

ECO CorFlex

Molecular Industrial Polymers

SAFETY DATA SHEET

PRODUCT NAME: POLY – POLY PRO II (PART A)

HMIS RATINGS: H F R

PRODUCT DESCRIPTION: CLEAR POLYURETHANE (2A: 1B)

3 1 0

SECTION I: COMPANY IDENTIFICATION

DISTRIBUTOR'S NAME:	ECO-CORFLEX INDUSTRIAL POLYMERS		
ADDRESS:	3801 E. ROESER ROAD, SUITE #1, PHOENIX, AZ 85040		
EMERGENCY PHONE #:	1-800-255-3924	DATE REVISED:	DEC 18, 2019
INFORMATION PHONE #:	1-866-406-2628	NAME OF PREPARER:	TECH. DEPT.

SECTION II: HAZARDS IDENTIFICATION

CLASSIFICATION OF THE SUBSTANCE OR MIXTURE

CLASSIFICATION

SERIOUS EYE DAMAGE - CATEGORY 1

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

SKIN CORROSION/IRRITATION - CATEGORY 2

REPRODUCTIVE TOXICITY - CATEGORY 2

SKIN SENSITIZER - CATEGORY 1

CARCINOGENICITY - CATEGORY 2

HAZARD PICTOGRAM(S):



SIGNAL WORD: DANGER

HAZARD STATEMENTS:

H318 CAUSES SERIOUS EYE DAMAGE.

H335 MAY CAUSE RESPIRATORY IRRITATION.

H315 CAUSES SKIN IRRITATION.

H361 SUSPECTED OF DAMAGING FERTILITY OR THE UNBORN CHILD.

H317 MAY CAUSE AN ALLERGIC SKIN REACTION.

H351 SUSPECTED OF CAUSING CANCER.

HAZARD(S) NOT OTHERWISE CLASSIFIED: NOT APPLICABLE

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SECTION II: HAZARDS IDENTIFICATION (CONT'D)

PRECAUTIONARY STATEMENT(S) GENERAL

P101 IF MEDICAL ADVICE IS NEEDED, HAVE PRODUCT CONTAINER OR LABEL AT HAND.

P102 KEEP OUT OF REACH OF CHILDREN.

PRECAUTIONARY STATEMENT(S) PREVENTION

P201 OBTAIN SPECIAL INSTRUCTIONS BEFORE USE.

P202 DO NOT HANDLE UNTIL ALL SAFETY PRECAUTIONS HAVE BEEN READ AND UNDERSTOOD.

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

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

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

PRECAUTIONARY STATEMENT(S) RESPONSE

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

P308+P313 IF EXPOSED OR CONCERNED: GET MEDICAL ADVICE/ATTENTION.

PRECAUTIONARY STATEMENT(S) STORAGE

P405 STORE LOCKED UP.

P403+P233 STORE IN A WELL-VENTILATED PLACE. KEEP CONTAINER TIGHTLY CLOSED.

PRECAUTIONARY STATEMENT(S) DISPOSAL

P501 DISPOSE OF CONTENTS/CONTAINER IN ACCORDANCE WITH LOCAL REGULATIONS.

SECTION III: COMPOSITION & INFORMATION ON INGREDIENTS

NAME	CAS #	% BY WEIGHT
TRIETHANOLAMINE	102-71-6	50-60
DIPROPYLENE GLYCOL MONO-N-BUTYL ETHER - ALPHA ISOMER	29911-28-2	1-5

The specific chemical identity and/or exact percentage (concentration) of composition has been withheld as a trade secret.

SECTION IV: FIRST AID MEASURES

EYE CONTACT

IF THIS PRODUCT COMES IN CONTACT WITH THE EYES:

IMMEDIATELY HOLD EYELIDS APART AND FLUSH THE EYE CONTINUOUSLY WITH RUNNING WATER.

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SECTION IV: FIRST AID MEASURES (CONT'D)

ENSURE COMPLETE IRRIGATION OF THE EYE BY KEEPING EYELIDS APART AND AWAY FROM EYE AND MOVING THE EYELIDS BY OCCASIONALLY LIFTING THE UPPER AND LOWER LIDS. CONTINUE FLUSHING UNTIL ADVISED TO STOP BY THE POISONS INFORMATION CENTRE OR A DOCTOR, OR FOR AT LEAST 15 MINUTES. TRANSPORT TO HOSPITAL OR DOCTOR WITHOUT DELAY. REMOVAL OF CONTACT LENSES AFTER AN EYE INJURY SHOULD ONLY BE UNDERTAKEN BY SKILLED PERSONNEL.

FOR AMINES:

IF LIQUID AMINES COME IN CONTACT WITH THE EYES, IRRIGATE IMMEDIATELY AND CONTINUOUSLY WITH LOW PRESSURE FLOWING WATER, PREFERABLY FROM AN EYE WASH FOUNTAIN, FOR 15 TO 30 MINUTES. FOR MORE EFFECTIVE FLUSHING OF THE EYES, USE THE FINGERS TO SPREAD APART AND HOLD OPEN THE EYELIDS. THE EYES SHOULD THEN BE “ROLLED” OR MOVED IN ALL DIRECTIONS.

SEEK IMMEDIATE MEDICAL ATTENTION, PREFERABLY FROM AN OPHTHALMOLOGIST.

SKIN CONTACT

IF SKIN CONTACT OCCURS:

IMMEDIATELY REMOVE ALL CONTAMINATED CLOTHING, INCLUDING FOOTWEAR. FLUSH SKIN AND HAIR WITH RUNNING WATER (AND SOAP IF AVAILABLE). SEEK MEDICAL ATTENTION IN EVENT OF IRRITATION.

FOR AMINES:

IN CASE OF MAJOR EXPOSURE TO LIQUID AMINE, PROMPTLY REMOVE ANY CONTAMINATED CLOTHING, INCLUDING RINGS, WATCHES, AND SHOE, PREFERABLY UNDER A SAFETY SHOWER. WASH SKIN FOR 15 TO 30 MINUTES WITH PLENTY OF WATER AND SOAP. CALL A PHYSICIAN IMMEDIATELY. REMOVE AND DRY-CLEAN OR LAUNDRER CLOTHING SOAKED OR SOILED WITH THIS MATERIAL BEFORE REUSE. DRY CLEANING OF CONTAMINATED CLOTHING MAY BE MORE EFFECTIVE THAN NORMAL LAUNDERING.

INFORM INDIVIDUALS RESPONSIBLE FOR CLEANING OF POTENTIAL HAZARDS ASSOCIATED WITH HANDLING CONTAMINATED CLOTHING. DISCARD CONTAMINATED LEATHER ARTICLES SUCH AS SHOES, BELTS, AND WATCHBANDS.

NOTE TO PHYSICIAN: TREAT ANY SKIN BURNS AS THERMAL BURNS. AFTER DECONTAMINATION, CONSIDER THE USE OF COLD PACKS AND TOPICAL ANTIBIOTICS.

INHALATION

IF FUMES OR COMBUSTION PRODUCTS ARE INHALED REMOVE FROM CONTAMINATED AREA. LAY PATIENT DOWN. KEEP WARM AND RESTED. PROSTHESES SUCH AS FALSE TEETH, WHICH MAY BLOCK AIRWAY, SHOULD BE REMOVED, WHERE POSSIBLE, PRIOR TO INITIATING FIRST AID PROCEDURES. APPLY ARTIFICIAL RESPIRATION IF NOT BREATHING, PREFERABLY WITH A DEMAND VALVE RESUSCITATOR, BAG-VALVE MASK DEVICE, OR POCKET MASK AS TRAINED. PERFORM CPR IF NECESSARY. TRANSPORT TO HOSPITAL, OR DOCTOR, WITHOUT DELAY.

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SECTION IV: FIRST AID MEASURES (CONT'D)

FOR AMINES:

ALL EMPLOYEES WORKING IN AREAS WHERE CONTACT WITH AMINE CATALYSTS IS POSSIBLE SHOULD BE THOROUGHLY TRAINED IN THE ADMINISTRATION OF APPROPRIATE FIRST AID PROCEDURES. EXPERIENCE HAS DEMONSTRATED THAT PROMPT ADMINISTRATION OF SUCH AID CAN MINIMIZE THE EFFECTS OF ACCIDENTAL EXPOSURE. PROMPTLY MOVE THE AFFECTED PERSON AWAY FROM THE CONTAMINATED AREA TO AN AREA OF FRESH AIR. KEEP THE AFFECTED PERSON CALM AND WARM, BUT NOT HOT. IF BREATHING IS DIFFICULT, OXYGEN MAY BE ADMINISTERED BY A QUALIFIED PERSON. IF BREATHING STOPS, GIVE ARTIFICIAL RESPIRATION. CALL A PHYSICIAN AT ONCE.

INGESTION

IF SWALLOWED DO NOT INDUCE VOMITING. IF VOMITING OCCURS, LEAN PATIENT FORWARD OR PLACE ON LEFT SIDE (HEAD-DOWN POSITION, IF POSSIBLE) TO MAINTAIN OPEN AIRWAY AND PREVENT ASPIRATION. OBSERVE THE PATIENT CAREFULLY. NEVER GIVE LIQUID TO A PERSON SHOWING SIGNS OF BEING SLEEPY OR WITH REDUCED AWARENESS; I.E. BECOMING UNCONSCIOUS. GIVE WATER TO RINSE OUT MOUTH, THEN PROVIDE LIQUID SLOWLY AND AS MUCH AS CASUALTY CAN COMFORTABLY DRINK. SEEK MEDICAL ADVICE.

FOR AMINES:

IF LIQUID AMINE ARE INGESTED, HAVE THE AFFECTED PERSON DRINK SEVERAL GLASSES OF WATER OR MILK. DO NOT INDUCE VOMITING. IMMEDIATELY TRANSPORT TO A MEDICAL FACILITY AND INFORM MEDICAL PERSONNEL ABOUT THE NATURE OF THE EXPOSURE. THE DECISION OF WHETHER TO INDUCE VOMITING SHOULD BE MADE BY AN ATTENDING PHYSICIAN.

MOST IMPORTANT SYMPTOMS AND EFFECTS, BOTH ACUTE AND DELAYED: SEE SECTION 11

INDICATION OF ANY IMMEDIATE MEDICAL ATTENTION AND SPECIAL TREATMENT NEEDED FOR ACUTE OR SHORT-TERM REPEATED EXPOSURES TO HIGHLY ALKALINE MATERIALS:

RESPIRATORY STRESS IS UNCOMMON BUT PRESENT OCCASIONALLY BECAUSE OF SOFT TISSUE EDEMA. UNLESS ENDOTRACHEAL INTUBATION CAN BE ACCOMPLISHED UNDER DIRECT VISION, CRICOTHYROIDOTOMY OR TRACHEOTOMY MAY BE NECESSARY. OXYGEN IS GIVEN AS INDICATED. THE PRESENCE OF SHOCK SUGGESTS PERFORATION AND MANDATES AN INTRAVENOUS LINE AND FLUID ADMINISTRATION. DAMAGE DUE TO ALKALINE CORROSIVES OCCURS BY LIQUEFACTION NECROSIS WHEREBY THE SAPONIFICATION OF FATS AND SOLUBILISATION OF PROTEINS ALLOW DEEP PENETRATION INTO THE TISSUE. ALKALIS CONTINUE TO CAUSE DAMAGE AFTER EXPOSURE.

INGESTION:

MILK AND WATER ARE THE PREFERRED DILUENTS. NO MORE THAN 2 GLASSES OF WATER SHOULD BE GIVEN TO AN ADULT. NEUTRALISING AGENTS SHOULD NEVER BE GIVEN SINCE EXOTHERMIC HEAT REACTION MAY COMPOUND INJURY. * CATHARSIS AND EMESIS ARE ABSOLUTELY CONTRA-INDICATED.

* ACTIVATED CHARCOAL DOES NOT ABSORB ALKALI. * GASTRIC LAVAGE SHOULD NOT BE USED.

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SECTION IV: FIRST AID MEASURES (CONT'D)

SUPPORTIVE CARE INVOLVES THE FOLLOWING:

WITHHOLD ORAL FEEDINGS INITIALLY. IF ENDOSCOPY CONFIRMS TRANSMUCOSAL INJURY START STEROIDS ONLY WITHIN THE FIRST 48 HOURS. CAREFULLY EVALUATE THE AMOUNT OF TISSUE NECROSIS BEFORE ASSESSING THE NEED FOR SURGICAL INTERVENTION. PATIENTS SHOULD BE INSTRUCTED TO SEEK MEDICAL ATTENTION WHENEVER THEY DEVELOP DIFFICULTY IN SWALLOWING (DYSPHAGIA).

SKIN AND EYE:

INJURY SHOULD BE IRRIGATED FOR 20-30 MINUTES. EYE INJURIES REQUIRE SALINE. [ELLENHORN & BARCELOUX: MEDICAL TOXICOLOGY]

FOR AMINES:

CERTAIN AMINES MAY CAUSE INJURY TO THE RESPIRATORY TRACT AND LUNGS IF ASPIRATED. ALSO, SUCH PRODUCTS MAY CAUSE TISSUE DESTRUCTION LEADING TO STRICTURE. IF LAVAGE IS PERFORMED, ENDOTRACHEAL AND/OR ESOPHAGOSCOPIC CONTROL IS SUGGESTED. NO SPECIFIC ANTIDOTE IS KNOWN. CARE SHOULD BE SUPPORTIVE AND TREATMENT BASED ON THE JUDGMENT OF THE PHYSICIAN IN RESPONSE TO THE REACTION OF THE PATIENT. LABORATORY ANIMAL STUDIES HAVE SHOWN THAT A FEW AMINES ARE SUSPECTED OF CAUSING DEPLETION OF CERTAIN WHITE BLOOD CELLS AND THEIR PRECURSORS IN LYMPHOID TISSUE. THESE EFFECTS MAY BE DUE TO AN IMMUNOSUPPRESSIVE MECHANISM. SOME PERSONS WITH HYPERREACTIVE AIRWAYS (E.G., ASTHMATIC PERSONS) MAY EXPERIENCE WHEEZING ATTACKS (BRONCHOSPASM) WHEN EXPOSED TO AIRWAY IRRITANTS. LUNG INJURY MAY RESULT FOLLOWING A SINGLE MASSIVE OVEREXPOSURE TO HIGH VAPOUR CONCENTRATIONS OR MULTIPLE EXPOSURES TO LOWER CONCENTRATIONS OF ANY PULMONARY IRRITANT MATERIAL. HEALTH EFFECTS OF AMINES, SUCH AS SKIN IRRITATION AND TRANSIENT CORNEAL EDEMA ("BLUE HAZE," "HALO EFFECT," "GLAUCOPSIA"), ARE BEST PREVENTED BY MEANS OF FORMAL WORKER EDUCATION, INDUSTRIAL HYGIENE MONITORING, AND EXPOSURE CONTROL METHODS. PERSONS WHO ARE HIGHLY SENSITIVE TO THE TRIGGERING EFFECT OF NON-SPECIFIC IRRITANTS SHOULD NOT BE ASSIGNED TO JOBS IN WHICH SUCH AGENTS ARE USED, HANDLED, OR MANUFACTURED.

MEDICAL SURVEILLANCE PROGRAMS SHOULD CONSIST OF A PRE-PLACEMENT EVALUATION TO DETERMINE IF WORKERS OR APPLICANTS HAVE ANY IMPAIRMENTS (E.G., HYPERREACTIVE AIRWAYS OR BRONCHIAL ASTHMA) THAT WOULD LIMIT THEIR FITNESS FOR WORK IN JOBS WITH POTENTIAL FOR EXPOSURE TO AMINES. A CLINICAL BASELINE CAN BE ESTABLISHED AT THE TIME OF THIS EVALUATION. PERIODIC MEDICAL EVALUATIONS CAN HAVE SIGNIFICANT VALUE IN THE EARLY DETECTION OF DISEASE AND IN PROVIDING AN OPPORTUNITY FOR HEALTH COUNSELING. MEDICAL PERSONNEL CONDUCTING MEDICAL SURVEILLANCE OF INDIVIDUALS POTENTIALLY EXPOSED TO POLYURETHANE AMINE CATALYSTS SHOULD CONSIDER: HEALTH HISTORY, WITH EMPHASIS ON THE RESPIRATORY SYSTEM AND HISTORY OF INFECTIONS PHYSICAL EXAMINATION, WITH EMPHASIS ON THE RESPIRATORY SYSTEM AND THE LYMPHORETICULAR ORGANS (LYMPH NODES, SPLEEN, ETC.) LUNG FUNCTION TESTS, PRE- AND POST-BRONCHODILATOR IF INDICATED TOTAL AND DIFFERENTIAL WHITE BLOOD CELL COUNT SERUM PROTEIN ELECTROPHORESIS PERSONS WHO ARE CONCURRENTLY EXPOSED TO ISOCYANATES ALSO SHOULD BE KEPT UNDER MEDICAL SURVEILLANCE.

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SECTION IV: FIRST AID MEASURES (CONT'D)

PRE-EXISTING MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE INCLUDE SKIN DISORDERS AND ALLERGIES, CHRONIC RESPIRATORY DISEASE (E.G. BRONCHITIS, ASTHMA, EMPHYSEMA), LIVER DISORDERS, KIDNEY DISEASE, AND EYE DISEASE. BROADLY SPEAKING, EXPOSURE TO AMINES, AS CHARACTERISED BY AMINE CATALYSTS, MAY CAUSE EFFECTS SIMILAR TO THOSE CAUSED BY EXPOSURE TO AMMONIA. AS SUCH, AMINES SHOULD BE CONSIDERED POTENTIALLY INJURIOUS TO ANY TISSUE THAT IS DIRECTLY CONTACTED.

INHALATION OF AEROSOL MISTS OR VAPORS, ESPECIALLY OF HEATED PRODUCT, CAN RESULT IN CHEMICAL PNEUMONITIS, PULMONARY EDEMA, LARYNGEAL EDEMA, AND DELAYED SCARRING OF THE AIRWAY OR OTHER AFFECTED ORGANS. THERE IS NO SPECIFIC TREATMENT.

CLINICAL MANAGEMENT IS BASED UPON SUPPORTIVE TREATMENT, SIMILAR TO THAT FOR THERMAL BURNS.

PERSONS WITH MAJOR SKIN CONTACT SHOULD BE MAINTAINED UNDER MEDICAL OBSERVATION FOR AT LEAST 24 HOURS DUE TO THE POSSIBILITY OF DELAYED REACTIONS.

POLYURETHENE AMINE CATALYSTS: GUIDELINES FOR SAFE HANDLING AND DISPOSAL TECHNICAL BULLETIN JUNE 2000, ALLIANCE FOR POLYURETHANES INDUSTRY

SECTION V: FIRE FIGHTING MEASURES

EXTINGUISHING MEDIA: FOAM. DRY CHEMICAL POWDER.

SPECIAL HAZARDS ARISING FROM THE SUBSTRATE OR MIXTURE

FIRE INCOMPATIBILITY: AVOID CONTAMINATION WITH OXIDISING AGENTS I.E. NITRATES, OXIDISING ACIDS, CHLORINE BLEACHES, POOL CHLORINE ETC. AS IGNITION MAY RESULT

SPECIAL PROTECTIVE EQUIPMENT AND PRECAUTIONS FOR FIRE-FIGHTERS

FIRE FIGHTING

FOR AMINES:

FOR FIREFIGHTING, CLEANING UP LARGE SPILLS, AND OTHER EMERGENCY OPERATIONS, WORKERS MUST WEAR A SELF-CONTAINED BREATHING APPARATUS WITH FULL FACE-PIECE, OPERATED IN A PRESSURE-DEMAND MODE. AIRLINE AND AIR PURIFYING RESPIRATORS SHOULD NOT BE WORN FOR FIREFIGHTING OR OTHER EMERGENCY OR UPSET CONDITIONS. ALERT FIRE BRIGADE AND TELL THEM LOCATION AND NATURE OF HAZARD. WEAR FULL BODY PROTECTIVE CLOTHING WITH BREATHING APPARATUS.

FIRE/EXPLOSION HAZARD

COMBUSTIBLE. SLIGHT FIRE HAZARD WHEN EXPOSED TO HEAT OR FLAME.

COMBUSTION PRODUCTS INCLUDE: CARBON DIOXIDE (CO₂). NITROGEN OXIDES (NO_X), OTHER PYROLYSIS PRODUCTS TYPICAL OF BURNING ORGANIC MATERIAL. MAY EMIT POISONOUS FUMES. MAY EMIT CORROSIVE FUMES.

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SECTION VI: ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS, PROTECTIVE EQUIPMENT AND EMERGENCY PROCEDURES: SEE SECTION 8

ENVIRONMENTAL PRECAUTIONS: SEE SECTION 12

METHODS AND MATERIAL FOR CONTAINMENT AND CLEANING UP

MINOR SPILLS

ENVIRONMENTAL HAZARD - CONTAIN SPILLAGE.

FOR AMINES: IF POSSIBLE (I.E., WITHOUT RISK OF CONTACT OR EXPOSURE), STOP THE LEAK. CONTAIN THE SPILLED MATERIAL BY DIKING, THEN NEUTRALIZE. SLIPPERY WHEN SPILT. REMOVE ALL IGNITION SOURCES. CLEAN UP ALL SPILLS IMMEDIATELY.

MAJOR SPILLS

ENVIRONMENTAL HAZARD - CONTAIN SPILLAGE.

FOR AMINES: FIRST REMOVE ALL IGNITION SOURCES FROM THE SPILL AREA. HAVE FIREFIGHTING EQUIPMENT NEARBY, AND HAVE FIREFIGHTING PERSONNEL FULLY TRAINED IN THE PROPER USE OF THE EQUIPMENT AND IN THE PROCEDURES USED IN FIGHTING A CHEMICAL FIRE.

SLIPPERY WHEN SPILT. ABSORB OR CONTAIN ISOTHIAZOLINONE LIQUID SPILLS WITH SAND, EARTH, INERT MATERIAL OR VERMICULITE. THE ABSORBENT (AND SURFACE SOIL TO A DEPTH SUFFICIENT TO REMOVE ALL OF THE BIOCIDES) SHOULD BE SHOVELLED INTO A DRUM AND TREATED WITH AN 11% SOLUTION OF SODIUM METABISULFITE (NA₂S₂O₅) OR SODIUM BISULFITE (NAHSO₃), OR 12% SODIUM SULFITE (NA₂SO₃) AND 8% HYDROCHLORIC ACID (HCL).

SECTION VII: HANDLING AND STORAGE

PRECAUTIONS FOR SAFE HANDLING

SAFE HANDLING: ALKANOLAMINES AND IRON MAY PRODUCED UNSTABLE COMPLEXES.

MONOETHANOLAMINE (MEA) AND IRON FORM A TRIETHANOLAMINO-IRON COMPLEX.

ELECTROSTATIC DISCHARGE MAY BE GENERATED DURING PUMPING - THIS MAY RESULT IN FIRE.

ENSURE ELECTRICAL CONTINUITY BY BONDING AND GROUNDING (EARTHING) ALL EQUIPMENT. AVOID ALL PERSONAL CONTACT, INCLUDING INHALATION. WEAR PROTECTIVE CLOTHING WHEN RISK OF EXPOSURE OCCURS. DO NOT ALLOW CLOTHING WET WITH MATERIAL TO STAY IN CONTACT WITH SKIN.

OTHER INFORMATION: STORE IN ORIGINAL CONTAINERS. KEEP CONTAINERS SECURELY SEALED.

CONDITIONS FOR SAFE STORAGE, INCLUDING ANY INCOMPATIBILITIES

SUITABLE CONTAINER: METAL CAN OR DRUM. PACKAGING AS RECOMMENDED BY MANUFACTURER.

CHECK ALL CONTAINERS ARE CLEARLY LABELLED AND FREE FROM LEAKS.

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SECTION VII: HANDLING AND STORAGE (CONT'D)

STORAGE INCOMPATIBILITY

VIOLENT REACTION AND FIRE MAY RESULT WHEN AMINE CATALYSTS ARE EXPOSED TO, OR MIXED WITH, OXIDIZING AGENTS SUCH AS PERCHLORATES, NITRATES, PERMANGANATES, CHROMATES, NITRIC ACID, HALOGENS, PEROXIDES, AND SOME CLEANING SOLUTIONS CONTAINING ACIDS. THE LARGE AMOUNT OF HEAT GENERATED BY THE REACTION OF THE CATALYST WITH THE OXIDIZING AGENT MAY BE SUFFICIENT TO CAUSE VIGOROUS BOILING, WHICH CAN CAUSE THE HOT MATERIAL TO SPLASH OR SPLATTER.

TRIETHANOLAMINE:

IS AN ORGANIC BASE. REACTS VIOLENTLY WITH STRONG OXIDISERS, PERMANGANATES, PEROXIDES, AMMONIUM PERSULFATE, BROMINE DIOXIDE, SULFURIC ACID, NITRIC ACID IS INCOMPATIBLE WITH ORGANIC ANHYDRIDES, ACRYLATES, ALCOHOLS, ALDEHYDES, ALKYLENE OXIDES, SUBSTITUTED ALLYLS, CELLULOSE NITRATE, CRESOLS, CAPROLACTAM SOLUTION, EPICHLOROHYDRIN, ETHYLENE DICHLORIDE, ISOCYANATES, KETONES, GLYCOLS, MERCURY, NITRATES, PHENOLS, VINYL ACETATE. DECOMPOSES EXOTHERMICALLY WITH MALEIC ANHYDRIDE. INCREASE THE EXPLOSIVE SENSITIVITY OF NITROMETHANE. CORRODES, ALUMINIUM, COPPER, ITS ALLOYS, TIN, ZINC

DIETHANOLAMINE:

REACTS VIGOROUSLY WITH STRONG OXIDISERS. REACTS WITH ALDEHYDES, KETONES, ACRYLATES, FORMATES, OXALATES, NITRITES, NON-OXIDISING MINERAL ACIDS, STRONG ACIDS, ORGANIC ACIDS, ORGANIC ANHYDRIDES, ISOCYANATES, VINYL ACETATE, ACRYLATES, SUBSTITUTED ALLYLS, ALKYLENE OXIDES, EPICHLOROHYDRIN. MAY UNDERGO SELF-SUSTAINING THERMAL DECOMPOSITION AT TEMPERATURES ABOVE 250 C. ATTACKS ALUMINIUM, COPPER, ZINC AND THEIR ALLOYS, AND GALVANISED IRON.

MONOETHANOLAMINE

IS A STRONG ORGANIC BASE. REACTS VIOLENTLY WITH STRONG OXIDISERS, STRONG ACIDS (WITH SPATTERING). IS INCOMPATIBLE WITH ACETIC ACID, ACETIC ANHYDRIDE, ACROLEIN, ACRYLATES, ACRYLIC ACID, ACRYLONITRILE, ALCOHOLS, ALDEHYDES, ALKALI METALS, ALKYLENE OXIDES, SUBSTITUTED ALLYLS, CAPROLACTAM SOLUTION, CELLULOSE NITRATE, CHLOROSULFONIC ACID, CRESOLS, EPICHLOROHYDRIN, GLYCOLS, HALOGENATED HYDROCARBONS, ISOCYANATES, KETONES, MESITYL OXIDE, OLEUM, ORGANIC ANHYDRIDES, PHENOLS, BETA-PROPIOLACTONE, VINYL ACETATE FORMS EXPLOSIVE MIXTURE WITH SODIUM PERCHLORATE. REACTS WITH IRON FORMING TRIS-ETHANOLAMINEIRON. MAY UNDERGO A SELF-SUSTAINING THERMAL DECOMPOSITION WHEN HEATED IN EXCESS OF 250 DEGREES C. ATTACKS ALUMINIUM, COPPER, LEAD, TIN, ZINC, AND THEIR ALLOYS. ATTACKS PLASTICS, COATINGS AN RUBBER.

AVOID STRONG ACIDS, BASES. AVOID CONTACT WITH COPPER, ALUMINIUM AND THEIR ALLOYS. AVOID REACTION WITH OXIDISING AGENTS.

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SECTION VIII: EXPOSURE CONTROL / PERSONAL PROTECTION

CONTROL PARAMETERS: OCCUPATIONAL EXPOSURE LIMITS (OEL)

INGREDIENT DATA:

SOURCE	INGREDIENT	MATERIAL NAME	TWA	STEL	PEAK	NOTES
US ACGIH THRESHOLD LIMIT VALUES (TLV)	TRIETHANOLAMINE	TRIETHANOLAMINE	5 MG/M3	N/A	N/A	TLV® BASIS: EYE & SKIN IRR; BEIA

EMERGENCY LIMITS:

INGREDIENT	MATERIAL NAME	TEEL-1	TEEL-2	TEEL-3
TRIETHANOLAMINE	TRIETHANOLAMINE; (TRIHIDROXYTRIETHYLAMINE)	15 MG/M3	240 MG/M3	1,500 MG/M3

INGREDIENT	ORIGINAL IDLH	REVISED IDLH
TRIETHANOLAMINE	NOT AVAILABLE	NOT AVAILABLE
DIPROPYLENE GLYCOL MONO-N-BUTYL ETHER - ALPHA ISOMER	NOT AVAILABLE	NOT AVAILABLE

EXPOSURE CONTROLS

APPROPRIATE ENGINEERING CONTROLS: ENGINEERING CONTROLS ARE USED TO REMOVE A HAZARD OR PLACE A BARRIER BETWEEN THE WORKER AND THE HAZARD. WELL-DESIGNED ENGINEERING CONTROLS CAN BE HIGHLY EFFECTIVE IN PROTECTING WORKERS AND WILL TYPICALLY BE INDEPENDENT OF WORKER INTERACTIONS TO PROVIDE THIS HIGH LEVEL OF PROTECTION.

PERSONAL PROTECTION: PROTECTIVE GLOVES, CLOTHING AND FOOTWEAR; RESPIRATOR

EYE AND FACE PROTECTION: FOR AMINES: SPECIAL PRECAUTION: BECAUSE AMINES ARE ALKALINE MATERIALS THAT CAN CAUSE RAPID AND SEVERE TISSUE DAMAGE, WEARING OF CONTACT LENSES WHILE WORKING WITH AMINES IS STRONGLY DISCOURAGED. WEARING SUCH LENSES CAN PROLONG CONTACT OF THE EYE TISSUE WITH THE AMINE, THEREBY CAUSING MORE SEVERE DAMAGE. SAFETY GLASSES WITH SIDE SHIELDS. CHEMICAL GOGGLES.

SKIN PROTECTION: SEE HAND PROTECTION BELOW

HANDS/FEET PROTECTION: WEAR CHEMICAL PROTECTIVE GLOVES, E.G. PVC. WEAR SAFETY FOOTWEAR OR SAFETY GUMBOOTS, E.G. RUBBER. NOTE: THE MATERIAL MAY PRODUCE SKIN SENSITISATION IN PREDISPOSED INDIVIDUALS. CARE MUST BE TAKEN, WHEN REMOVING GLOVES AND OTHER PROTECTIVE EQUIPMENT, TO AVOID ALL POSSIBLE SKIN CONTACT. THE SELECTION OF SUITABLE GLOVES DOES NOT ONLY DEPEND ON THE MATERIAL, BUT ALSO ON FURTHER MARKS OF QUALITY WHICH VARY FROM MANUFACTURER TO MANUFACTURER. WHERE THE CHEMICAL IS A PREPARATION OF SEVERAL SUBSTANCES, THE RESISTANCE OF THE GLOVE MATERIAL CANNOT BE CALCULATED IN ADVANCE AND HAS THEREFORE TO BE CHECKED PRIOR TO THE APPLICATION. FOR AMINES: GLOVES MUST ONLY BE WORN ON CLEAN HANDS. AFTER USING GLOVES, HANDS SHOULD BE WASHED AND DRIED THOROUGHLY. BUTYL RUBBER GLOVES, NITRILE RUBBER GLOVES.

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PRODUCT DESCRIPTION: CLEAR POLYURETHANE (2A: 1B)

3 1 0

SECTION VIII: EXPOSURE CONTROL / PERSONAL PROTECTION (CONT'D)

BODY PROTECTION: SEE OTHER PROTECTION BELOW

OTHER PROTECTION: OVERALLS, P.V.C.

RESPIRATORY PROTECTION: TYPE AK-P FILTER OF SUFFICIENT CAPACITY. (AS/NZS 1716 & 1715, EN 143:2000 & 149:2001, ANSI Z88 OR NATIONAL EQUIVALENT). CARTRIDGE RESPIRATORS SHOULD NEVER BE USED FOR EMERGENCY INGRESS OR IN AREAS OF UNKNOWN VAPOUR CONCENTRATIONS OR OXYGEN CONTENT. THE WEARER MUST BE WARNED TO LEAVE THE CONTAMINATED AREA IMMEDIATELY ON DETECTING ANY ODOURS THROUGH THE RESPIRATOR. THE ODOUR MAY INDICATE THAT THE MASK IS NOT FUNCTIONING PROPERLY, THAT THE VAPOUR CONCENTRATION IS TOO HIGH, OR THAT THE MASK IS NOT PROPERLY FITTED. BECAUSE OF THESE LIMITATIONS, ONLY RESTRICTED USE OF CARTRIDGE RESPIRATORS IS CONSIDERED APPROPRIATE.

CARTRIDGE PERFORMANCE IS AFFECTED BY HUMIDITY. CARTRIDGES SHOULD BE CHANGED AFTER 2 HR OF CONTINUOUS USE UNLESS IT IS DETERMINED THAT THE HUMIDITY IS LESS THAN 75%, IN WHICH CASE, CARTRIDGES CAN BE USED FOR 4 HR. USED CARTRIDGES SHOULD BE DISCARDED DAILY, REGARDLESS OF THE LENGTH OF TIME USED. WHERE ENGINEERING CONTROLS ARE NOT FEASIBLE AND WORK PRACTICES DO NOT REDUCE AIRBORNE AMINE CONCENTRATIONS BELOW RECOMMENDED EXPOSURE LIMITS, APPROPRIATE RESPIRATORY PROTECTION SHOULD BE USED. IN SUCH CASES, AIR-PURIFYING RESPIRATORS EQUIPPED WITH CARTRIDGES DESIGNED TO PROTECT AGAINST AMINES ARE RECOMMENDED.

SECTION IX: PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE: N/A

PHYSICAL STATE: LIQUID

RELATIVE DENSITY (WATER = 1): N/A

ODOUR: N/A

PARTITION COEFFICIENT (N-OCTANOL /WATER): N/A

ODOUR THRESHOLD: N/A

AUTO-IGNITION TEMPERATURE (°C): N/A

PH (AS SUPPLIED): N/A

DECOMPOSITION TEMPERATURE: N/A

MELTING POINT / FREEZING POINT (°C): N/A

VISCOSITY (CST): N/A

INITIAL BOILING POINT/BOILING RANGE (°C): N/A

MOLECULAR WEIGHT (G/MOL): N/A

FLASH POINT (°C): N/A

TASTE: N/A

EVAPORATION RATE: N/A

EXPLOSIVE PROPERTIES: N/A

FLAMMABILITY: N/A

OXIDISING PROPERTIES: N/A

UPPER EXPLOSIVE LIMIT (%): N/A

SURFACE TENSION (DYN/CM OR MN/M): N/A

ECO CorFlex

Molecular Industrial Polymers

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PRODUCT NAME: POLY – POLY PRO II (PART A)

HMIS RATINGS: H F R

PRODUCT DESCRIPTION: CLEAR POLYURETHANE (2A: 1B)

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

LOWER EXPLOSIVE LIMIT (%): N/A

VOLATILE COMPONENT (%VOL): N/A

VAPOUR PRESSURE (KPA): N/A

GAS GROUP: N/A

SOLUBILITY IN WATER IMMISCIBLE PH AS A SOLUTION (1%): N/A

VAPOUR DENSITY (AIR = 1): N/A

VOC G/L: N/A

SECTION X: STABILITY & REACTIVITY DATA

REACTIVITY: SEE SECTION 7

CHEMICAL STABILITY: UNSTABLE IN THE PRESENCE OF INCOMPATIBLE MATERIALS. PRODUCT IS CONSIDERED STABLE.

POSSIBILITY OF HAZARDOUS REACTIONS: SEE SECTION 7

CONDITIONS TO AVOID: SEE SECTION 7

INCOMPATIBLE MATERIALS: SEE SECTION 7

HAZARDOUS DECOMPOSITION PRODUCTS: SEE SECTION 5

SECTION XI: TOXICOLOGICAL INFORMATION

INFORMATION ON TOXICOLOGICAL EFFECTS

INHALED: THE MATERIAL CAN CAUSE RESPIRATORY IRRITATION IN SOME PERSONS. THE BODY'S RESPONSE TO SUCH IRRITATION CAN CAUSE FURTHER LUNG DAMAGE. RATS EXPOSED TO TRIETHANOLAMINE FOR SIX HOURS SHOWED NO ABNORMALITY.

INGESTION: TAKEN BY MOUTH, ISOTHIAZOLINONES HAVE MODERATE TO HIGH TOXICITY. THE MAJOR SIGNS OF TOXICITY ARE SEVERE STOMACH IRRITATION, LETHARGY, AND INCO-ORDINATION. INGESTION OF TRIETHANOLAMINE MAY CAUSE GASTRO-INTESTINAL IRRITATION WITH BLEEDING, BURNING OR PAINFUL SENSATIONS IN THE MOUTH, THROAT, CHEST AND ABDOMEN, VOMITING AND DIARRHOEA. ANIMAL TESTING HAS ALSO SHOWN SLUGGISHNESS, EXCESSIVE TEAR SECRETION, HAIRS STANDING UP, UNSTEADY GAIT, AND RED/BROWN DISCHARGE ON HAIR AROUND THE NOSE AND GENITALS.

ACCIDENTAL INGESTION OF THE MATERIAL MAY BE HARMFUL; ANIMAL EXPERIMENTS INDICATE THAT INGESTION OF LESS THAN 150 GRAM MAY BE FATAL OR MAY PRODUCE SERIOUS DAMAGE TO THE HEALTH OF THE INDIVIDUAL.

SKIN CONTACT: THE MATERIAL MAY ACCENTUATE ANY PRE-EXISTING DERMATITIS CONDITION. A 0.5% SOLUTION OF 1,2-BENZISOTHIAZOLINE-3-ONE (BIT) IS IRRITATING TO THE SKIN. EVEN 0.05% CAN CAUSE ALLERGY, ACCORDING TO PATCH TESTS, WITH REDDENING OF THE SKIN.

SAFETY DATA SHEET

PRODUCT NAME: POLY – POLY PRO II (PART A)

HMIS RATINGS: H F R

PRODUCT DESCRIPTION: CLEAR POLYURETHANE (2A: 1B)

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SECTION XI: TOXICOLOGICAL INFORMATION (CONT'D)

SOLUTIONS OF ISOTHIAZOLINONES MAY BE IRRITATING OR EVEN DAMAGING TO THE SKIN, DEPENDING ON CONCENTRATION. A CONCENTRATION OF OVER 0.1% CAN IRRITATE, AND OVER 0.5% CAN CAUSE SEVERE IRRITATION. OPEN CUTS, ABRADED OR IRRITATED SKIN SHOULD NOT BE EXPOSED TO THIS MATERIAL ENTRY INTO THE BLOOD-STREAM, THROUGH, FOR EXAMPLE, CUTS, ABRASIONS OR LESIONS, MAY PRODUCE SYSTEMIC INJURY WITH HARMFUL EFFECTS. EXAMINE THE SKIN PRIOR TO THE USE OF THE MATERIAL AND ENSURE THAT ANY EXTERNAL DAMAGE IS SUITABLY PROTECTED.

SKIN EXPOSURE TO TRIETHANOLAMINE MAY CAUSE SLIGHT IRRITATION WITH ITCHING, LOCAL REDNESS, SWELLING AND TISSUE DESTRUCTION, SENSITISATION (IN A SMALL PROPORTION OF INDIVIDUALS), AND REDDENED BLISTERS. EXPOSURE OF ANIMALS TO TOXIC LEVELS OF TRIETHANOLAMINE MAY CAUSE SLUGGISHNESS, UNSTEADY GAIT, EMACIATION AND DISCOLOURATION OF BODY ORGANS.

SKIN CONTACT WITH THE MATERIAL MAY BE HARMFUL; SYSTEMIC EFFECTS MAY RESULT FOLLOWING ABSORPTION.

THE MATERIAL MAY CAUSE MILD BUT SIGNIFICANT INFLAMMATION OF THE SKIN EITHER FOLLOWING DIRECT CONTACT OR AFTER A DELAY OF SOME TIME. REPEATED EXPOSURE CAN CAUSE CONTACT DERMATITIS WHICH IS CHARACTERISED BY REDNESS, SWELLING AND BLISTERING.

EYE: IF APPLIED TO THE EYES, THIS MATERIAL CAUSES SEVERE EYE DAMAGE. SOLUTIONS CONTAINING ISOTHIAZOLINONES MAY DAMAGE THE MUCOUS MEMBRANES AND CORNEA. ANIMAL TESTING SHOWED VERY LOW CONCENTRATIONS (UNDER 0.1%) DID NOT CAUSE IRRITATION, WHILE HIGHER LEVELS (3-5.5%) PRODUCED SEVERE IRRITATION AND DAMAGE TO THE EYE.

CHRONIC: THERE HAS BEEN CONCERN THAT THIS MATERIAL CAN CAUSE CANCER OR MUTATIONS, BUT THERE IS NOT ENOUGH DATA TO MAKE AN ASSESSMENT. LONG-TERM EXPOSURE TO RESPIRATORY IRRITANTS MAY RESULT IN AIRWAYS DISEASE, INVOLVING DIFFICULTY BREATHING AND RELATED WHOLE-BODY PROBLEMS. SKIN CONTACT WITH THE MATERIAL IS MORE LIKELY TO CAUSE A SENSITISATION REACTION IN SOME PERSONS COMPARED TO THE GENERAL POPULATION. AMPLE EVIDENCE FROM EXPERIMENTS EXISTS THAT THERE IS A SUSPICION THIS MATERIAL DIRECTLY REDUCES FERTILITY. SUBSTANCE ACCUMULATION, IN THE HUMAN BODY, MAY OCCUR AND MAY CAUSE SOME CONCERN FOLLOWING REPEATED OR LONG-TERM OCCUPATIONAL EXPOSURE. PROLONGED OR CHRONIC EXPOSURE TO ALKANOLAMINES MAY RESULT IN LIVER, KIDNEY OR NERVOUS SYSTEM INJURY. REPEATED INHALATION MAY AGGRAVATE ASTHMA AND LUNG DISEASE INVOLVING INFLAMMATION OR SCARRING. IN ANIMAL TESTING, 1,2-BENZISOTHIAZOLINE-3-ONE (BIT) DID NOT CAUSE TOXICITY TO THE EMBRYO OR BIRTH DEFECTS. THE MATERIAL DOES NOT CAUSE MUTATIONS OR AN INCREASE IN CANCER. THE ISOTHIAZOLINONES ARE KNOWN CONTACT SENSITISERS. SENSITISATION IS MORE LIKELY WITH THE CHLORINATED SPECIES AS OPPOSED TO THE NON-CHLORINATED SPECIES. TRIETHANOLAMINE IS REPORTED TO CAUSE REVERSIBLE KIDNEY AND LIVER DAMAGE BUT NOT CANCER OR FOETAL TOXICITY. HOWEVER, ITS REACTION WITH NITRITES AND NITROUS ACID MAY PRODUCE POTENT CANCER CAUSING AGENT - N-NITROSODIETHANOLAMINE.

SAFETY DATA SHEET

PRODUCT NAME: POLY – POLY PRO II (PART A)

HMIS RATINGS: H F R

PRODUCT DESCRIPTION: CLEAR POLYURETHANE (2A: 1B)

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SECTION XI: TOXICOLOGICAL INFORMATION (CONT'D)

TRIETHANOLAMINE

TOXICITY:

DERMAL (RAT) LD50: >2000 MG/KG[2]

ORAL (RAT) LD50: 4190 MG/KG[2]

IRRITATION:

EYE (RABBIT): 0.1 ML -

EYE (RABBIT): 10 MG - MILD

EYE (RABBIT): 5.62 MG - SEVERE

MINOR CONJUNCTIVAL IRRITATION

NO IRRITATION *

SKIN (HUMAN): 15 MG/3D (INT)-MILD

SKIN (RABBIT): 4 H OCCLUDED

SKIN (RABBIT): 560 MG/24 HR- MILD

DIPROPYLENE GLYCOL MONO-N-BUTYL ETHER – ALPHA ISOMER

TOXICITY

DERMAL (RAT) LD50: >2000 MG/KG[2]

ORAL (RAT) LD50: 1501.74 MG/KG[2]

IRRITATION

EYE: NO ADVERSE EFFECT OBSERVED (NOT IRRITATING)[1]

SKIN: NO ADVERSE EFFECT OBSERVED (NOT IRRITATING)[1]

TRIETHANOLAMINE: THE MATERIAL MAY PRODUCE SEVERE IRRITATION TO THE EYE CAUSING PRONOUNCED INFLAMMATION. REPEATED OR PROLONGED EXPOSURE TO IRRITANTS MAY PRODUCE CONJUNCTIVITIS. THE MATERIAL MAY CAUSE SKIN IRRITATION AFTER PROLONGED OR REPEATED EXPOSURE AND MAY PRODUCE ON CONTACT SKIN REDNESS, SWELLING, THE PRODUCTION OF VESICLES, SCALING AND THICKENING OF THE SKIN. STUDIES DONE SHOW THAT TRIETHANOLAMINE IS OF LOW TOXICITY FOLLOWING HIGH DOSE EXPOSURE BY SWALLOWING, SKIN CONTACT OR INHALATION. IT HAS NOT BEEN SHOWN TO CAUSE CANCER, GENETIC DEFECTS, REPRODUCTIVE OR DEVELOPMENTAL TOXICITY. 551TEAPCP

THE SUBSTANCE IS CLASSIFIED BY IARC AS GROUP 3:

NOT CLASSIFIABLE AS TO ITS CARCINOGENICITY TO HUMANS. EVIDENCE OF CARCINOGENICITY MAY BE INADEQUATE OR LIMITED IN ANIMAL TESTING.

SAFETY DATA SHEET

PRODUCT NAME: POLY – POLY PRO II (PART A)

HMIS RATINGS: H F R

PRODUCT DESCRIPTION: CLEAR POLYURETHANE (2A: 1B)

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SECTION XI: TOXICOLOGICAL INFORMATION (CONT'D)

NOTE: SUBSTANCE HAS BEEN SHOWN TO BE MUTAGENIC IN AT LEAST ONE ASSAY, OR BELONGS TO A FAMILY OF CHEMICALS PRODUCING DAMAGE OR CHANGE TO CELLULAR DNA.

LACHRYMATION, DIARRHOEA, CONVULSIONS, URINARY TRACT CHANGES, CHANGES IN BLADDER WEIGHT, CHANGES IN TESTICULAR WEIGHT, CHANGES IN THYMUS WEIGHT, CHANGES IN LIVER WEIGHT, DERMATITIS AFTER SYSTEMIC EXPOSURE, KIDNEY, URETER, BLADDER TUMOURS RECORDED. EQUIVOCAL TUMOURIGEN BY RTECS CRITERIA. DERMAL RABBIT VALUE QUOTED ABOVE IS FOR OCCLUDED PATCH IN MALE OR FEMALE ANIMALS * UNION CARBIDE

DIPROPYLENE GLYCOL MONO-N-BUTYL ETHER ALPHA ISOMER

FOR PROPYLENE GLYCOL ETHERS (PGES): TYPICAL PROPYLENE GLYCOL ETHERS INCLUDE PROPYLENE GLYCOL N-BUTYL ETHER (PNB); DIPROPYLENE GLYCOL N-BUTYL ETHER (DPNB); DIPROPYLENE GLYCOL METHYL ETHER ACETATE (DPMA) AND TRIPROPYLENE GLYCOL METHYL ETHER (TPM). TESTING OF A WIDE VARIETY OF PROPYLENE GLYCOL ETHERS HAS SHOWN THAT PROPYLENE GLYCOL-BASED ETHERS ARE LESS TOXIC THAN SOME ETHERS OF THE ETHYLENE SERIES.

PART 'A' CLEAR FINISH & TRIETHANOLAMINE

ASTHMA-LIKE SYMPTOMS MAY CONTINUE FOR MONTHS OR EVEN YEARS AFTER EXPOSURE TO THE MATERIAL ENDS. THIS MAY BE DUE TO A NON-ALLERGIC CONDITION KNOWN AS REACTIVE AIRWAYS DYSFUNCTION SYNDROME (RADS) WHICH CAN OCCUR AFTER EXPOSURE TO HIGH LEVELS OF HIGHLY IRRITATING COMPOUND. THE FOLLOWING INFORMATION REFERS TO CONTACT ALLERGENS AS A GROUP AND MAY NOT BE SPECIFIC TO THIS PRODUCT. CONTACT ALLERGIES QUICKLY MANIFEST THEMSELVES AS CONTACT ECZEMA, MORE RARELY AS URTICARIA OR QUINCKE'S OEDEMA. OVEREXPOSURE TO MOST OF THESE MATERIALS MAY CAUSE ADVERSE HEALTH EFFECTS. MANY AMINE-BASED COMPOUNDS CAN CAUSE RELEASE OF HISTAMINES, WHICH, IN TURN, CAN TRIGGER ALLERGIC AND OTHER PHYSIOLOGICAL EFFECTS, INCLUDING CONSTRICTION OF THE BRONCHI OR ASTHMA AND INFLAMMATION OF THE CAVITY OF THE NOSE.

SECTION XII: ECOLOGICAL INFORMATION

POLY PRO 'A' CLEAR FINISH: NO DATA AVAILABLE

TRIETHANOLAMINE

ENDPOINT	TEST DURATION (HR)	SPECIES	VALUE	SOURCE
LC50	96	FISH	11-800MG/L	2
EC50	48	CRUSTACEA	609.88MG/L	2
EC50	96	ALGAE OR OTHER AQUATIC PLANTS	169MG/L	1
EC0	24	CRUSTACEA	1-530MG/L	2
NOEC	504	CRUSTACEA	16MG/L	1

SAFETY DATA SHEET

PRODUCT NAME: POLY – POLY PRO II (PART A)

HMIS RATINGS: H F R

PRODUCT DESCRIPTION: CLEAR POLYURETHANE (2A: 1B)

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SECTION XII: ECOLOGICAL INFORMATION

DIPROPYLENE GLYCOL MONO-N-BUTYL ETHER – ALPHA ISOMER

ENDPOINT	TEST DURATION (HR)	SPECIES	VALUE	SOURCE
LC50	96	FISH	139.478MG/L	3
EC50	48	CRUSTACEA	>100MG/L	2
EC50	96	ALGAE OR OTHER AQUATIC PLANTS	519MG/L	2
ECO	48	CRUSTACEA	>=100MG/L	2
NOEC	48	CRUSTACEA	>1-MG/L	2

ON THE BASIS OF AVAILABLE EVIDENCE CONCERNING EITHER TOXICITY, PERSISTENCE, POTENTIAL TO ACCUMULATE AND OR OBSERVED ENVIRONMENTAL FATE AND BEHAVIOUR, THE MATERIAL MAY PRESENT A DANGER, IMMEDIATE OR LONG-TERM AND /OR DELAYED, TO THE STRUCTURE AND/ OR FUNCTIONING OF NATURAL ECOSYSTEMS.

DRINKING WATER STANDARDS: HYDROCARBON TOTAL: 10 UG/L (UK MAX.).

ENVIRONMENTAL FATE: ISOTHIAZOLINONES ARE ANTIMICROBIALS USED TO CONTROL BACTERIA, FUNGI, AND FOR WOOD PRESERVATION AND ANTIFOULING AGENTS. THEY ARE FREQUENTLY USED IN PERSONAL CARE PRODUCTS SUCH AS SHAMPOOS AND OTHER HAIR CARE PRODUCTS, AS WELL AS CERTAIN PAINT FORMULATIONS.

FOR TRIETHANOLAMINE:

KOC: 3 HALF-LIFE (HR) AIR: 4HENRY'S ATM M3 /MOL: 3.38E-19BOD 5 IF UNSTATED: NIL-0.17COD : 1.5THOD : 2.04; 1.61 P/PTHOD (MEASURED) 1.52 MG/MG (UNION CARBIDE)THOD (CALCULATED) 1.61 MG/MG (UNION CARBIDE)BCF : <1BIODEGRADABILITY: 96% DOC REDUCTION (OECD METHOD 301E)BOD; DAY 5: 8%, DAY 10: 9%, DAY 20: 66% PASSES STURM, AFNOR TESTS FOR BIODEGRADABILITY. REACHES MORE THAN 70% MINERALISATION IN OECD TEST FOR INHERENT BIODEGRADABILITY (ZAHN-WELLENS TEST). **DO NOT DISCHARGE INTO SEWER OR WATERWAYS.**

PERSISTENCE AND DEGRADABILITY

TRIETHANOLAMINE: WATER/SOIL PERSISTENCE = LOW; PERSISTENCE AIR = LOW

DIPROPYLENE GLYCOL MONO-N-BUTYL ETHER - ALPHA ISOMER: WATER/SOIL PERSISTENCE = HIGH; PERSISTENCE AIR = HIGH

BIOACCUMULATIVE POTENTIAL

TRIETHANOLAMINE: LOW (BCF = 3.9)

DIPROPYLENE GLYCOL MONO-N-BUTYL ETHER - ALPHA ISOMER: LOW (LOGKOW = 1.1274)

MOBILITY IN SOIL

TRIETHANOLAMINE: LOW (KOC = 10)

DIPROPYLENE GLYCOL MONO-N-BUTYL ETHER - ALPHA ISOMER: LOW (KOC = 10)

ECO CorFlex

Molecular Industrial Polymers

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HMIS RATINGS: H F R

PRODUCT DESCRIPTION: CLEAR POLYURETHANE (2A: 1B)

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SECTION XIII: DISPOSAL CONSIDERATIONS

WASTE TREATMENT METHODS

PRODUCT / PACKAGING DISPOSAL: CONTAINERS MAY STILL PRESENT A CHEMICAL HAZARD/ DANGER WHEN EMPTY.

RETURN TO SUPPLIER FOR REUSE/ RECYCLING IF POSSIBLE.

RECYCLE WHEREVER POSSIBLE.

CONSULT MANUFACTURER FOR RECYCLING OPTIONS OR CONSULT LOCAL OR REGIONAL WASTE MANAGEMENT AUTHORITY FOR DISPOSAL IF NO SUITABLE TREATMENT OR DISPOSAL FACILITY CAN BE IDENTIFIED.

MOST POLYURETHANE AMINE CATALYSTS AND THEIR BYPRODUCTS CAN BE CHEMICALLY OR BIOLOGICALLY DEGRADED.

INCINERATION IS THE PREFERRED METHOD OF DISPOSAL; HOWEVER, NITROGEN OXIDE EMISSION CONTROL MAY BE REQUIRED TO MEET CURRENT ENVIRONMENTAL REGULATIONS.

DRUM DISPOSAL

WHILE THE MANY LAWS, REGULATIONS, AND ORDINANCES GOVERNING THE DISPOSAL OF EMPTY CONTAINERS ARE VARIED AND COMPLEX, ONE PRINCIPLE IS COMMON TO ALL: THE RESPONSIBILITY FOR THE PROPER DISPOSAL OF EMPTY CONTAINERS LIES WITH THE WASTE GENERATOR.

MOREOVER, THE WASTE GENERATOR IS ALSO RESPONSIBLE FOR ANY INJURY TO HEALTH OR ENVIRONMENT CAUSED BY IMPROPER DISPOSAL.

LEGISLATION ADDRESSING WASTE DISPOSAL REQUIREMENTS MAY DIFFER BY COUNTRY, STATE AND/ OR TERRITORY. EACH USER MUST REFER TO LAWS OPERATING IN THEIR AREA.

DO NOT ALLOW WASH WATER FROM CLEANING OR PROCESS EQUIPMENT TO ENTER DRAINS.

IT MAY BE NECESSARY TO COLLECT ALL WASH WATER FOR TREATMENT BEFORE DISPOSAL.

SECTION XIV: TRANSPORT INFORMATION

LABELS REQUIRED

MARINE POLLUTANT: NO

LAND TRANSPORT (DOT): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS

AIR TRANSPORT (ICAO-IATA / DGR): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS

SEA TRANSPORT (IMDG-CODE / GGVSEE): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS

TRANSPORT IN BULK ACCORDING TO ANNEX II OF MARPOL AND THE IBC CODE: NOT APPLICABLE

ECO CorFlex

Molecular Industrial Polymers

SAFETY DATA SHEET

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HMIS RATINGS: H F R

PRODUCT DESCRIPTION: CLEAR POLYURETHANE (2A: 1B)

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SECTION XV: REGULATORY INFORMATION

FEDERAL REGULATIONS

SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT OF 1986 (SARA)

SECTION 311/312 HAZARD CATEGORIES

FLAMMABLE (GASES, AEROSOLS, LIQUIDS, OR SOLIDS): NO

GAS UNDER PRESSURE: NO

EXPLOSIVE: NO

SELF-HEATING: NO

PYROPHORIC (LIQUID OR SOLID): NO

PYROPHORIC GAS: NO

CORROSIVE TO METAL: NO

OXIDIZER (LIQUID, SOLID OR GAS): NO

ORGANIC PEROXIDE: NO

SELF-REACTIVE: NO

IN CONTACT WITH WATER EMITS FLAMMABLE GAS: NO

COMBUSTIBLE DUST: NO

CARCINOGENICITY: YES

ACUTE TOXICITY (ANY ROUTE OF EXPOSURE): NO

REPRODUCTIVE TOXICITY: YES

SKIN CORROSION OR IRRITATION: YES

RESPIRATORY OR SKIN SENSITIZATION: YES

SERIOUS EYE DAMAGE OR EYE IRRITATION: YES

SPECIFIC TARGET ORGAN TOXICITY (SINGLE OR REPEATED EXPOSURE): NO

ASPIRATION HAZARD: NO

GERM CELL MUTAGENICITY: NO

SIMPLE ASPHYXIAN: NO

HAZARDS NOT OTHERWISE CLASSIFIED: NO

US. EPA CERCLA HAZARDOUS SUBSTANCES AND REPORTABLE QUANTITIES (40 CFR 302.4): NONE REPORTED

US. CALIFORNIA PROPOSITION 65: NONE REPORTED

NATIONAL INVENTORY STATUS

ECO CorFlex

Molecular Industrial Polymers

SAFETY DATA SHEET

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HMIS RATINGS: H F R

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SECTION XV: REGULATORY INFORMATION (CONT'D)

AUSTRALIA - AICS YES

CANADA - DSL YES

CANADA - NDSL NO (DIPROPYLENE GLYCOL MONO-N-BUTYL ETHER - ALPHA ISOMER;
TRIETHANOLAMINE)

CHINA - IECSC YES

EUROPE - EINEC / ELINCS / NLP YES

JAPAN - ENCS YES

KOREA - KECI YES

NEW ZEALAND - NZIOC YES

PHILIPPINES - PICCS YES

USA - TSCA YES

TAIWAN - TCSI YES

MEXICO - INSQ YES

VIETNAM - NCI YES

RUSSIA - ARIPS YES

LEGEND:

YES = ALL CAS DECLARED INGREDIENTS ARE ON THE INVENTORY

NO = ONE OR MORE OF THE CAS LISTED INGREDIENTS ARE NOT ON THE INVENTORY AND ARE NOT
EXEMPT FROM LISTING(SEE SPECIFIC INGREDIENTS IN BRACKETS)

SECTION XVI: OTHER INFORMATION

ABBREVIATIONS & ACRONYMS:

PC—TWA: PERMISSIBLE CONCENTRATION-TIME WEIGHTED AVERAGE

PC—STEL: PERMISSIBLE CONCENTRATION-SHORT TERM EXPOSURE LIMIT

IARC: INTERNATIONAL AGENCY FOR RESEARCH ON CANCER

ACGIH: AMERICAN CONFERENCE OF GOVERNMENTAL INDUSTRIAL HYGIENISTS

STEL: SHORT TERM EXPOSURE LIMIT

TEEL: TEMPORARY EMERGENCY EXPOSURE LIMIT.

IDLH: IMMEDIATELY DANGEROUS TO LIFE OR HEALTH CONCENTRATIONS

OSF: ODOUR SAFETY FACTOR

ECO CorFlex

Molecular Industrial Polymers

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SECTION XVI: OTHER INFORMATION (CONT'D)

NOAEL :NO OBSERVED ADVERSE EFFECT LEVEL

LOAEL: LOWEST OBSERVED ADVERSE EFFECT LEVEL

TLV: THRESHOLD LIMIT VALUE

LOD: LIMIT OF DETECTION

OTV: ODOUR THRESHOLD VALUE

BCF: BIOCONCENTRATION FACTORS

BEI: BIOLOGICAL EXPOSURE INDEX

DISCLAIMER

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