ECO CorFlex
Molecular Industrial Polymers

SAFETY DATA SHEET

PRODUCT NAME: POLY – POLY PRO II (PART B) **HMIS RATINGS: H F R**

PRODUCT DESCRIPTION: CLEAR POLYURETHANE (2A: 1B) 4 1 1

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 19, 2019
INFORMATION PHONE #:	1-866-406-2628	**NAME OF PREPARER:**	TECH. DEPT.

SECTION II: HAZARDS IDENTIFICATION

CLASSIFICATION OF THE SUBSTANCE OR MIXTURE

CLASSIFICATION

EYE IRRITATION CATEGORY 2A

RESPIRATORY SENSITIZER CATEGORY 1

ACUTE AQUATIC HAZARD CATEGORY 3

ACUTE TOXICITY (INHALATION) CATEGORY 1

SKIN CORROSION/IRRITATION CATEGORY 2

SKIN SENSITIZER CATEGORY 1

CHRONIC AQUATIC HAZARD CATEGORY 3

HAZARD PICTOGRAM(S):

SIGNAL WORD: DANGER

HAZARD STATEMENTS:

H319 CAUSES SERIOUS EYE IRRITATION.

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

H330 FATAL IF INHALED.

H315 CAUSES SKIN IRRITATION.

H317 MAY CAUSE AN ALLERGIC SKIN REACTION.

H412 HARMFUL TO AQUATIC LIFE WITH LONG LASTING EFFECTS.

HAZARD(S) NOT OTHERWISE CLASSIFIED: NOT APPLICABLE

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

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

P260 DO NOT BREATHE DUST/FUME/GAS/MIST/VAPOURS/SPRAY.

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

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

PRECAUTIONARY STATEMENT(S) RESPONSE

P304+P340 IF INHALED: REMOVE VICTIM TO FRESH AIR AND KEEP AT REST IN A POSITION COMFORTABLE FOR BREATHING.

P303+P361+P353 IF ON SKIN (OR HAIR) REMOVE/TAKE OFF IMMEDIATELY ALL CONTAMINATED CLOTHING. RINSE SKIN WITH WATER/SHOWER.

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

P310 IMMEDIATELY CALL A POISON CENTER OR DOCTOR/PHYSICIAN.

PRECAUTIONARY STATEMENT(S) STORAGE

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

P405 STORE LOCKED UP.

PRECAUTIONARY STATEMENT(S) DISPOSAL

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

SECTION III: COMPOSITION & INFORMATION ON INGREDIENTS

NAME	CAS #	% BY WEIGHT
HEXAMETHYLENE DIISOCYANATE	822-06-0	<1
HEXAMETHYLENE DIISOCYANATE POLYMER	28182-81-2	50-80
HEXAMETHYLENE ISOCYANATE BLOCKED POLYMER	666723-27-9	5-20
TRIDECYL ALCOHOL, ETHOXYLATED, PHOSPHATED	9046-01-9	1-5
ISOPHORONE DIISOCYANATE HOMOPOLYMER	53880-05-0	5-10
N-BUTYL ACETATE	123-86-4	1-5
DIPROPYLENE GLYCOL MONOMETHYL ETHER	34590-94-8	5-10

THE SPECIFIC CHEMICAL IDENTITY AND/OR EXACT PERCENTAGE (CONCENTRATION) OF COMPOSITION HAS BEEN WITHHELD AS A TRADE SECRET.

SECTION IV: FIRST AID MEASURES (CONT'D)

DESCRIPTION OF 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. 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.

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.

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.

FOLLOWING UPTAKE BY INHALATION, MOVE PERSON TO AN AREA FREE FROM RISK OF FURTHER EXPOSURE. OXYGEN OR ARTIFICIAL RESPIRATION SHOULD BE ADMINISTERED AS NEEDED.

ASTHMATIC-TYPE SYMPTOMS MAY DEVELOP AND MAY BE IMMEDIATE OR DELAYED UP TO SEVERAL HOURS. TREATMENT IS ESSENTIALLY SYMPTOMATIC. A PHYSICIAN SHOULD BE CONSULTED.

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.

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

SECTION IV: FIRST AID MEASURES (CONT'D)

INDICATION OF ANY IMMEDIATE MEDICAL ATTENTION AND SPECIAL TREATMENT NEEDED

FOR SUB-CHRONIC AND CHRONIC EXPOSURES TO ISOCYANATES: THIS MATERIAL MAY BE A POTENT PULMONARY SENSITISER WHICH CAUSES BRONCHOSPASM EVEN IN PATIENTS WITHOUT PRIOR AIRWAY HYPERREACTIVITY. CLINICAL SYMPTOMS OF EXPOSURE INVOLVE MUCOSAL IRRITATION OF RESPIRATORY AND GASTROINTESTINAL TRACTS. CONJUNCTIVAL IRRITATION, SKIN INFLAMMATION (ERYTHEMA, PAIN VESICULATION) AND GASTROINTESTINAL DISTURBANCES OCCUR SOON AFTER EXPOSURE. PULMONARY SYMPTOMS INCLUDE COUGH, BURNING, SUBSTERNAL PAIN AND DYSPNOEA.

SOME CROSS-SENSITIVITY OCCURS BETWEEN DIFFERENT ISOCYANATES. NONCARDIOGENIC PULMONARY OEDEMA AND BRONCHOSPASM ARE THE MOST SERIOUS CONSEQUENCES OF EXPOSURE. MARKEDLY SYMPTOMATIC PATIENTS SHOULD RECEIVE OXYGEN, VENTILATORY SUPPORT AND AN INTRAVENOUS LINE. TREATMENT FOR ASTHMA INCLUDES INHALED SYMPATHOMIMETICS (EPINEPHRINE [ADRENALIN], TERBUTALINE) AND STEROIDS. ACTIVATED CHARCOAL (1 G/KG) AND A CATHARTIC (SORBITOL, MAGNESIUM CITRATE) MAY BE USEFUL FOR INGESTION. MYDRIATICS, SYSTEMIC ANALGESICS AND TOPICAL ANTIBIOTICS (SULAMYD) MAY BE USED FOR CORNEAL ABRASIONS. THERE IS NO EFFECTIVE THERAPY FOR SENSITISED WORKERS. [ELLENHORN AND BARCELOUX; MEDICAL TOXICOLOGY].

NOTE: ISOCYANATES CAUSE AIRWAY RESTRICTION IN NAIVE INDIVIDUALS WITH THE DEGREE OF RESPONSE DEPENDANT ON THE CONCENTRATION AND DURATION OF EXPOSURE. THEY INDUCE SMOOTH MUSCLE CONTRACTION WHICH LEADS TO BRONCHOCONSTRICTIVE EPISODES. ACUTE CHANGES IN LUNG FUNCTION, SUCH AS DECREASED FEV1, MAY NOT REPRESENT SENSITIVITY. [KAROL & JIN, FRONTIERS IN MOLECULAR TOXICOLOGY, PP 56-61, 1992]. PERSONNEL WHO WORK WITH ISOCYANATES, ISOCYANATE PREPOLYMERS OR POLYISOCYANATES SHOULD HAVE A PRE-PLACEMENT MEDICAL EXAMINATION AND PERIODIC EXAMINATIONS THEREAFTER, INCLUDING A PULMONARY FUNCTION TEST. ANYONE WITH A MEDICAL HISTORY OF CHRONIC RESPIRATORY DISEASE, ASTHMATIC OR BRONCHIAL ATTACKS, INDICATIONS OF ALLERGIC RESPONSES, RECURRENT ECZEMA OR SENSITISATION CONDITIONS OF THE SKIN SHOULD NOT HANDLE OR WORK WITH ISOCYANATES. ANYONE WHO DEVELOPS CHRONIC RESPIRATORY DISTRESS WHEN WORKING WITH ISOCYANATES SHOULD BE REMOVED FROM EXPOSURE AND EXAMINED BY A PHYSICIAN. FURTHER EXPOSURE MUST BE AVOIDED IF A SENSITIVITY TO ISOCYANATES OR POLYISOCYANATES HAS DEVELOPED.

SECTION V: FIRE FIGHTING MEASURES

EXTINGUISHING MEDIA: SMALL QUANTITIES OF WATER IN CONTACT WITH HOT LIQUID MAY REACT VIOLENTLY WITH GENERATION OF A LARGE VOLUME OF RAPIDLY EXPANDING HOT STICKY SEMI-SOLID FOAM. PRESENTS ADDITIONAL HAZARD WHEN FIRE FIGHTING IN A CONFINED SPACE. FOAM. DRY CHEMICAL POWDER.

SECTION V: FIRE FIGHTING MEASURES

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: ALERT FIRE BRIGADE AND TELL THEM LOCATION AND NATURE OF HAZARD. WEAR FULL BODY PROTECTIVE CLOTHING WITH BREATHING APPARATUS.

FIRE/EXPLOSION HAZARD

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

COMBUSTION PRODUCTS INCLUDE: CARBON DIOXIDE (CO2), ISOCYANATES, HYDROGEN CYANIDE AND MINOR AMOUNTS OF NITROGEN OXIDES (NOX), SULFUR OXIDES (SOX), OTHER PYROLYSIS PRODUCTS TYPICAL OF BURNING ORGANIC MATERIAL. MAY EMIT CORROSIVE FUMES. WHEN HEATED AT HIGH TEMPERATURES MANY ISOCYANATES DECOMPOSE RAPIDLY GENERATING A VAPOUR WHICH PRESSURISES CONTAINERS, POSSIBLY TO THE POINT OF RUPTURE. RELEASE OF TOXIC AND/OR FLAMMABLE ISOCYANATE VAPOURS MAY THEN OCCUR.

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: REMOVE ALL IGNITION SOURCES. CLEAN UP ALL SPILLS IMMEDIATELY.

PERSONAL PROTECTIVE EQUIPMENT ADVICE IS CONTAINED IN SECTION 8 OF THE SDS.

SECTION VII: HANDLING AND STORAGE

PRECAUTIONS FOR SAFE HANDLING

SAFE HANDLING: 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: FOR COMMERCIAL QUANTITIES OF ISOCYANATES: ISOCYANATES SHOULD BE STORED IN ADEQUATELY BUNDED AREAS. NOTHING ELSE SHOULD BE KEPT WITHIN THE SAME BUNDING. STORE IN ORIGINAL CONTAINERS. KEEP CONTAINERS SECURELY SEALED.

SECTION VII: HANDLING AND STORAGE (CONT'D)

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.

STORAGE INCOMPATIBILITY: AVOID CROSS CONTAMINATION BETWEEN THE TWO LIQUID PARTS OF PRODUCT (KIT). IF TWO PART PRODUCTS ARE MIXED OR ALLOWED TO MIX IN PROPORTIONS OTHER THAN MANUFACTURER'S RECOMMENDATION, POLYMERISATION WITH GELATION AND EVOLUTION OF HEAT (EXOTHERM) MAY OCCUR.

DIPROPYLENE GLYCOL MONOMETHYL ETHER: MAY FORM UNSTABLE PEROXIDES ON CONTACT WITH AIR REACTS VIOLENTLY WITH STRONG OXIDISERS, PERMANGANATES, PEROXIDES, AMMONIUM PERSULFATE, BROMINE DIOXIDE, SULFURIC ACID, NITRIC ACID, PERCHLORIC ACID AND OTHER STRONG ACIDS IS INCOMPATIBLE WITH ACID HALIDES, ALIPHATIC AMINES, ALKALIS, BORANES, ISOCYANATES ATTACKS SOME PLASTICS, RUBBER AND COATINGS. AVOID REACTION WITH WATER, ALCOHOLS AND DETERGENT SOLUTIONS. ISOCYANATES ARE ELECTROPHILES, AND AS SUCH THEY ARE REACTIVE TOWARD A VARIETY OF NUCLEOPHILES INCLUDING ALCOHOLS, AMINES, AND EVEN WATER. A RANGE OF EXOTHERMIC DECOMPOSITION ENERGIES FOR ISOCYANATES IS GIVEN AS 20-30 KJ/MOL.

THE RELATIONSHIP BETWEEN ENERGY OF DECOMPOSITION AND PROCESSING HAZARDS HAS BEEN THE SUBJECT OF DISCUSSION; IT IS SUGGESTED THAT VALUES OF ENERGY RELEASED PER UNIT OF MASS, RATHER THAN ON A MOLAR BASIS (J/G) BE USED IN THE ASSESSMENT.

SECTION VIII: EXPOSURE CONTROL / PERSONAL PROTECTION

CONTROL PARAMETERS

OCCUPATIONAL EXPOSURE LIMITS (OEL): INGREDIENT DATA

Source	Ingredient	Material name	TWA	STEL	Peak	Notes
US NIOSH Recommended Exposure Limits (RELs)	hexamethylene diisocyanate	1,6-Diisocyanatohexane; HDI; Hexamethylene-1,6-diisocyanate; 1,6-Hexamethylene diisocyanate; HMDI	0.005 ppm / 0.035 mg/m3	Not Available	0.020 ppm / 0.140 mg/m3	[10-minute]
US ACGIH Threshold Limit Values (TLV)	hexamethylene diisocyanate	Hexamethylene diisocyanate	0.005 ppm	Not Available	Not Available	TLV® Basis: URT irr; resp sens
US NIOSH Recommended Exposure Limits (RELs)	n-butyl acetate	Butyl acetate, n-Butyl ester of acetic acid, Butyl ethanoate	150 ppm / 710 mg/m3	950 mg/m3 / 200 ppm	Not Available	Not Available
US ACGIH Threshold Limit Values (TLV)	n-butyl acetate	Butyl acetate, all isomers	50 ppm	150 ppm	Not Available	TLV® Basis: Eye & URT irr
US OSHA Permissible Exposure Levels (PELs) - Table Z1	n-butyl acetate	n-Butyl-acetate	150 ppm / 710 mg/m3	Not Available	Not Available	Not Available
US NIOSH Recommended Exposure Limits (RELs)	dipropylene glycol monomethyl ether	Dipropylene glycol monomethyl ether, Dowanol® 50B	100 ppm / 600 mg/m3	900 mg/m3 / 150 ppm	Not Available	[skin]
US ACGIH Threshold Limit Values (TLV)	dipropylene glycol monomethyl ether	(2-Methoxymethylethoxy)propanol	100 ppm	150 ppm	Not Available	TLV® Basis: Eye & URT irr; CNS impair
US OSHA Permissible Exposure Levels (PELs) - Table Z1	dipropylene glycol monomethyl ether	Dipropylene glycol methyl ether	100 ppm / 600 mg/m3	Not Available	Not Available	Not Available

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

EMERGENCY LIMITS

Ingredient	Material name	TEEL-1	TEEL-2	TEEL-3
hexamethylene diisocyanate	Hexamethylene diisocyanate; (1,6-Diisocyanatohexane)	0.018 ppm	0.2 ppm	3 ppm
hexamethylene diisocyanate polymer	Hexamethylene diisocyanate polymer	7.8 mg/m3	86 mg/m3	510 mg/m3
isophorone diisocyanate homopolymer	Isocyanate-bearing waste (as CNs N.O.S.)	6 mg/m3	8.3 mg/m3	50 mg/m3
n-butyl acetate	Butyl acetate, n-	Not Available	Not Available	Not Available
dipropylene glycol monomethyl ether	Dipropylene glycol methyl ether	150 ppm	1700 ppm	9900 ppm

Ingredient	Original IDLH	Revised IDLH
hexamethylene diisocyanate	Not Available	Not Available

Ingredient	Original IDLH	Revised IDLH
hexamethylene diisocyanate	Not Available	Not Available
hexamethylene diisocyanate polymer	Not Available	Not Available
hexamethylene isocyanate blocked polymer	Not Available	Not Available
tridecyl alcohol, ethoxylated, phosphated	Not Available	Not Available
isophorone diisocyanate homopolymer	Not Available	Not Available
n-butyl acetate	1,700 ppm	Not Available
dipropylene glycol monomethyl ether	600 ppm	Not Available

EXPOSURE CONTROLS

APPROPRIATE ENGINEERING CONTROLS: ALL PROCESSES IN WHICH ISOCYANATES ARE USED SHOULD BE ENCLOSED WHEREVER POSSIBLE. TOTAL ENCLOSURE, ACCOMPANIED BY GOOD GENERAL VENTILATION, SHOULD BE USED TO KEEP ATMOSPHERIC CONCENTRATIONS BELOW THE RELEVANT EXPOSURE STANDARDS. 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: GLOVES, EYEWEAR, PROTECTIVE CLOTHING AND FOOTWEAR, RESPIRATOR

EYE AND FACE PROTECTION: SAFETY GLASSES WITH SIDE SHIELDS. CHEMICAL GOGGLES.

SKIN PROTECTION: SEE HAND PROTECTION BELOW

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

HANDS/FEET PROTECTION

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. DO NOT WEAR NATURAL RUBBER (LATEX GLOVES). ISOCYANATE RESISTANT MATERIALS INCLUDE TEFLON, VITON, NITRILE RUBBER AND SOME PVA GLOVES. PROTECTIVE GLOVES AND OVERALLS SHOULD BE WORN AS SPECIFIED IN THE APPROPRIATE NATIONAL STANDARD. DO NOT USE SKIN CREAM UNLESS NECESSARY AND THEN USE ONLY MINIMUM AMOUNT. ISOCYANATE VAPOUR MAY BE ABSORBED INTO SKIN CREAM AND THIS INCREASES HAZARD.

BODY PROTECTION: SEE OTHER PROTECTION BELOW

OTHER PROTECTION: ALL EMPLOYEES WORKING WITH ISOCYANATES MUST BE INFORMED OF THE HAZARDS FROM EXPOSURE TO THE CONTAMINANT AND THE PRECAUTIONS NECESSARY TO PREVENT DAMAGE TO THEIR HEALTH. THEY SHOULD BE MADE AWARE OF THE NEED TO CARRY OUT THEIR WORK SO THAT AS LITTLE CONTAMINATION AS POSSIBLE IS PRODUCED, AND OF THE IMPORTANCE OF THE PROPER USE OF ALL SAFEGUARDS AGAINST EXPOSURE TO THEMSELVES AND THEIR FELLOW WORKERS. OVERALLS. P.V.C.

RESPIRATORY PROTECTION: FULL FACE RESPIRATOR WITH SUPPLIED AIR. 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 FOR SPRAYING OR OPERATIONS WHICH MIGHT GENERATE AEROSOLS: FULL FACE RESPIRATOR WITH SUPPLIED AIR. IN CERTAIN CIRCUMSTANCES, PERSONAL PROTECTION OF THE INDIVIDUAL EMPLOYEE IS NECESSARY. PERSONAL PROTECTIVE DEVICES SHOULD BE REGARDED AS BEING SUPPLEMENTARY TO SUBSTITUTION AND ENGINEERING CONTROL AND SHOULD NOT BE USED IN PREFERENCE TO THEM AS THEY DO NOTHING TO ELIMINATE THE HAZARD.

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

HOWEVER, IN SOME SITUATIONS, MINIMISING EXPOSURE TO ISOCYANATES BY ENCLOSURE AND VENTILATION IS NOT POSSIBLE, AND OCCUPATIONAL EXPOSURE STANDARDS MAY BE EXCEEDED, PARTICULARLY DURING ON-SITE MIXING OF PAINTS, SPRAY-PAINTING, FOAMING AND MAINTENANCE OF MACHINE AND VENTILATION SYSTEMS. IN THESE SITUATIONS, AIR-LINE RESPIRATORS OR SELF-CONTAINED BREATHING APPARATUS COMPLYING WITH THE APPROPRIATE NATIONALS STANDARD MUST BE USED. ORGANIC VAPOUR RESPIRATORS WITH PARTICULATE PRE- FILTERS AND POWERED, AIR-PURIFYING RESPIRATORS ARE NOT SUITABLE.

PERSONAL PROTECTIVE EQUIPMENT MUST BE APPROPRIATELY SELECTED, INDIVIDUALLY FITTED AND WORKERS TRAINED IN THEIR CORRECT USE AND MAINTENANCE. PERSONAL PROTECTIVE EQUIPMENT MUST BE REGULARLY CHECKED AND MAINTAINED TO ENSURE THAT THE WORKER IS BEING PROTECTED. AIR-LINE RESPIRATORS OR SELF-CONTAINED BREATHING APPARATUS COMPLYING WITH THE APPROPRIATE NATIONAL STANDARD SHOULD BE USED DURING THE CLEAN-UP OF SPILLS AND THE REPAIR OR CLEAN-UP OF CONTAMINATED EQUIPMENT AND SIMILAR SITUATIONS WHICH CAUSE EMERGENCY EXPOSURES TO HAZARDOUS ATMOSPHERIC CONCENTRATIONS OF ISOCYANATE.

SECTION IX: PHYSICAL AND CHEMICAL PROPERTIES

INFORMATION ON BASIC 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

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

INHALED: INHALATION OF VAPOURS OR AEROSOLS (MISTS, FUMES), GENERATED BY THE MATERIAL DURING THE COURSE OF NORMAL HANDLING, MAY PRODUCE SEVERELY TOXIC EFFECTS; THESE MAY BE FATAL. THE MATERIAL IS NOT THOUGHT TO PRODUCE RESPIRATORY IRRITATION (AS CLASSIFIED BY EC DIRECTIVES USING ANIMAL MODELS). NEVERTHELESS INHALATION OF VAPOURS, FUMES OR AEROSOLS, ESPECIALLY FOR PROLONGED PERIODS, MAY PRODUCE RESPIRATORY DISCOMFORT AND OCCASIONALLY, DISTRESS. THE VAPOUR/MIST MAY BE HIGHLY IRRITATING TO THE UPPER RESPIRATORY TRACT AND LUNGS; THE RESPONSE MAY BE SEVERE ENOUGH TO PRODUCE BRONCHITIS AND PULMONARY OEDEMA. POSSIBLE NEUROLOGICAL SYMPTOMS ARISING FROM ISOCYANATE EXPOSURE INCLUDE HEADACHE, INSOMNIA, EUPHORIA, ATAXIA, ANXIETY NEUROSIS, DEPRESSION AND PARANOIA. DIPROPYLENE GLYCOL MONOMETHYL ETHER (DPME) MAY CAUSE DROWSINESS FROM WHICH RAPID RECOVERY OCCURS, AND IN FEW CASES BRAIN AND NERVES IMPAIRMENT.

INGESTION: DIPROPYLENE MONOMETHYL ETHER (DPME) PRODUCES MARKED CENTRAL NERVOUS SYSTEM DEPRESSION IN RATS. LETHAL DOSES PRODUCED FAILURE OF BREATHING WITHIN 48 HOURS. 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 SKIN CONTACT WITH THE MATERIAL MAY DAMAGE THE HEALTH OF THE INDIVIDUAL; SYSTEMIC EFFECTS MAY RESULT FOLLOWING ABSORPTION. CONTINUOUS SKIN CONTACT WITH DPME MAY CAUSE SCALY SKIN. TESTING ON ANIMALS HAS SHOWN THAT ABSORPTION THROUGH THE SKIN MAY CAUSE DROWSINESS, STOMACH DISTENSION AND IRRITATION AS WELL AS KIDNEY DAMAGE, AND HIGH DOSES MAY BE LETHAL. 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. THE MATERIAL MAY CAUSE MODERATE 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.

SECTION XI: TOXICOLOGICAL INFORMATION (CONT'D)

EYE: UNDILUTED DIPROPYLENE GLYCOL MONOMETHYL ETHER (DPME) MAY CAUSE EYE IRRITATION WITH REDNESS, PAIN AND SOMETIMES PHYSICAL INJURY. THESE ARE REVERSIBLE AND THERE IS NO PERMANENT DAMAGE. THIS MATERIAL MAY PRODUCE EYE IRRITATION IN SOME PERSONS AND PRODUCE EYE DAMAGE 24 HOURS OR MORE AFTER INSTILLATION. MODERATE INFLAMMATION MAY BE EXPECTED WITH REDNESS; CONJUNCTIVITIS MAY OCCUR WITH PROLONGED EXPOSURE.

CHRONIC: INHALING THIS PRODUCT IS MORE LIKELY TO CAUSE A SENSITISATION REACTION IN SOME PERSONS COMPARED TO THE GENERAL POPULATION. SKIN CONTACT WITH THE MATERIAL IS MORE LIKELY TO CAUSE A SENSITISATION REACTION IN SOME PERSONS COMPARED TO THE GENERAL POPULATION. PERSONS WITH A HISTORY OF ASTHMA OR OTHER RESPIRATORY PROBLEMS OR ARE KNOWN TO BE SENSITISED, SHOULD NOT BE ENGAGED IN ANY WORK INVOLVING THE HANDLING OF ISOCYANATES. [CCTRADE-BAYER, APMF].

DMPE CAUSES FEW ADVERSE EFFECTS, ALTHOUGH IT HAS CAUSED DECREASED CONSCIOUSNESS IN ANIMAL TESTING. IT HAS AN UNPLEASANT ODOUR. ANIMAL TESTING SHOWS THAT POLYMERIC MDI CAN DAMAGE THE NASAL CAVITIES AND LUNGS, CAUSING INFLAMMATION.AND INCREASED CELL GROWTH. THIS PRODUCT CONTAINS A POLYMER WITH A FUNCTIONAL GROUP CONSIDERED TO BE OF HIGH CONCERN. ISOTHIOCYANATES MAY CAUSE HYPERSENSITIVITY OF THE SKIN AND AIRWAYS. CONTAINS FREE ORGANIC ISOCYANATE. MIXING AND APPLICATION REQUIRES SPECIAL PRECAUTIONS AND USE OF PERSONAL PROTECTIVE GEAR [APMF].

clear high gloss	TOXICITY	IRRITATION
	Not Available	Not Available
hexamethylene diisocyanate	TOXICITY	IRRITATION
	Dermal (rabbit) LD50: =570 mg/kg[2]	Eye: adverse effect observed (irritating)[1]
	Inhalation (rat) LC50: 0.06 mg/l/4h[2]	Skin: adverse effect observed (corrosive)[1]
	Oral (rat) LD50: =710 mg/kg[2]	Skin: adverse effect observed (irritating)[1]
hexamethylene diisocyanate polymer	TOXICITY	IRRITATION
	dermal (rat) LD50: >2000 mg/kg[1]	Skin (rabbit): 500 mg - moderate
	Inhalation (rat) LC50: 4.625 mg/l/1hr[2]	
	Oral (rat) LD50: approximately2000 mg/kg[1]	
hexamethylene isocyanate blocked polymer	TOXICITY	IRRITATION
	Not Available	Not Available
tridecyl alcohol, ethoxylated, phosphated	TOXICITY	IRRITATION
	Not Available	Not Available

SECTION XI: TOXICOLOGICAL INFORMATION (CONT'D)

isophorone diisocyanate homopolymer	

TOXICITY	IRRITATION
Not Available	Not Available

n-butyl acetate	

TOXICITY	IRRITATION
Dermal (rabbit) LD50: 3200 mg/kg[2]	Eye (human): 300 mg
Inhalation (rat) LC50: 1.802 mg/l4 h[1]	Eye (rabbit): 20 mg (open)-SEVERE
Oral (rat) LD50: =10700 mg/kg[2]	Eye (rabbit): 20 mg/24h - moderate
	Eye: no adverse effect observed (not irritating)[1]
	Skin (rabbit): 500 mg/24h-moderate
	Skin: no adverse effect observed (not irritating)[1]

dipropylene glycol monomethyl ether	

TOXICITY	IRRITATION
Dermal (rabbit) LD50: 9500 mg/kg[2]	Eye (human): 8 mg - mild
Oral (rat) LD50: 5130 mg/kg[2]	Eye (rabbit): 500 mg/24hr - mild
	Skin (rabbit): 238 mg - mild
	Skin (rabbit): 500 mg (open)-mild

Legend:	*1. Value obtained from Europe ECHA Registered Substances - Acute toxicity 2.* Value obtained from manufacturer's SDS. Unless otherwise specified data extracted from RTECS - Register of Toxic Effect of chemical Substances*

HEXAMETHYLENE DIISOCYANATE	For 1,6-hexamethylene diisocyanate (HDI): Exposures to HDI are often associated with exposures to its prepolymers, one of which is widely used as a hardener in automobile and airplane paints. Both the prepolymers and the native substance may cause asthma. Aromatic and aliphatic diisocyanates may cause airway toxicity and skin sensitization. Monomers and prepolymers exhibit similar respiratory effect.
HEXAMETHYLENE DIISOCYANATE POLYMER	* Bayer SDS ** Ardex SDS The material may produce moderate eye irritation leading to inflammation. Repeated or prolonged exposure to irritants may produce conjunctivitis.
HEXAMETHYLENE ISOCYANATE BLOCKED POLYMER	SDS Ardex 6 P Part B Crosslinker Ardex Engineered Cements
TRIDECYL ALCOHOL, ETHOXYLATED, PHOSPHATED	For alkyl alcohol alkoxylate phosphate (AAAPD) surfactants (alkyl or alcohol ether phosphates): Acute toxicity: This group of surfactants exhibit similar effects to the alcohol ether sulfates (AAASDs, such as sodium lauryl ether sulfate). They are likely to be irritating to the skin and eyes (R36/R38) in their undiluted forms, but not acutely toxic.
N-BUTYL ACETATE	The material may produce severe irritation to the eye causing pronounced inflammation. Repeated or prolonged exposure to irritants may produce conjunctivitis.
DIPROPYLENE GLYCOL MONOMETHYL ETHER	The material may be irritating to the eye, with prolonged contact causing inflammation. Repeated or prolonged exposure to irritants may produce conjunctivitis.

Clear High Gloss - & HEXAMETHYLENE DIISOCYANATE & HEXAMETHYLENE DIISOCYANATE POLYMER	Allergic reactions involving the respiratory tract are usually due to interactions between IgE antibodies and allergens and occur rapidly. Allergic potential of the allergen and period of exposure often determine the severity of symptoms. Attention should be paid to atopic diathesis, characterised by increased susceptibility to nasal inflammation, asthma and eczema. Exogenous allergic alveolitis is induced essentially by allergen specific immune-complexes of the IgG type; cell-mediated reactions (T lymphocytes) may be involved. Such allergy is of the delayed type with onset up to four hours following exposure.

SECTION XI: TOXICOLOGICAL INFORMATION (CONT'D)

Clear High Gloss - & HEXAMETHYLENE DIISOCYANATE & HEXAMETHYLENE DIISOCYANATE POLYMER & HEXAMETHYLENE ISOCYANATE BLOCKED POLYMER & ISOPHORONE DIISOCYANATE HOMOPOLYMER	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. Isocyanate vapours are irritating to the airways and can cause their inflammation, with wheezing, gasping, severe distress, even loss of consciousness and fluid in the lungs. Nervous system symptoms that may occur include headache, sleep disturbance, euphoria, inco-ordination, anxiety, depression and paranoia.
Clear High Gloss - & DIPROPYLENE GLYCOL MONOMETHYL ETHER	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.
HEXAMETHYLENE DIISOCYANATE & TRIDECYL ALCOHOL, ETHOXYLATED, PHOSPHATED & DIPROPYLENE GLYCOL MONOMETHYL ETHER	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.
HEXAMETHYLENE DIISOCYANATE & TRIDECYL ALCOHOL, ETHOXYLATED, PHOSPHATED	No significant acute toxicological data identified in literature search.
HEXAMETHYLENE DIISOCYANATE POLYMER & N-BUTYL ACETATE & DIPROPYLENE GLYCOL MONOMETHYL ETHER	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.

Acute Toxicity	✔	Carcinogenicity	✘
Skin Irritation/Corrosion	✔	Reproductivity	✘
Serious Eye Damage/Irritation	✔	STOT - Single Exposure	✘
Respiratory or Skin sensitisation	✔	STOT - Repeated Exposure	✘
Mutagenicity	✘	Aspiration Hazard	✘

Legend: ✘ *– Data either not available or does not fill the criteria for classification*
✔ *– Data available to make classification*

SECTION XII: ECOLOGICAL INFORMATION

TOXICITY

Clear High Gloss -

ENDPOINT	TEST DURATION (HR)	SPECIES	VALUE	SOURCE
Not Available	Not Available	Not Available	Not Available	Not Available

SECTION XII: ECOLOGICAL INFORMATION (CONT'D)

hexamethylene diisocyanate

ENDPOINT	TEST DURATION (HR)	SPECIES	VALUE	SOURCE
LC50	96	Fish	22mg/L	1
EC50	72	Algae or other aquatic plants	>77.4mg/L	2
NOEC	72	Algae or other aquatic plants	4.9mg/L	2

hexamethylene diisocyanate polymer

ENDPOINT	TEST DURATION (HR)	SPECIES	VALUE	SOURCE
LC50	96	Fish	8.9mg/L	2
EC50	48	Crustacea	127mg/L	2
EC50	72	Algae or other aquatic plants	>1-mg/L	2
EC0	24	Crustacea	>=1-mg/L	2

hexamethylene isocyanate blocked polymer

ENDPOINT	TEST DURATION (HR)	SPECIES	VALUE	SOURCE
Not Available	Not Available	Not Available	Not Available	Not Available

tridecyl alcohol, ethoxylated, phosphated

ENDPOINT	TEST DURATION (HR)	SPECIES	VALUE	SOURCE
Not Available	Not Available	Not Available	Not Available	Not Available

isophorone diisocyanate homopolymer

ENDPOINT	TEST DURATION (HR)	SPECIES	VALUE	SOURCE
Not Available	Not Available	Not Available	Not Available	Not Available

n-butyl acetate

ENDPOINT	TEST DURATION (HR)	SPECIES	VALUE	SOURCE
LC50	96	Fish	18mg/L	4
EC50	48	Crustacea	=32mg/L	1
EC50	96	Algae or other aquatic plants	1.675mg/L	3
EC90	72	Algae or other aquatic plants	1-540.7mg/L	2
NOEC	504	Crustacea	23.2mg/L	2

dipropylene glycol monomethyl ether

ENDPOINT	TEST DURATION (HR)	SPECIES	VALUE	SOURCE
LC50	96	Fish	>1-930mg/L	2
EC50	48	Crustacea	1-930mg/L	2
EC50	72	Algae or other aquatic plants	6-999mg/L	2
NOEC	528	Crustacea	>=0.5mg/L	2

Legend: *Extracted from 1. IUCLID Toxicity Data 2. Europe ECHA Registered Substances - Ecotoxicological Information - Aquatic Toxicity 3. EPIWIN Suite V3.12 (QSAR) - Aquatic Toxicity Data (Estimated) 4. US EPA, Ecotox database - Aquatic Toxicity Data 5. ECETOC Aquatic Hazard Assessment Data 6. NITE (Japan) - Bioconcentration Data 7. METI (Japan) - Bioconcentration Data 8. Vendor Data*

SECTION XII: ECOLOGICAL INFORMATION (CONT'D)

HARMFUL TO AQUATIC ORGANISMS, MAY CAUSE LONG-TERM ADVERSE EFFECTS IN THE AQUATIC ENVIRONMENT. DO NOT ALLOW PRODUCT TO COME IN CONTACT WITH SURFACE WATERS OR TO INTERTIDAL AREAS BELOW THE MEAN HIGH WATER MARK. DO NOT CONTAMINATE WATER WHEN CLEANING EQUIPMENT OR DISPOSING OF EQUIPMENT WASH-WATERS.

FOR PROPYLENE GLYCOL ETHERS: LOG KOW'S RANGE FROM 0.309 FOR TPM TO 1.523 FOR DPNB. CALCULATED BCFS RANGE FROM 1.47 FOR DPNB TO 3.16 FOR DPMA AND TPM, INDICATING LOW BIOACCUMULATION. **FOR POLYISOCYANATES:** POLYISOCYANATES ARE NOT READILY BIODEGRADABLE. HOWEVER, DUE TO OTHER ELIMINATION MECHANISMS (HYDROLYSIS, ADSORPTION), LONG RETENTION TIMES IN WATER ARE NOT TO BE EXPECTED. **FOR ISOCYANATE MONOMERS:** ENVIRONMENTAL FATE: ISOCYANATES, (DI- AND POLYFUNCTIONAL ISOCYANATES) ARE COMMONLY USED TO MAKE VARIOUS POLYMERS, SUCH AS POLYURETHANES. POLYURETHANES FIND SIGNIFICANT APPLICATION IN THE MANUFACTURE OF RIGID & FLEXIBLE FOAMS. DO NOT DISCHARGE INTO SEWER OR WATERWAYS.

Persistence and degradability

Ingredient	Persistence: Water/Soil	Persistence: Air
hexamethylene diisocyanate	LOW	LOW
hexamethylene diisocyanate polymer	HIGH	HIGH
isophorone diisocyanate homopolymer	HIGH	HIGH
n-butyl acetate	LOW	LOW
dipropylene glycol monomethyl ether	HIGH	HIGH

Bioaccumulative potential

Ingredient	Bioaccumulation
hexamethylene diisocyanate	LOW (LogKOW = 3.1956)
hexamethylene diisocyanate polymer	LOW (LogKOW = 7.5795)
isophorone diisocyanate homopolymer	MEDIUM (LogKOW = 4.2608)
n-butyl acetate	LOW (BCF = 14)
dipropylene glycol monomethyl ether	LOW (BCF = 100)

Mobility in soil

Ingredient	Mobility
hexamethylene diisocyanate	LOW (KOC = 5864)
hexamethylene diisocyanate polymer	LOW (KOC = 18560000)
isophorone diisocyanate homopolymer	LOW (KOC = 19770)
n-butyl acetate	LOW (KOC = 20.86)
dipropylene glycol monomethyl ether	LOW (KOC = 10)

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. 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. DO NOT RECYCLE SPILLED MATERIAL. CONSULT STATE LAND WASTE MANAGEMENT AUTHORITY FOR 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

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

SECTION XV: REGULATORY INFORMATION (CONT'D)

IN CONTACT WITH WATER EMITS FLAMMABLE GAS: NO

COMBUSTIBLE DUST: NO

CARCINOGENICITY: NO

ACUTE TOXICITY (ANY ROUTE OF EXPOSURE): YES

REPRODUCTIVE TOXICITY: NO

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 ASPHYXIANT: NO

HAZARDS NOT OTHERWISE CLASSIFIED: NO

US. EPA CERCLA HAZARDOUS SUBSTANCES AND REPORTABLE QUANTITIES (40 CFR 302.4):

Name	Reportable Quantity in Pounds (lb)	Reportable Quantity in kg
Butyl acetate	5000	2270

US. CALIFORNIA PROPOSITION 65: NONE REPORTED

NATIONAL INVENTORY STATUS

National Inventory	Status
Australia - AICS	Yes
Canada - DSL	Yes
Canada - NDSL	No (n-butyl acetate; hexamethylene isocyanate blocked polymer; tridecyl alcohol, ethoxylated, phosphated; isophorone diisocyanate homopolymer; dipropylene glycol monomethyl ether; hexamethylene diisocyanate)
China - IECSC	No (hexamethylene isocyanate blocked polymer)
Europe - EINEC / ELINCS / NLP	No (hexamethylene isocyanate blocked polymer; tridecyl alcohol, ethoxylated, phosphated)
Japan - ENCS	No (hexamethylene diisocyanate polymer; hexamethylene isocyanate blocked polymer; tridecyl alcohol, ethoxylated, phosphated; isophorone diisocyanate homopolymer)
Korea - KECI	Yes
New Zealand - NZIoC	Yes
Philippines - PICCS	Yes
USA - TSCA	Yes
Taiwan - TCSI	Yes
Mexico - INSQ	No (hexamethylene diisocyanate polymer; hexamethylene isocyanate blocked polymer; tridecyl alcohol, ethoxylated, phosphated; isophorone diisocyanate homopolymer)
Vietnam - NCI	Yes
Russia - ARIPS	No (hexamethylene isocyanate blocked polymer; isophorone diisocyanate homopolymer)
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)*

SAFETY DATA SHEET

PRODUCT NAME: POLY – POLY PRO II (PART B) **HMIS RATINGS: H F R**

PRODUCT DESCRIPTION: CLEAR POLYURETHANE (2A: 1B) 4 1 1

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
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

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