

# ECO CorFlex

## Molecular Industrial Polymers

### MATERIAL SAFETY DATA SHEET

**PRODUCT NAME: ZYCRETE PMC (PART B)**

**HMIS RATINGS: H F R**

**PRODUCT DESCRIPTION: POLYMER CONCRETE CURING AGENT**

**2 1 1**

#### SECTION I: COMPANY IDENTIFICATION

<b>DISTRIBUTOR'S NAME:</b>	ECO-CORFLEX INDUSTRIAL POLYMERS		
<b>ADDRESS:</b>	3801 E. ROESER ROAD, SUITE #1, PHOENIX, AZ 85040		
<b>EMERGENCY PHONE #:</b>	1-800-255-3924	<b>DATE REVISED:</b>	JAN 21, 2019
<b>INFORMATION PHONE #:</b>	1-866-406-2628	<b>NAME OF PREPARER:</b>	TECH. DEPT.

#### SECTION II: HAZARDS IDENTIFICATION

**OSHA / HCS STATUS:** THIS MATERIAL IS CONSIDERED HAZARDOUS BY THE OSHA HAZARD COMMUNICATION STANDARD (29 CFR 1910.1200).

**CLASSIFICATION OF THE SUBSTANCE OR MIXTURE:**

SKIN CORROSION/IRRITATION (CATEGORY 2)

SPECIFIC TARGET ORGAN TOXICITY, SINGLE EXPOSURE; RESPIRATORY TRACT IRRITATION (CATEGORY 3)

ACUTE INHALATION (VAPOR AND MIST)TOXICITY (CATEGORY 4)

RESPIRATORY SENSITIZATION ( CATEGORY 1)

EYE IRRITANT (CATEGORY 2B)

SKIN SENSITIZATION (CATEGORY 1)

**PERCENTAGE OF MIXTURE CONSISTING OF INGREDIENTS OF UNKNOWN TOXICITY: 100%**

**HAZARD PICTOGRAMS:**

EXCLAMATION MARK (IRRITANT)

HEALTH HAZARD (HEALTH HAZARD)

**SIGNAL WORD: DANGER!**

**HAZARDOUS STATEMENTS:**

H315 + H320: CAUSES SKIN AND EYE IRRITATION

H317: MAY CAUSE AN ALLERGIC SKIN REACTION

H332: HARMFUL IF INHALED

H334: MAY CAUSE ALLERGY OR ASTHMA SYMPTOMS OR BREATHING DIFFICULTIES IF INHALED

H335: MAY CAUSE RESPIRATORY IRRITATION

**GENERAL PRECAUTIONARY STATEMENTS:**

**PREVENTION:**

P261: AVOID BREATHING DUST/FUME/GAS/MIST/VAPOURS/SPRAY.

P264: WASH SKIN THOROUGHLY AFTER HANDLING.

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### SECTION II: HAZARDS IDENTIFICATION

P271: USE ONLY OUTDOORS OR IN A WELL-VENTILATED AREA.

P272: CONTAMINATED WORK CLOTHING SHOULD NOT BE ALLOWED OUT OF THE WORKPLACE.

P280: WEAR PROTECTIVE GLOVES/PROTECTIVE CLOTHING/EYE PROTECTION/FACE PROTECTION.

P285: IN CASE OF INADEQUATE VENTILATION WEAR RESPIRATORY PROTECTION. THE TYPE OF RESPIRATORY SELECTION MUST COMPLY WITH THE REQUIREMENTS SET FORTH IN OSHA'S RESPIRATORY PROTECTION STANDARD (29CFR 1910.134) OR REGIONAL STANDARDS.

#### RESPONSE:

P302 + P350: IF ON SKIN: GENTLY WASH WITH PLENTY OF SOAP AND WATER.

P304 + P341: IF INHALED: IF BREATHING IS DIFFICULT, REMOVE VICTIM TO FRESH AIR AND KEEP AT REST IN A POSITION COMFORTABLE FOR BREATHING.

P305 + P351 + P338: IF IN EYES: RINSE CAUTIOUSLY WITH WATER FOR SEVERAL MINUTES. REMOVE CONTACT LENSES, IF PRESENT AND EASY TO DO. CONTINUE RINSING.

P314: GET MEDICAL ADVICE/ATTENTION IF YOU FEEL UNWELL.

P333 + P313: IF SKIN IRRITATION OR RASH OCCURS: GET MEDICAL ADVICE/ATTENTION.

P337 + P313: IF EYE IRRITATION PERSISTS: GET MEDICAL ADVICE/ATTENTION.

P342 + P311: IF EXPERIENCING RESPIRATORY SYMPTOMS: CALL A POISON CENTER/DOCTOR/...

P362 + P364: TAKE OFF CONTAMINATED CLOTHING AND WASH IT BEFORE REUSE.

#### STORAGE:

P405: STORE LOCKED UP.

#### DISPOSAL:

P501: DISPOSE OF CONTENTS AND CONTAINER IN ACCORDANCE WITH ALL LOCAL, STATE, AND FEDERAL REGULATIONS.

#### SUPPLEMENTAL LABEL ELEMENTS:

WARNING! INDIVIDUALS WITH LUNG OR BREATHING PROBLEMS OR PRIOR REACTION TO ISOCYANATES MUST NOT BE EXPOSED TO VAPOR OR SPRAY MIST.

**HAZARDS NOT OTHERWISE CLASSIFIED:** A HISTORY OF ECZEMA OR RESPIRATORY ALLERGIES SUCH AS HAY FEVER, ARE POSSIBLE REASONS FOR EXCLUSION FROM ISOCYANATE WORK AREAS. APPLICANTS WITH A HISTORY OF PRIOR ISOCYANATE SENSITIZATION SHOULD BE EXCLUDED FROM FURTHER WORK WITH ISOCYANATES. A COMPREHENSIVE ANNUAL MEDICAL SURVEILLANCE PROGRAM SHOULD BE INSTITUTED FOR ALL EMPLOYEES WHO ARE POTENTIALLY EXPOSED TO DIISOCYANATES. ONCE A WORKER HAS BEEN DIAGNOSED AS SENSITIZED TO ANY ISOCYANATE, NO FURTHER EXPOSURE SHOULD BE PERMITTED.

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#### SECTION III: COMPOSITION & INFORMATION ON INGREDIENTS

**SUBSTANCE / MIXTURE:** MIXTURE

**OTHER MEANS OF IDENTIFICATION (COMPOSITION):** NOT AVAILABLE

HAZARDOUS INGREDIENT	CAS #	% BY WEIGHT
* DIPHENYMETHANE 4,4'-DIISOCYANATE	101-68-8	35.1
* POLYMETHYLENE POLYPHENYL ISOCYANATE	9016-87-9	27.0
DIPHENYMETHANE-2,4'-DIISOCYANATE	5873-54-1	22.9

THERE ARE NO ADDITIONAL INGREDIENTS PRESENT WHICH, WITHIN THE CURRENT KNOWLEDGE OF THE SUPPLIER AND IN THE CONCENTRATIONS APPLICABLE, ARE CLASSIFIED AS HAZARDOUS TO HEALTH OR THE ENVIRONMENT AND HENCE REQUIRE REPORTING IN THIS SECTION.

#### SECTION IV: FIRST AID MEASURES

**EYE CONTACT:** IN CASE OF CONTACT, IMMEDIATELY FLUSH EYES WITH PLENTY OF WATER FOR AT LEAST 15 MINUTES. GET MEDICAL ATTENTION IMMEDIATELY.

**INHALATION:** MOVE EXPOSED PERSON TO FRESH AIR. GET MEDICAL ATTENTION IMMEDIATELY. TREATMENT IS SYMPTOMATIC FOR PRIMARY IRRITATION OR BRONCHOSPASM. IF BREATHING IS LABORED, OXYGEN SHOULD BE ADMINISTERED BY A QUALIFIED PERSONNEL.

**SKIN CONTACT:** AFTER CONTACT WITH SKIN, WASH IMMEDIATELY WITH PLENTY OF WARM SOAPY WATER. REMOVE CONTAMINATED CLOTHING AND SHOES. CONTINUE TO RINSE FOR AT LEAST 10 MINUTES. AN MDI STUDY HAS DEMONSTRATED THAT A POLYGLYCOL-BASED SKIN CLEANSER OR CORN OIL MAY BE MORE EFFECTIVE THEN SOAP AND WATER. GET MEDICAL ATTENTION IF SYMPTOMS OCCUR. WASH CLOTHING BEFORE REUSE. CLEAN SHOES THOROUGHLY BEFORE REUSE.

**INGESTION:** DO NOT INDUCE VOMITING UNLESS DIRECTED TO DO SO BY MEDICAL PERSONNEL. NEVER GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS PERSON. PROVIDED THE PATIENT IS CONSCIOUS, WASH OUT MOUTH WITH WATER. GET MEDICAL ATTENTION IF SYMPTOMS APPEAR.

**POTENTIAL HEALTH EFFECTS:** CAUSES EYE IRRITATION. HARMFUL IF INHALED. MAY CAUSE RESPIRATORY IRRITATION. THIS PRODUCT IS A RESPIRATORY IRRITANT AND POTENTIAL RESPIRATORY SENSITIZER; REPEATED INHALATION OF VAPOR OR AEROSOL AT LEVELS ABOVE THE OCCUPATIONAL EXPOSURE LIMIT COULD CAUSE RESPIRATORY SENSITIZATION. SYMPTOMS MAY INCLUDE IRRITATION TO THE EYES, NOSE, THROAT, AND LUNGS, POSSIBLY COMBINED WITH DRYNESS OF THE THROAT, TIGHTNESS OF THE CHEST AND DIFFICULTY BREATHING. THE ONSET OF THE RESPIRATORY SYMPTOMS MAY BE DELAYED FOR SEVERAL HOURS AFTER EXPOSURE. A HYPER-REACTIVE RESPONSE TO EVEN MINIMAL CONCENTRATIONS OF MDI MAY DEVELOP IN SENSITIZED PEOPLE.

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#### SECTION IV: FIRST AID MEASURES (CONT'D)

**OVER-EXPOSURE SIGNS / SYMPTOMS:** ADVERSE SYMPTOMS OF EYE CONTACT MAY INCLUDE: PAIN OR IRRITATION, WATERING, REDNESS. ADVERSE SYMPTOMS OF INHALATION MAY INCLUDE: RESPIRATORY TRACT IRRITATION, COUGHING, WHEEZING AND BREATHING DIFFICULTIES, ASTHMA. ADVERSE SYMPTOMS OF SKIN CONTACT MAY INCLUDE: IRRITATION, REDNESS.

**NOTE TO PHYSICIAN:** TREAT SYMPTOMATICALLY. FOLLOWING SEVERE EXPOSURE MEDICAL FOLLOW-UP SHOULD BE MONITORED FOR AT LEAST 48 HOURS

#### SECTION V: FIRE FIGHTING MEASURES

**EXTINGUISHING MEDIA:** FOAM, CO<sub>2</sub>, OR DRY POWDER

**UNSUITABLE EXTINGUISHING MEDIA:** WATER MAY BE USED IF NO OTHER AVAILABLE AND THEN IN COPIOUS QUANTITIES. REACTION BETWEEN WATER AND HOT ISOCYANATE MAY BE VIGOROUS. PREVENT WASHING FROM ENTERING WATER COURSES, KEEP FIRE EXPOSED CONTAINERS COOL BY SPRAYING WITH WATER.

**HAZARDOUS COMBUSTION PRODUCTS:** COMBUSTION PRODUCTS MAY INCLUDE: CARBON MONOXIDE, CARBON DIOXIDE, NITROGEN OXIDES HYDROCARBONS AND HCN.

**OTHER CONSIDERATIONS:** DUE TO REACTION WITH WATER PRODUCING CO<sub>2</sub>-GAS, A HAZARDOUS BUILD-UP OF PRESSURE COULD RESULT IF CONTAMINATED CONTAINERS ARE RE-SEALED. CONTAINERS MAY BURST IF OVERHEATED.

**FIRE FIGHTING PROCEDURES:** AVOID CONTACT WITH PRODUCT. DURING A FIRE, ISOCYANATE VAPORS AND OTHER IRRITATING, HIGHLY TOXIC GASES MAY BE GENERATED BY THERMAL DECOMPOSITION OR COMBUSTION. EXPOSURE TO HEATED DIISOCYANATE CAN BE EXTREMELY DANGEROUS.

**FIRE FIGHTING EQUIPMENT:** WEAR FULL PROTECTIVE GEAR AND SCBA.

#### SECTION VI: ACCIDENTAL RELEASE MEASURES

**PERSONAL PRECAUTION:** WEAR APPROPRIATE PERSONAL PROTECTIVE EQUIPMENT. EVACUATE SURROUNDING AREAS AND ISOLATE THE AREA. KEEP UNNECESSARY AND UNPROTECTED PERSONNEL FROM ENTERING. PROVIDE ADEQUATE VENTILATION. WEAR APPROPRIATE RESPIRATOR WHEN VENTILATION IS INADEQUATE.

**ENVIRONMENTAL PRECAUTIONS:** AVOID DISPERSAL OF SPILLED MATERIAL AND RUNOFF AND CONTACT WITH SOIL, WATERWAYS, DRAINS AND SEWERS. INFORM THE RELEVANT AUTHORITIES IF THE PRODUCT HAS CAUSED ENVIRONMENTAL POLLUTION (SEWERS, WATERWAYS, SOIL OR AIR).

**METHODS FOR CONTAINMENT & CLEAN-UP:** ABSORB WITH LIQUID-BINDING MATERIAL (SAND, DIATOMITE, ACID BINDERS, UNIVERSAL BINDERS, SAWDUST).

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### SECTION VI: ACCIDENTAL RELEASE MEASURES (CONT'D)

SHOVEL INTO SUITABLE RECEPTACLES. DECONTAMINATE SPILL SURFACE USING A NEUTRALIZATION SOLUTION (90% FANTASTIC HEAVY DUTY ALL PURPOSE CLEANER AND 10% HOUSEHOLD AMMONIA) SCRUB SURFACE WITH BROOM OR BRUSH. WAIT AT LEAST 15 MINS AFTER APPLYING DECONTAMINATE SOLUTION AND COVER THE AREA WITH ABSORBENT AND SHOVEL INTO RECEPTACLE. KEEP THE LID OF RECEPTACLE LOOSE TO ALLOW CARBON DIOXIDE AND HEAT TO ESCAPE. DISPOSE OF CONTAINER AFTER 72 HOURS IN ACCORDANCE WITH EXISTING FEDERAL, STATE AND LOCAL REGULATIONS.

### SECTION VII: HANDLING AND STORAGE

**PROTECTIVE MEASURES FOR HANDLING:** INDIVIDUALS WITH LUNG OR BREATHING PROBLEMS OR PRIOR ALLERGIC REACTIONS TO ISOCYANATES MUST NOT BE EXPOSED TO VAPOR OR SPRAY MIST. DO NOT BREATHE VAPORS, MIST, OR DUST. USE ADEQUATE VENTILATION. FLAMMABLE LIQUID. AVOID HEAT, SPARKS AND OPEN FLAMES. PUT ON APPROPRIATE PERSONAL PROTECTIVE EQUIPMENT. AVOID BREATHING VAPOR AND CONTACT WITH EYES, SKIN AND CLOTHING. DO NOT LEAVE CONTAINERS OPEN. AVOID REPEATED OR PROLONGED CONTACT WITH SKIN. EMPTY CONTAINERS RETAIN RESIDUE. OBSERVE ALL SAFETY PRECAUTIONS. DO NOT REUSE CONTAINER.

**ADVICE ON GENERAL OCCUPATIONAL HYGIENE:** WEAR APPROPRIATE PERSONAL PROTECTIVE EQUIPMENT. USE GENERAL INDUSTRIAL HYGIENE PRACTICE. WASH HANDS AFTER HANDLING PAINT/COATING AND BEFORE EATING, DRINKING OR SMOKING. READ AND UNDERSTAND ENTIRE SDS BEFORE HANDLING PRODUCT.

**CONDITIONS FOR SAFE STORAGE (INCLUDING ANY INCOMPATIBILITIES):** KEEP CONTAINER TIGHTLY CLOSED IN A COOL WELL-VENTILATED PLACE. KEEP AWAY FROM MOISTURE. DUE TO REACTION WITH WATER PRODUCING CO<sub>2</sub>-GAS, A HAZARDOUS BUILD-UP OF PRESSURE COULD RESULT IF CONTAMINATED CONTAINERS ARE RE-SEALED. DO NOT RESEAL CONTAMINATED CONTAINERS. UNCONTAMINATED CONTAINERS, FREE OF MOISTURE, MAY BE RESEALED ONLY AFTER PLACING UNDER A NITROGEN BLANKET. DO NOT STORE IN UNLABELED CONTAINERS. USE APPROPRIATE CONTAINMENT TO AVOID ENVIRONMENTAL CONTAMINATION. UNSUITABLE CONTAINERS; DO NOT STORE IN CONTAINERS MADE OF COPPER, COPPER ALLOYS OR GALVANIZED SURFACES.

### SECTION VIII: EXPOSURE CONTROL / PERSONAL PROTECTION

**AIRBORNE EXPOSURE LIMITS:**

\* DIPHENYMETHANE 4,4'-DIISOCYANATE      101-68-8      35.1  
OSHA PEL: 0.2 mg/m<sup>3</sup>  
NIOSH TWA: 0.05 mg/m<sup>3</sup>

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#### SECTION VIII: EXPOSURE CONTROL / PERSONAL PROTECTION

* POLYMETHYLENE POLYPHENYL ISOCYANATE	9016-87-9	27.0
ACGIH/TLV : N/E		
OSHA/PEL : N/E		
DIPHENYMETHANE-2,4'-DIISOCYANATE	5873-54-1	22.9
OSHA PEL: 0.2 MG/M3		
NIOSH TWA: 0.05 MG/M3		

**ENGINEERING CONTROLS:** USE ONLY WITH ADEQUATE VENTILATION. LOCAL EXHAUST VENTILATION OR OTHER ENGINEERING CONTROLS TO KEEP WORKER EXPOSURE TO AIRBORNE CONTAMINANTS BELOW ANY RECOMMENDED OR STATUTORY LIMITS. DIISOCYANATES CAN ONLY BE SMELLED IF THE OCCUPATIONAL EXPOSURE LIMIT HAS BEEN EXCEEDED CONSIDERABLY.

MEDICAL SUPERVISION OF ALL EMPLOYEES WHO HANDLE OR COME IN CONTACT WITH RESPIRATORY SENSITIZERS IS RECOMMENDED. PERSONNEL WITH A HISTORY OF ASTHMA-TYPE CONDITIONS, BRONCHITIS OR SKIN SENSITIZATION CONDITIONS SHOULD NOT WORK WITH MDI BASED PRODUCTS. THE OCCUPATIONAL EXPOSURE LIMITS LISTED DO NOT APPLY TO PREVIOUSLY SENSITIZED INDIVIDUALS. SENSITIZED INDIVIDUALS SHOULD BE REMOVED FROM ANY FURTHER EXPOSURE.

#### PERSONAL PROTECTIVE EQUIPMENT

**RESPIRATORY PROTECTION:** IF YOU EXPERIENCE EYE WATERING, HEADACHE OR DIZZINESS OR IF AIR MONITORING DEMONSTRATES VAPOR/MIST LEVELS ARE ABOVE APPLICABLE LIMITS, WEAR AN APPROPRIATE, PROPERLY FITTED RESPIRATOR (NIOSH APPROVED) DURING AND AFTER APPLICATION. FOLLOW RESPIRATOR MANUFACTURER'S DIRECTIONS FOR RESPIRATOR USE.

**SKIN & BODY PROTECTION:** IMPERVIOUS CHEMICAL RESISTANT GLOVES. LONG SLEEVED CLOTHING OR PROTECTIVE SLEEVES. REMOVE AND WASH CONTAMINATED CLOTHING BEFORE RE-USE.

**EYE & FACE PROTECTION:** SPLASH PROOF SAFETY GLASSES

**WORK HYGIENIC PRACTICES:** WASH HANDS, FOREARMS AND FACE THOROUGHLY AFTER HANDLING CHEMICAL PRODUCTS, BEFORE EATING AND DRINKING, SMOKING OR USING THE LAVATORY AND AT THE END OF THE WORKING PERIOD. CONTAMINATED WORK CLOTHING SHOULD NOT BE ALLOWED WORN OUT OF THE WORKPLACE. WASH CONTAMINATED CLOTHING BEFORE REUSING. ENSURE THAT EYEWASH STATIONS AND SAFETY SHOWERS ARE CLOSE TO THE WORKSTATION LOCATION.

#### SECTION IX: PHYSICAL AND CHEMICAL PROPERTIES

##### PHYSICAL STATE

**APPEARANCE:** LIQUID

**COLOR:** BROWNISH

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#### SECTION IX: PHYSICAL AND CHEMICAL PROPERTIES (CONT'D)

**ODOR:** FAINT ODOR

**ODOR THRESHOLD:** NOT AVAILABLE

**PH:** NOT APPLICABLE

**MELTING POINT:** NOT AVAILABLE

**FREEZING POINT:** NOT AVAILABLE

**INITIAL BOILING POINT:** >572°F DECOMPOSES

**FLASH POINT:** 415.4°F

**EVAPORATION RATE:** NOT AVAILABLE

**EXPLOSION LIMITS:**

**LOWER & UPPER EXPLOSIVE LIMIT:** NOT AVAILABLE

**VAPOR PRESSURE:** NOT AVAILABLE

**VAPOR DENSITY (AIR = 1):** NOT AVAILABLE

**SPECIFIC GRAVITY (G/CC):** 1.16

**DENSITY (LB/GAL):** 9.66 LB/GL

**SOLUBILITY IN WATER:** NOT AVAILABLE

**PARTITION COEFFICIENT:** NOT AVAILABLE

**(N-OCTANOL / WATER)**

**VISCOSITY:** NOT AVAILABLE

**AUTO-IGNITION TEMPERATURE:** >1,112°F

**DECOMPOSITION TEMPERATURE:** NOT AVAILABLE

**ACTUAL V.O.C:** 0.0 LB/GL

**(METRIC):** 0 G/L

**REGULATORY V.O.C.:** 0.0 LB/GL

**(METRIC):** 0 G/L

**OTHER PHYSICAL PROPERTIES:** NOT AVAILABLE

#### SECTION X: STABILITY & REACTIVITY DATA

**CHEMICAL STABILITY:**

STABLE UNDER NORMAL CONDITIONS



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### SECTION X: STABILITY & REACTIVITY DATA (CONT'D)

**POSSIBLE HAZARDOUS REACTIONS:** REACTION WITH WATER (MOISTURE) PRODUCES CO<sub>2</sub>-GAS, EXOTHERMIC REACTION WITH MATERIALS CONTAINING ACTIVE HYDROGEN GROUPS. THE REACTION BECOMES PROGRESSIVELY MORE VIGOROUS AND CAN BE VIOLENT AT HIGHER TEMPERATURES IF THE MISCIBILITY OF THE REACTION PARTNERS IS GOOD OR IS SUPPORTED BY STIRRING OR BY THE PRESENCE OF SOLVENTS. MDI IS INSOLUBLE WITH AND HEAVIER THAN WATER AND SINKS TO THE BOTTOM BUT REACTS SLOWLY AT THE INTERFACE. A SOLID WATER-INSOLUBLE LAYER OF POLYUREA IS FORMED AT THE INTERFACE BY LIBERATING CARBON DIOXIDE GAS.

**CONDITIONS TO AVOID:** AVOID HIGH TEMPERATURES.

**INCOMPATIBLE MATERIALS:** WATER, ALCOHOLS, AMINES, BASES, AND ACIDS.

**HAZARDOUS DECOMPOSITION:** COMBUSTION PRODUCTS MAY INCLUDE: CARBON OXIDES, NITROGEN OXIDES, HYDROCARBONS, AND HCN.

### SECTION XI: TOXICOLOGICAL INFORMATION

#### INFORMATION ON TOXICOLOGICAL EFFECTS

**ACUTE TOXICITY:** THE ACUTE EFFECTS OF THIS PRODUCT AS A WHOLE HAVE NOT BEEN TESTED.

#### DATA ON INDIVIDUAL COMPONENTS ARE BELOW:

DIPHENYMETHANE 4,4'-DIISOCYANATE (101-68-8)

LD50 ORAL RAT (MALE) >10,000 MG/KG

LC50 INHALATION RAT 0.49 MG/L

LD50 DERMAL RABBIT >9,400 MG/KG

POLYMETHYLENE POLYPHENYL ISOCYANATE (9016-87-9)

LD50 ORAL RAT (MALE) >10,000 MG/KG

LC50 INHALATION RAT 0.49 MG/L

LD50 DERMAL RABBIT >9,400 MG/KG

DIPHENYMETHANE-2,4'-DIISOCYANATE (5873-54-1)

LD50 ORAL RAT (MALE) NO DATA AVAILABLE

LC50 INHALATION RAT 0.49 MG/L

LD50 DERMAL RABBIT >9,400 MG/KG

**CARCINOGENICITY:** NO SUSPECTED CARCINOGENS PRESENT AT >0.1%

**OSHA:** NO COMPONENT OF THIS PRODUCT PRESENT AT LEVEL GREATER THAN OR EQUAL TO 0.1% IS IDENTIFIED AS A CARCINOGEN OR POTENTIAL CARCINOGEN BY OSHA.



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#### SECTION XI: TOXICOLOGICAL INFORMATION

**IARC:** NO COMPONENT OF THIS PRODUCT PRESENT AT LEVEL GREATER THAN OR EQUAL TO 0.1% IS IDENTIFIED AS A CARCINOGEN OR POTENTIAL CARCINOGEN BY IARC.

**NTP:** NO COMPONENT OF THIS PRODUCT PRESENT AT LEVEL GREATER THAN OR EQUAL TO 0.1% IS IDENTIFIED AS A CARCINOGEN OR POTENTIAL CARCINOGEN BY NTP.

**EFFECTS OF ACUTE EXPOSURE FROM EYE CONTACT:** CAUSES EYE IRRITATION.

**EFFECTS OF ACUTE EXPOSURE FROM SKIN CONTACT:** CAUSES SKIN IRRITATION. MAY CAUSE SENSITIZATION BY SKIN CONTACT WITH KNOWN RESPIRATORY SENSITIZATION CAN BE INDUCED BY SKIN CONTACT WITH KNOWN RESPIRATORY SENSITIZERS INCLUDING DIISOCYANATES. THESE RESULTS EMPHASIZE THE NEED FOR PROTECTIVE CLOTHING INCLUDING GLOVES TO BE WORN AT ALL TIMES WHEN HANDLING THESE CHEMICALS OR IN MAINTENANCE WORK.

**EFFECTS OF ACUTE EXPOSURE FROM INGESTION:** LOW ORAL TOXICITY, BUT INGESTION MAY CAUSE IRRITATION OF THE GASTROINTESTINAL TRACT.

**EFFECTS OF ACUTE EXPOSURE FROM INHALATION:** HARMFUL IF INHALED. MAY CAUSE RESPIRATORY IRRITATION. THIS PRODUCT IS A RESPIRATORY IRRITANT AND POTENTIAL RESPIRATORY SENSITIZER; REPEATED INHALATION OF VAPOR OR AEROSOL AT LEVELS ABOVE THE OCCUPATIONAL EXPOSURE LIMIT COULD CAUSE RESPIRATORY SENSITIZATION. SYMPTOMS MAY INCLUDE IRRITATION TO THE EYES, NOSE, THROAT, AND LUNGS, POSSIBLY COMBINED WITH DRYNESS OF THE THROAT, TIGHTNESS OF THE CHEST AND DIFFICULTY BREATHING. THE ONSET OF THE RESPIRATORY SYMPTOMS MAY BE DELAYED FOR SEVERAL HOURS AFTER EXPOSURE. A HYPER-REACTIVE RESPONSE TO EVEN MINIMAL CONCENTRATIONS OF MDI MAY DEVELOP IN SENSITIZED PEOPLE.

**EFFECTS OF CHRONIC EXPOSURE:** MAY CAUSE DAMAGE TO ORGANS THROUGH PROLONGED OR REPEATED EXPOSURE IF INHALED. ONCE SENSITIZED, A SEVERE ALLERGIC REACTION MAY OCCUR WHEN SUBSEQUENTLY EXPOSED TO VERY LOW LEVELS.

**PRIMARY ROUTE(S) OF ENTRY:** EYE CONTACT, SKIN CONTACT, INGESTION, INHALATION

#### SECTION XII: ECOLOGICAL INFORMATION

**ENVIRONMENTAL TOXICITY:** ECOLOGICAL EVALUATION OF THIS MATERIAL HAS NOT BEEN PERFORMED; HOWEVER, DO NOT ALLOW THE PRODUCT TO BE RELEASED TO THE ENVIRONMENT WITHOUT GOVERNMENTAL APPROVAL/PERMITS. DISCHARGE INTO THE ENVIRONMENT MUST BE AVOIDED.

#### SECTION XIII: DISPOSAL CONSIDERATIONS

**DISPOSAL METHOD:** THE GENERATION OF WASTE SHOULD BE AVOIDED OR MINIMIZED WHENEVER POSSIBLE. DISPOSAL OF THIS PRODUCT SHOULD ALWAYS COMPLY WITH THE REQUIREMENTS OF ENVIRONMENTAL PROTECTION AND WASTE DISPOSAL LEGISLATION AND ANY REGIONAL LOCAL...

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#### SECTION XIII: DISPOSAL CONSIDERATIONS (CONT'D)

...AUTHORITY REQUIREMENTS. DISPOSE OF SURPLUS AND NON-RECYCLABLE PRODUCTS VIA A LICENSED WASTE DISPOSAL CONTRACTOR. THE MATERIAL AND ITS CONTAINER MUST BE DISPOSED OF IN A SAFE WAY. CARE SHOULD BE TAKEN WHEN HANDLING EMPTIED CONTAINERS THAT HAVE NOT BEEN CLEANED OR RINSED. EMPTY CONTAINERS MAY RETAIN SOME PRODUCT RESIDUES. AVOID DISPERSAL OF SPILLED MATERIAL AND RUNOFF AND CONTACT WITH SOIL, WATERWAYS, DRAINS, AND SEWERS.

#### SECTION XIV: TRANSPORT INFORMATION

**TRANSPORTATION INFORMATION DISCLAIMER:** DETERMINATION OF PROPER SHIPPING IDENTIFICATION IS DEPENDENT UPON THE FORM, QUANTITY AND PACKAGING. THE PERSON OFFERING A HAZARDOUS MATERIAL FOR TRANSPORT HAS THE SOLE RESPONSIBILITY TO PROPERLY PREPARE THE SHIPPING PAPER AND PACKAGING FOR TRANSPORT. PEOPLE LOADING AND UNLOADING MUST BE TRAINED ON ALL OF THE RISKS DERIVING FROM HANDLING THIS PRODUCT.

#### SECTION XV: REGULATORY INFORMATION

##### U.S. FEDERAL REGULATIONS :

**CLEAN AIR ACT SECTION 112(B) HAZARDOUS AIR POLLUTANTS (HAP'S):** THE FOLLOWING COMPONENTS PRESENT AT LEVELS HIGHER THEN 1% LISTED ON HAPS LIST OF CHEMICALS:

DIPHENYLMETHANE 4,4'-DIISOCYANATE 101-68-8

**CERCLA: SARA HAZARD CATEGORY:** THIS PRODUCT HAS BEEN REVIEWED ACCORDING TO THE EPA "HAZARD CATEGORIES" PROMULGATED UNDER SECTION 311 AND 312 OF THE SUPERFUND AMENDMENT AND REAUTHORIZATION ACT OF 1986 (SARA TITLE III) AND IS CONSIDERED, UNDER APPLICABLE DEFINITIONS, TO MEET THE FOLLOWING CATEGORIES: ACUTE HEALTH HAZARD.

**EPA SECTION 313:** THIS MATERIAL CONTAINS A CHEMICAL(S) COMPONENT(S) WITH KNOWN CAS NUMBERS AT REPORTING LEVELS ESTABLISHED BY SARA TITLE III, SECTION 313:

101-68-8 DIPHENYLMETHANE 4,4'-DIISOCYANATE

9016-87-9 POLYMETHYLENE POLYPHENYL ISOCYANATE

##### US STATE REGULATIONS:

**CALIFORNIA PROPOSITION 65:** THIS PRODUCT DOES NOT CONTAIN A CHEMICAL KNOWN TO THE STATE OF CALIFORNIA TO CAUSE CANCER OR BIRTH DEFECTS OR OTHER REPRODUCTIVE HARM.

#### SECTION XVI: OTHER INFORMATION

##### ABBREVIATIONS & ACRONYMS:

# ECO CorFlex

Molecular Industrial Polymers

## MATERIAL SAFETY DATA SHEET

**PRODUCT NAME: ZYCRETE PMC (PART B)**

**HMIS RATINGS: H F R**

**PRODUCT DESCRIPTION: POLYMER CONCRETE CURING AGENT**

**2 1 1**

### SECTION XVI: OTHER INFORMATION (CONT'D)

ACA - AMERICAN COATINGS ASSOCIATION

ACGIH - AMERICAN CONFERENCE OF GOVERNMENTAL INDUSTRIAL HYGIENISTS

ATE - ACUTE TOXICITY ESTIMATE

BCF - BIOCONCENTRATION FACTOR

CAS - CHEMICAL ABSTRACTS SERVICE (DIVISION OF THE AMERICAN CHEMICAL SOCIETY)

CLP - REGULATION (EC) NO 1272/2008 ON CLASSIFICATION, LABELING AND PACKAGING OF SUBSTANCES AND MIXTURES

DOT - US DEPARTMENT OF TRANSPORTATION

EC - EUROPEAN COMMUNITY

EEC - EUROPEAN ECONOMIC COMMUNITY

EINECS- EUROPEAN INVENTORY OF EXISTING COMMERCIAL CHEMICAL SUBSTANCES

EN - EUROPEAN STANDARD

EPA - ENVIRONMENTAL PROTECTION AGENCY (USA)

EU - EUROPEAN UNION

GHS - GLOBALLY HARMONIZED SYSTEM OF CLASSIFICATION AND LABELING OF CHEMICALS

HMIS - HAZARDOUS MATERIALS IDENTIFICATION SYSTEM (USA)

HSDB - HAZARDOUS SUBSTANCES DATA BANK

IARC - INTERNATIONAL ASSOCIATION OF RADIO CARDIOLOGISTS

IATA - INTERNATIONAL AIR TRANSPORT ASSOCIATION

IBC - INTERMEDIATE BULK CONTAINER

ICAO - INTERNATIONAL CIVIL AVIATION ORGANIZATION

IMDG - INTERNATIONAL MARITIME CODE FOR DANGEROUS GOODS

LC - LETHAL CONCENTRATION

LD - LETHAL DOSE

LOLI - LIST OF LISTS

NA - NOT APPLICABLE

ND - NO DATA OR INFORMATION AVAILABLE

NE - NOT ESTABLISHED

NFPA - NATIONAL FIRE PROTECTION ASSOCIATION (USA)

NTP - NATIONAL TOXICOLOGY PROGRAM (USA)

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## MATERIAL SAFETY DATA SHEET

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**HMIS RATINGS: H F R**

**PRODUCT DESCRIPTION: POLYMER CONCRETE CURING AGENT**

**2 1 1**

### SECTION XVI: OTHER INFORMATION (CONT'D)

OECD - ORGANIZATION FOR ECONOMIC CO-OPERATION AND DEVELOPMENT

OEL - OCCUPATIONAL EXPOSURE LIMITS

OSHA - OCCUPATIONAL SAFETY & HEALTH ADMINISTRATION (USA)

RID - REGULATIONS CONCERNING THE INTERNATIONAL CARRIAGE OF DANGEROUS GOODS BY RAIL

RTECS - REGISTRY OF TOXIC EFFECTS OF CHEMICAL SUBSTANCES

RTK - RIGHT-TO-KNOW LAWS

SDS - SAFETY DATA SHEET

STEL - SHORT-TERM EXPOSURE LIMIT

TWA - TIME WEIGHTED AVERAGE

UN - UNITED NATIONS

WEL - WORKPLACE EXPOSURE LIMIT

### DISCLAIMER

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