIATE AGENCY IN YOUR STATE.

<u>STATE LISTED COMPONENT</u>	<u>PERCENT</u>	<u>STATE CODE</u>
ACETIC ACID (CAS NO: 64-19-7)	<5%	CA, CT, FL, IL, MA, ME, MN, NJ, PA, RI

CA = CALIFORNIA HAZ. SUBST. LIST; CA65 = CALIFORNIA SAFE DRINKING WATER AND TOXICS ENFORCEMENT ACT LIST; CT = CONNECTICUT TOX. SUBST. LIST; FL = FLORIDA SUBST. LIST; IL = ILLINOIS TOX. SUBST. LIST; LA = LOUISIANA HAZ. SUBST. LIST; MA = MASSACHUSETTS SUBST. LIST; ME = MAINE HAZ. SUBST. LIST; MN = MINNESOTA HAZ. SUBST. LIST; NJ = NEW JERSEY HAZ. SUBST. LIST; PA = PENNSYLVANIA HAZ. SUBST. LIST; RI = RHODE ISLAND HAZ. SUBST. LIST.

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## SECTION XVI SPECIAL NOTES

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NEW MSDS.

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DATE PREPARED: OCTOBER 5, 2011

PREPARED BY: MULTICOAT PRODUCTS, INC.  
2922 WINFIELD ROAD  
WINFIELD, WV 25213