

# ECO CorFlex

## Molecular Industrial Polymers

### SAFETY DATA SHEET

**PRODUCT NAME:** POLY HYBRID XLO (PART A)

**HMIS RATINGS:** H F R

**PRODUCT DESCRIPTION:** CLEAR POLYUREA FAST CURE (1A:1B)

3 2 0

#### 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 13, 2022
<b>INFORMATION PHONE #:</b>	1-866-406-2628	<b>NAME OF PREPARER:</b>	TECH. DEPT.

#### SECTION II: HAZARDS IDENTIFICATION

##### CLASSIFICATION OF THE SUBSTANCE OR MIXTURE

##### CLASSIFICATION:

SKIN CORROSION/IRRITATION: CATEGORY 1C

FLAMMABLE LIQUID: CATEGORY 4

CORROSIVE TO METALS: CATEGORY 1

SERIOUS EYE DAMAGE/EYE IRRITATION: CATEGORY 1

SKIN SENSITIZER: CATEGORY 1

CHRONIC AQUATIC HAZARD: CATEGORY 3

##### LABEL ELEMENTS

##### HAZARD PICTOGRAMS



**SIGNAL WORD:** DANGER!

##### HAZARD STATEMENTS

**H314** CAUSES SEVERE SKIN BURNS AND EYE DAMAGE.

**H227** COMBUSTIBLE LIQUID.

**H290** MAY BE CORROSIVE TO METALS.

**H317** MAY CAUSE AN ALLERGIC SKIN REACTION.

**H412** HARMFUL TO AQUATIC LIFE WITH LONG LASTING EFFECTS.

**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

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

P210 KEEP AWAY FROM HEAT/SPARKS/OPEN FLAMES/HOT SURFACES. - NO SMOKING.

P234 KEEP ONLY IN ORIGINAL CONTAINER.

P260 DO NOT BREATHE MIST/VAPOURS/SPRAY.

P264 WASH THOROUGHLY AFTER HANDLING.

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

P273 AVOID RELEASE TO THE ENVIRONMENT.

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

##### PRECAUTIONARY STATEMENT(S) RESPONSE

P301+P330+P331 IF SWALLOWED: RINSE MOUTH. DO NOT INDUCE VOMITING.

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

P302+P352 IF ON SKIN: WASH WITH PLENTY OF WATER.

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

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

P363 WASH CONTAMINATED CLOTHING BEFORE REUSE.

P304+P340 IF INHALED: REMOVE PERSON TO FRESH AIR AND KEEP COMFORTABLE FOR BREATHING.

P390 ABSORB SPILLAGE TO PREVENT MATERIAL DAMAGE

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

##### PRECAUTIONARY STATEMENT(S) STORAGE

P403+P235 STORE IN A WELL-VENTILATED PLACE. KEEP COOL.

P405 STORE LOCKED UP.

##### PRECAUTIONARY STATEMENT(S) DISPOSAL

P501 DISPOSE OF CONTENTS/CONTAINER TO AUTHORISED HAZARDOUS OR SPECIAL WASTE COLLECTION POINT IN ACCORDANCE WITH ANY LOCAL REGULATION.

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

HAZARDOUS INGREDIENTS	WT. %	CAS NUMBER
ASPARTIC ACID, N,N'-(METHYLENEDICYCLOHEXANEDIYL)BIS-,ESTER	40-70	136210-30-5
ASPARTIC ACID, N,N'-(METHYLENEDICYCLOHEXANEDIYL)BIS-,ESTER	10-25	136210-32-7
BIS(1,2,2,6,6-PENTAMETHYL-4-PIPERIDYL)SEBACATE	1-5	41556-26-7
LATENT ALIPHATIC POLYAMINE	1-5	54914-37-3

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

#### SECTION IV: FIRST AID MEASURES

##### 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.

##### FOR AMINES:

IF LIQUID AMINES COME IN CONTACT WITH EYES, IRRIGATE IMMEDIATELY AND CONTINUOUSLY WITH LOW PRESSURE FLOWING WATER, PREFERABLY FROM AN EYE WASH FOUNTAIN, FOR 15-30 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.

##### IF SKIN OR HAIR CONTACT OCCURS:

IMMEDIATELY FLUSH BODY AND CLOTHES WITH LARGE AMOUNTS OF WATER, USING SAFETY SHOWER IF AVAILABLE.

QUICKLY REMOVE ALL CONTAMINATED CLOTHING, INCLUDING FOOTWEAR.

WASH SKIN AND HAIR WITH RUNNING WATER. CONTINUE FLUSHING WITH WATER UNTIL ADVISED TO STOP BY THE POISONS INFORMATION CENTRE.

TRANSPORT TO HOSPITAL OR DOCTOR.

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

##### 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 LAUNDRING.

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.

INHALATION OF VAPOURS OR AEROSOLS (MISTS, FUMES) MAY CAUSE LUNG OEDEMA.

CORROSIVE SUBSTANCES MAY CAUSE LUNG DAMAGE (E.G. LUNG OEDEMA, FLUID IN THE LUNGS).

AS THIS REACTION MAY BE DELAYED UP TO 24 HOURS AFTER EXPOSURE, AFFECTED INDIVIDUALS NEED COMPLETE REST (PREFERABLY IN SEMI-RECUMBENT POSTURE) AND MUST BE KEPT UNDER MEDICAL OBSERVATION EVEN IF NO SYMPTOMS ARE (YET) MANIFESTED.

BEFORE ANY SUCH MANIFESTATION, THE ADMINISTRATION OF A SPRAY CONTAINING A DEXAMETHASONE DERIVATIVE OR BECLOMETHASONE DERIVATIVE MAY BE CONSIDERED.

**THIS MUST DEFINITELY BE LEFT TO A DOCTOR OR PERSON AUTHORISED BY HIM/HER.**

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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

FOR ADVICE, CONTACT A POISONS INFORMATION CENTRE OR A DOCTOR AT ONCE.

URGENT HOSPITAL TREATMENT IS LIKELY TO BE NEEDED.

**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.

TRANSPORT TO HOSPITAL OR DOCTOR WITHOUT DELAY.

##### 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

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

##### INDICATION OF ANY IMMEDIATE MEDICAL ATTENTION AND SPECIAL TREATMENT NEEDED

TREAT SYMPTOMATICALLY.

##### 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.

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]

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

##### 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 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 THE FOLLOWING:

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.

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

PERSONS WHO ARE CONCURRENTLY EXPOSED TO ISOCYANATES ALSO SHOULD BE KEPT UNDER MEDICAL SURVEILLANCE.

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**

ALERT FIRE BRIGADE AND TELL THEM LOCATION AND NATURE OF HAZARD.

WEAR FULL BODY PROTECTIVE CLOTHING WITH BREATHING APPARATUS.

**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.



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#### SECTION V: FIRE FIGHTING MEASURES (CONT'D)

##### FIRE/EXPLOSION HAZARD

COMBUSTIBLE.

SLIGHT FIRE HAZARD WHEN EXPOSED TO HEAT OR FLAME.

COMBUSTION PRODUCTS INCLUDE: CARBON DIOXIDE (CO<sub>2</sub>), NITROGEN OXIDES (NO<sub>x</sub>), OTHER PYROLYSIS PRODUCTS TYPICAL OF BURNING ORGANIC MATERIAL.

MAY EMIT CORROSIVE FUMES.

#### 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

DRAINS FOR STORAGE OR USE AREAS SHOULD HAVE RETENTION BASINS FOR PH ADJUSTMENTS AND DILUTION OF SPILLS BEFORE DISCHARGE OR DISPOSAL OF MATERIAL.

CHECK REGULARLY FOR SPILLS AND LEAKS.

CLEAN UP ALL SPILLS IMMEDIATELY.

AVOID BREATHING VAPOURS AND CONTACT WITH SKIN AND EYES.

###### FOR AMINES:

IF POSSIBLE (I.E., WITHOUT RISK OF CONTACT OR EXPOSURE), STOP THE LEAK.

CONTAIN THE SPILLED MATERIAL BY DIKING, THEN NEUTRALIZE.

###### MAJOR SPILLS

CLEAR AREA OF PERSONNEL AND MOVE UPWIND.

ALERT FIRE BRIGADE AND TELL THEM LOCATION AND NATURE OF HAZARD.

###### 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.

Personal Protective Equipment advice is contained in Section 8 of the SDS.

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#### 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

CONSIDER STORAGE UNDER INERT GAS.

STORE IN ORIGINAL CONTAINERS.

KEEP CONTAINERS SECURELY SEALED.

**DO NOT STORE NEAR ACIDS, OR OXIDISING AGENTS**

NO SMOKING, NAKED LIGHTS, HEAT OR IGNITION SOURCES.

##### CONDITIONS FOR SAFE STORAGE, INCLUDING ANY INCOMPATIBILITIES

##### SUITABLE CONTAINER

LINED METAL CAN, LINED METAL PAIL/ CAN.

PLASTIC PAIL.

FOR LOW VISCOSITY MATERIALS:

DRUMS AND JERRICANS MUST BE OF THE NON-REMOVABLE HEAD TYPE.

WHERE A CAN IS TO BE USED AS AN INNER PACKAGE, THE CAN MUST HAVE A SCREWED ENCLOSURE.

##### STORAGE INCOMPATIBILITY

SEGREGATE FROM ALCOHOL, WATER.

AVOID STRONG ACIDS, ACID CHLORIDES, ACID ANHYDRIDES AND CHLOROFORMATES.

AVOID CONTACT WITH COPPER, ALUMINIUM AND THEIR ALLOYS.

AVOID REACTION WITH OXIDISING AGENTS

AMINES ARE INCOMPATIBLE WITH:

ISOCYANATES, HALOGENATED ORGANICS, PEROXIDES, PHENOLS (ACIDIC), EPOXIDES, ANHYDRIDES, AND ACID HALIDES.

STRONG REDUCING AGENTS SUCH AS HYDRIDES, DUE TO THE LIBERATION OF FLAMMABLE GAS.

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

##### CONTROL PARAMETERS

OCCUPATIONAL EXPOSURE LIMITS (OEL)

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

**INGREDIENT:** POLY HYBRID XLO - TEEL-1: N/A TEEL-2: N/AV TEEL-3: N/A

HAZARDOUS INGREDIENTS	ORIGINAL IDHL	REVISED IDHL
ASPARTIC ACID, N,N'-(METHYLENEDICYCLOHEXANEDIYL)BIS-,ESTER	N/A	N/A
ASPARTIC ACID, N,N'-(METHYLENEDICYCLOHEXANEDIYL)BIS-,ESTER	N/A	N/A
BIS(1,2,2,6,6-PENTAMETHYL-4-PIPERIDYL)SEBACATE	N/A	N/A
LATENT ALIPHATIC POLYAMINE	N/A	N/A

#### OCCUPATIONAL EXPOSURE BANDING (OEB)

HAZARDOUS INGREDIENTS	OEB RATING	OEB LIMIT
ASPARTIC ACID, N,N'-(METHYLENEDICYCLOHEXANEDIYL)BIS-,ESTER	D	> 0.1 TO ≤ 1 PPM
ASPARTIC ACID, N,N'-(METHYLENEDICYCLOHEXANEDIYL)BIS-,ESTER	D	> 0.1 TO ≤ 1 PPM
BIS(1,2,2,6,6-PENTAMETHYL-4-PIPERIDYL)SEBACATE	D	> 0.1 TO ≤ 1 PPM
LATENT ALIPHATIC POLYAMINE	D	> 0.1 TO ≤ 1 PPM

**Notes:** Occupational exposure banding is a process of assigning chemicals into specific categories or bands based on a chemical's potency and the adverse health outcomes associated with exposure. The output of this process is an occupational exposure band (OEB), which corresponds to a range of exposure concentrations that are expected to protect worker health.

#### 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.



##### EYE AND FACE PROTECTION

CHEMICAL GOGGLES. FULL FACE SHIELD MAY BE REQUIRED FOR SUPPLEMENTARY BUT NEVER FOR PRIMARY PROTECTION OF EYES.

##### FOR AMINES (SPECIAL PRECAUTION):

AMINES ARE ALKALINE MATERIALS THAT CAN CAUSE RAPID AND SEVERE TISSUE DAMAGE. WEARING OF CONTACT LENSES WHILE WORKING WITH AMINES IS STRONGLY DISCOURAGED. WEARING LENSES CAN PROLONG CONTACT OF THE EYE TISSUE WITH THE AMINE, THEREBY CAUSING MORE SEVERE DAMAGE.

# ECO CorFlex

## Molecular Industrial Polymers

### SAFETY DATA SHEET

**PRODUCT NAME:** POLY HYBRID XLO (PART A)

**HMIS RATINGS:** H F R

**PRODUCT DESCRIPTION:** CLEAR POLYUREA FAST CURE (1A:1B)

3 2 0

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

**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

WHEN HANDLING CORROSIVE LIQUIDS, WEAR TROUSERS OR OVERALLS OUTSIDE OF BOOTS, TO AVOID SPILLS ENTERING BOOTS.

**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 CAN NOT BE CALCULATED IN ADVANCE AND HAS THEREFORE TO BE CHECKED PRIOR TO THE APPLICATION.

LEATHER WEAR NOT RECOMMENDED: CONTAMINATED LEATHER FOOTWEAR, WATCH BANDS, SHOULD BE DESTROYED, I.E. BURNT, AS THEY CANNOT BE ADEQUATELY DECONTAMINATED

##### **FOR AMINES:**

GLOVES MUST ONLY BE WORN ON CLEAN HANDS. AFTER USING GLOVES, HANDS SHOULD BE WASHED AND DRIED THOROUGHLY.

**BODY PROTECTION:** SEE OTHER PROTECTION BELOW

##### **OTHER PROTECTION:**

OVERALLS.

PVC APRON.

##### **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.

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

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

##### INFORMATION ON BASIC PHYSICAL AND CHEMICAL PROPERTIES

**APPEARANCE:** MOISTURE SENSITIVE. FAMILY OF PRODUCTS WHICH VARY IN THEIR PHYSICAL PROPERTIES AS A RESULT OF VARIATIONS IN PRODUCTION. DATA PRESENTED HERE IS FOR TYPICAL FAMILY MEMBER.

**PHYSICAL STATE** LIQUID

**RELATIVE DENSITY (WATER = 1)** NOT AVAILABLE

**ODOUR** NOT AVAILABLE

**PARTITION COEFFICIENT N-OCTANOL / WATER** NOT AVAILABLE

**ODOUR THRESHOLD** NOT AVAILABLE

**AUTO-IGNITION TEMPERATURE (°C)** NOT AVAILABLE

**PH (AS SUPPLIED)** NOT AVAILABLE

**DECOMPOSITION TEMPERATURE** NOT AVAILABLE

**MELTING POINT / FREEZING POINT (°C)** NOT AVAILABLE

**VISCOSITY (CST)** NOT AVAILABLE

**INITIAL BOILING POINT AND BOILING RANGE (°C)** NOT AVAILABLE

**MOLECULAR WEIGHT (G/MOL)** NOT AVAILABLE

**FLASH POINT (°C)** 86 **TASTE** NOT AVAILABLE

**EVAPORATION RATE** NOT AVAILABLE

**EXPLOSIVE PROPERTIES** NOT AVAILABLE

**FLAMMABILITY** COMBUSTIBLE

**OXIDISING PROPERTIES** NOT AVAILABLE

# ECO CorFlex

## Molecular Industrial Polymers

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

UPPER EXPLOSIVE LIMIT (%) NOT AVAILABLE  
SURFACE TENSION (DYN/CM OR MN/M) NOT AVAILABLE  
LOWER EXPLOSIVE LIMIT (%) NOT AVAILABLE  
VOLATILE COMPONENT (%VOL) NOT AVAILABLE  
VAPOUR PRESSURE (KPA) NOT AVAILABLE  
GAS GROUP NOT AVAILABLE  
SOLUBILITY IN WATER IMMISCIBLE  
PH AS A SOLUTION (1%) NOT AVAILABLE  
VAPOUR DENSITY (AIR = 1) NOT AVAILABLE  
VOC G/L NOT AVAILABLE

#### 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.

INHALATION OF AMINE VAPOURS MAY CAUSE IRRITATION OF THE MUCOUS MEMBRANE OF THE NOSE AND THROAT, AND LUNG IRRITATION WITH RESPIRATORY DISTRESS AND COUGH. SWELLING AND INFLAMMATION OF THE RESPIRATORY TRACT IS SEEN IN SERIOUS CASES; WITH HEADACHE, NAUSEA, FAINTNESS AND ANXIETY.

# ECO CorFlex

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#### SECTION XI: TOXICOLOGICAL INFORMATION (CONT'D)

THE MATERIAL HAS **NOT** BEEN CLASSIFIED BY EC DIRECTIVES OR OTHER CLASSIFICATION SYSTEMS AS "HARMFUL BY INHALATION". THIS IS BECAUSE OF THE LACK OF CORROBORATING ANIMAL OR HUMAN EVIDENCE.

##### INGESTION

THE MATERIAL CAN PRODUCE CHEMICAL BURNS WITHIN THE ORAL CAVITY AND GASTROINTESTINAL TRACT FOLLOWING INGESTION.

THE MATERIAL HAS **NOT** BEEN CLASSIFIED BY EC DIRECTIVES OR OTHER CLASSIFICATION SYSTEMS AS "HARMFUL BY INGESTION". THIS IS BECAUSE OF THE LACK OF CORROBORATING ANIMAL OR HUMAN EVIDENCE.

HIGH MOLECULAR WEIGHT MATERIAL; ON SINGLE ACUTE EXPOSURE WOULD BE EXPECTED TO PASS THROUGH GASTROINTESTINAL TRACT WITH LITTLE CHANGE / ABSORPTION.

OCCASIONALLY ACCUMULATION OF THE SOLID MATERIAL WITHIN THE ALIMENTARY TRACT MAY RESULT IN FORMATION OF A BEZOAR (CONCRETION), PRODUCING DISCOMFORT.

##### SKIN CONTACT

THE MATERIAL CAN PRODUCE CHEMICAL BURNS FOLLOWING DIRECT CONTACT WITH THE SKIN.

SKIN CONTACT IS NOT THOUGHT TO HAVE HARMFUL HEALTH EFFECTS (AS CLASSIFIED UNDER EC DIRECTIVES); THE MATERIAL MAY STILL PRODUCE HEALTH DAMAGE FOLLOWING ENTRY THROUGH WOUNDS, LESIONS OR ABRASIONS.

VOLATILE AMINE VAPOURS PRODUCE IRRITATION AND INFLAMMATION OF THE SKIN. DIRECT CONTACT CAN CAUSE BURNS.

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.

THERE IS SOME EVIDENCE TO SUGGEST THAT THIS MATERIAL CAN CAUSE INFLAMMATION OF THE SKIN ON CONTACT IN SOME PERSONS.

##### EYE

THE MATERIAL CAN PRODUCE CHEMICAL BURNS TO THE EYE FOLLOWING DIRECT CONTACT. VAPOURS OR MISTS MAY BE EXTREMELY IRRITATING.

IF APPLIED TO THE EYES, THIS MATERIAL CAUSES SEVERE EYE DAMAGE.

VAPOURS OF VOLATILE AMINES IRRITATE THE EYES, CAUSING EXCESSIVE SECRETION OF TEARS, INFLAMMATION OF THE CONJUNCTIVA AND SLIGHT SWELLING OF THE CORNEA, RESULTING IN "HALOS" AROUND LIGHTS. THIS EFFECT IS TEMPORARY, LASTING ONLY FOR A FEW HOURS.

# ECO CorFlex

## Molecular Industrial Polymers

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3 2 0

#### SECTION XI: TOXICOLOGICAL INFORMATION (CONT'D)

##### CHRONIC

REPEATED OR PROLONGED EXPOSURE TO CORROSIVES MAY RESULT IN THE EROSION OF TEETH, INFLAMMATORY AND ULCERATIVE CHANGES IN THE MOUTH AND NECROSIS (RARELY) OF THE JAW. BRONCHIAL IRRITATION, WITH COUGH, AND FREQUENT ATTACKS OF BRONCHIAL PNEUMONIA MAY ENSUE.

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.

SUBSTANCE ACCUMULATION, IN THE HUMAN BODY, MAY OCCUR AND MAY CAUSE SOME CONCERN FOLLOWING REPEATED OR LONG-TERM OCCUPATIONAL EXPOSURE.

THERE HAS BEEN SOME CONCERN THAT THIS MATERIAL CAN CAUSE CANCER OR MUTATIONS BUT THERE IS NOT ENOUGH DATA TO MAKE AN ASSESSMENT.

Poly Hybrid XLO Fast Cure	TOXICITY	IRRITATION
	Not Available	Not Available
aspartic acid, N,N'-(methylenedicyclohexanediyl)bis-,ester	TOXICITY	IRRITATION
	dermal (rat) LD50: >2000 mg/kg <sup>[1]</sup>	Eye : Mild
	Inhalation(Rat) LC50: >4.224 mg/L4h <sup>[1]</sup>	Skin : Moderate
	Oral(Rat) LD50: >2000 mg/kg <sup>[1]</sup>	
aspartic acid, N,N'-(methylenedicyclohexanediyl)bis-,ester	TOXICITY	IRRITATION
	dermal (rat) LD50: >2000 mg/kg <sup>[1]</sup>	Eye : Mild
	Inhalation(Rat) LC50: >4.224 mg/L4h <sup>[1]</sup>	Skin : Moderate
	Oral(Rat) LD50: >2000 mg/kg <sup>[1]</sup>	
bis(1,2,2,6,6-pentamethyl-4-piperidyl)sebacate	TOXICITY	IRRITATION
	Oral(Rat) LD50: 2369-3920 mg/kg <sup>[2]</sup>	Not Available
Latent aliphatic polyamine	TOXICITY	IRRITATION
	dermal (rat) LD50: >5000 mg/kg <sup>[1]</sup>	Skin (rabbit) 4h: CORROSIVE
	Oral(Rat) LD50: 4150 mg/kg <sup>[1]</sup>	
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	



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**3 2 0**

#### SECTION XI: TOXICOLOGICAL INFORMATION (CONT'D)

Poly Hybrid XLO Fast Cure	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
ASPARTIC ACID, N,N'-(METHYLENEDICYCLOHEXANEDIYL)BIS-,ESTER	physiological effects, including constriction of the bronchi or asthma and inflammation of the cavity of the nose. Whole-body symptoms include headache, nausea, faintness, anxiety, a decrease in blood pressure, rapid heartbeat, itching, reddening of the skin, urticaria (hives) and swelling of the face, which are usually transient. There are generally four routes of possible or potential exposure: inhalation, skin contact, eye contact, and swallowing. Inhalation: Inhaling vapours may result in moderate to severe irritation of the tissues of the nose and throat and can irritate the lungs.
LATENT ALIPHATIC POLYAMINE	for similar substance CAS 136210-10-32-7: 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.
Polyurea 5100 "A" Fast Cure & LATENT ALIPHATIC POLYAMINE	The material may be irritating to the eye, with prolonged contact causing inflammation. Repeated or prolonged exposure to irritants may produce conjunctivitis. The material may produce respiratory tract irritation, and result in damage to the lung including reduced lung function. 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.
Polyurea 5100 "A" Fast Cure & ASPARTIC ACID, N,N'-(METHYLENEDICYCLOHEXANEDIYL)BIS-,ESTER & BIS(1,2,2,6,6-PENTAMETHYL-4-PIPERIDYL)SEBACATE & LATENT ALIPHATIC POLYAMINE	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.
ASPARTIC ACID, N,N'-(METHYLENEDICYCLOHEXANEDIYL)BIS-,ESTER	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. The pathogenesis of contact eczema involves a cell-mediated (T lymphocytes) immune reaction of the delayed type.
ASPARTIC ACID, N,N'-(METHYLENEDICYCLOHEXANEDIYL)BIS-,ESTER	Evidence of sensitisation (adjuvant test) * After the first challenge very mild to clearly visible skin reddening was observed in 85% of the test substance animals. After the second challenge, very mild to clearly visible skin reddening was observed in 50% and 35% of the test substance animals challenged with 25% and 12% test substance respectively. Rat repeat dose oral toxicity - 29 days NOAEL 1000 mg/kg/day * Genotoxicity ? bacterial reverse mutation non mutagenic * Genotoxicity ? in vitro not determined * Genotoxicity ? in vivo erythrocyte micronucleus test non clastogenic * The notified chemical is considered to be of low acute toxicity via the oral, dermal and inhalation routes. Irritation and Sensitisation. The material is considered to be a slight skin and eye irritant and mild respiratory irritant and a skin sensitiser. As skin reactions were observed in 85% of animals at a concentration of 50%, the substance is considered to be a strong sensitiser. Repeated Dose Toxicity. In a 28 day study in rats, the No Observed Adverse Effect Level (NOAEL) was established as 1000 mg/kg bw/day based on the absence of adverse treatment related effects. Mutagenicity. The material was negative in an Ames test and an in vivo erythrocyte micronucleus test. The substance is not considered to be mutagenic. Neurotoxicity: In the in vivo mouse erythrocyte micronucleus test, following intraperitoneal administration of a fairly high dose (5345 mg/kg bw) some evidence of non-specific neurological impairment was seen. However, this was not observed in any of the tests conducted on any other species and could either be species-specific or an expression of generalised toxicity induced at high doses, as opposed to specific neurotoxicity. * NICNAS Report 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.

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

# ECO CorFlex

## Molecular Industrial Polymers

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**HMIS RATINGS: H F R**

**PRODUCT DESCRIPTION: CLEAR POLYUREA FAST CURE (1A:1B)**

**3 2 0**

#### SECTION XII: ECOLOGICAL INFORMATION

SECTION 12 Ecological information					
<b>Toxicity</b>					
Poly Hybrid XLO Fast Cure	Endpoint	Test Duration (hr)	Species	Value	Source
	Not Available	Not Available	Not Available	Not Available	Not Available
aspartic acid, N,N'-(methylenedicyclohexanediy)bis-,ester	Endpoint	Test Duration (hr)	Species	Value	Source
	NOEC(ECx)	504h	Crustacea	0.013mg/l	2
	EC50	72h	Algae or other aquatic plants	34mg/l	2
	EC50	48h	Crustacea	88.6mg/l	2
aspartic acid, N,N'-(methylenedicyclohexanediy)bis-,ester	Endpoint	Test Duration (hr)	Species	Value	Source
	NOEC(ECx)	504h	Crustacea	0.013mg/l	2
	EC50	72h	Algae or other aquatic plants	34mg/l	2
	EC50	48h	Crustacea	88.6mg/l	2
bis(1,2,2,6,6-pentamethyl-4-piperidyl)sebacate	Endpoint	Test Duration (hr)	Species	Value	Source
	EC0(ECx)	24h	Crustacea	<10mg/l	1
	LC50	96h	Fish	0.34mg/l	1
	Endpoint	Test Duration (hr)	Species	Value	Source
Latent aliphatic polyamine	NOEC(ECx)	48h	Crustacea	7.5mg/l	2
	EC50	72h	Algae or other aquatic plants	9.6mg/l	2
	EC50	48h	Crustacea	14.7mg/l	2
	LC50	96h	Fish	>53.7mg/l	2
<b>Legend:</b>	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				
<p>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 high molecular weight synthetic polymers: (according to the Sustainable Futures (SF) program (U.S. EPA 2005b; U.S. EPA 2012c) polymer assessment guidance.)            High MW polymers are expected:            · to have low vapour pressure and are not expected to undergo volatilization .            · to adsorb strongly to soil and sediment            · to be non-biodegradable (not anticipated to be assimilated by microorganisms.- therefore, biodegradation is not expected to be an important removal process. However many exceptions exist            High MW polymers are not expected to undergo removal by other degradative processes under environmental conditions            Prevent, by any means available, spillage from entering drains or water courses.  <b>DO NOT discharge into sewer or waterways.</b></p>					

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#### SECTION XII: ECOLOGICAL INFORMATION (CONT'D)

Persistence and degradability		
Ingredient	Persistence: Water/Soil	Persistence: Air
	No Data available for all ingredients	No Data available for all ingredients
Bioaccumulative potential		
Ingredient	Bioaccumulation	
	No Data available for all ingredients	
Mobility in soil		
Ingredient	Mobility	
	No Data available for all ingredients	

#### 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.

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.

#### SECTION XIV: TRANSPORT INFORMATION

Labels Required	
	
Marine Pollutant	NO

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#### SECTION XIV: TRANSPORT INFORMATION (CONT'D)

Land transport (DOT)	
UN number	2735
UN proper shipping name	Amines, liquid, corrosive, n.o.s..(contains aliphatic polyamine)
Transport hazard class(es)	Class 8
	Subrisk Not Applicable
Packing group	III
Environmental hazard	Not Applicable

Special precautions for user	Hazard Label	8
	Special provisions	IB3, T7, TP1, TP28

Air transport (ICAO-IATA / DGR)		
UN number	2735	
UN proper shipping name	Amines, liquid, corrosive, n.o.s..(contains aliphatic polyamine)	
Transport hazard class(es)	ICAO/IATA Class	8
	ICAO / IATA Subrisk	Not Applicable
	ERG Code	8L
Packing group	III	
Environmental hazard	Not Applicable	
Special precautions for user	Special provisions	A3 A803
	Cargo Only Packing Instructions	856
	Cargo Only Maximum Qty / Pack	60 L
	Passenger and Cargo Packing Instructions	852
	Passenger and Cargo Maximum Qty / Pack	5 L
	Passenger and Cargo Limited Quantity Packing Instructions	Y841
	Passenger and Cargo Limited Maximum Qty / Pack	1 L

Sea transport (IMDG-Code / GGVSee)		
UN number	2735	
UN proper shipping name	AMINES, LIQUID, CORROSIVE, N.O.S..(contains aliphatic polyamine)	
Transport hazard class(es)	IMDG Class	8
	IMDG Subrisk	Not Applicable
Packing group	III	
Environmental hazard	Not Applicable	
Special precautions for user	EMS Number	F-A, S-B
	Special provisions	223 274
	Limited Quantities	5 L

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#### SECTION XIV: TRANSPORT INFORMATION (CONT'D)

Transport in bulk according to Annex II of MARPOL and the IBC code

Not Applicable

Transport in bulk in accordance with MARPOL Annex V and the IMSBC Code

Product name	Group
aspartic acid, N,N'-(methylenedicyclohexanedyl)bis-,ester	Not Available
aspartic acid, N,N'-(methylenedicyclohexanedyl)bis-,ester	Not Available
bis(1,2,2,6,6-pentamethyl-4-piperidyl)sebacate	Not Available
Latent aliphatic polyamine	Not Available

Transport in bulk in accordance with the ICG Code

Product name	Ship Type
aspartic acid, N,N'-(methylenedicyclohexanedyl)bis-,ester	Not Available
aspartic acid, N,N'-(methylenedicyclohexanedyl)bis-,ester	Not Available
bis(1,2,2,6,6-pentamethyl-4-piperidyl)sebacate	Not Available
Latent aliphatic polyamine	Not Available

#### SECTION XV: REGULATORY INFORMATION

Safety, health and environmental regulations / legislation specific for the substance or mixture

aspartic acid, N,N'-(methylenedicyclohexanedyl)bis-,ester is found on the following regulatory lists

US Toxic Substances Control Act (TSCA) - Chemical Substance Inventory

US TSCA Chemical Substance Inventory - Interim List of Active Substances

aspartic acid, N,N'-(methylenedicyclohexanedyl)bis-,ester is found on the following regulatory lists

US Toxic Substances Control Act (TSCA) - Chemical Substance Inventory

US TSCA Chemical Substance Inventory - Interim List of Active Substances

bis(1,2,2,6,6-pentamethyl-4-piperidyl)sebacate is found on the following regulatory lists

US Toxic Substances Control Act (TSCA) - Chemical Substance Inventory

US TSCA Chemical Substance Inventory - Interim List of Active Substances

Latent aliphatic polyamine is found on the following regulatory lists

US Toxic Substances Control Act (TSCA) - Chemical Substance Inventory

US TSCA Chemical Substance Inventory - Interim List of Active Substances

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**PRODUCT DESCRIPTION:** CLEAR POLYUREA FAST CURE (1A:1B)

**3 2 0**

#### SECTION XV: REGULATORY INFORMATION (CONT'D)

##### Federal Regulations

##### Superfund Amendments and Reauthorization Act of 1986 (SARA)

##### Section 311/312 hazard categories

Flammable (Gases, Aerosols, Liquids, or Solids)	Yes
Gas under pressure	No
Explosive	No
Self-heating	No
Pyrophoric (Liquid or Solid)	No
Pyrophoric Gas	No
Corrosive to metal	Yes
Oxidizer (Liquid, Solid or Gas)	No
Organic Peroxide	No
Self-reactive	No
In contact with water emits flammable gas	No
Combustible Dust	No
Carcinogenicity	No
Acute toxicity (any route of exposure)	No
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)

None Reported

# ECO CorFlex

## Molecular Industrial Polymers

### SAFETY DATA SHEET

**PRODUCT NAME: POLY HYBRID XLO (PART A)**

**HMIS RATINGS: H F R**

**PRODUCT DESCRIPTION:** CLEAR POLYUREA FAST CURE (1A:1B)

3 2 0

#### SECTION XV: REGULATORY INFORMATION (CONT'D)

State Regulations	
<b>US. California Proposition 65</b> None Reported	
National Inventory Status	
National Inventory	Status
Australia - AIIIC / Australia Non-Industrial Use	Yes
Canada - DSL	Yes
Canada - NDSL	No (aspartic acid, N,N'-(methylenedicyclohexanediy)bis-.ester; aspartic acid, N,N'-(methylenedicyclohexanediy)bis-.ester; bis(1,2,2,6,6-pentamethyl-4-piperidyl)sebacate; Latent aliphatic polyamine)
China - IECSC	Yes
Europe - EINEC / ELINCS / NLP	No (aspartic acid, N,N'-(methylenedicyclohexanediy)bis-.ester)
Japan - ENCS	No (aspartic acid, N,N'-(methylenedicyclohexanediy)bis-.ester; aspartic acid, N,N'-(methylenedicyclohexanediy)bis-.ester)
Korea - KECI	Yes
New Zealand - NZIoC	Yes
Philippines - PICCS	No (aspartic acid, N,N'-(methylenedicyclohexanediy)bis-.ester; aspartic acid, N,N'-(methylenedicyclohexanediy)bis-.ester)
USA - TSCA	Yes
Taiwan - TCSI	Yes
Mexico - INSQ	No (aspartic acid, N,N'-(methylenedicyclohexanediy)bis-.ester; aspartic acid, N,N'-(methylenedicyclohexanediy)bis-.ester; Latent aliphatic polyamine)
Vietnam - NCI	Yes
Russia - FBEPH	No (Latent aliphatic polyamine)
<b>Legend:</b>	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

Other information
Classification of the preparation and its individual components has drawn on official and authoritative sources as well as independent review by the Chemwatch Classification committee using available literature references. The SDS is a Hazard Communication tool and should be used to assist in the Risk Assessment. Many factors determine whether the reported Hazards are Risks in the workplace or other settings.

# ECO CorFlex

## Molecular Industrial Polymers

### SAFETY DATA SHEET

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**PRODUCT NAME:** POLY HYBRID XLO (PART A)

**HMIS RATINGS:** H F R

**PRODUCT DESCRIPTION:** CLEAR POLYUREA FAST CURE (1A:1B)

3 2 0

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#### DISCLAIMER

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