HAZARD RATING
4=EXTREME
3=HIGH
2=MODERATE
1=SLIGHT
0=INSIGNIFICANT

SECTION I - GENERAL INFORMATION

PRODUCT IDENTIFICATION:
PROCOAT HBE SYSTEM PART A CLEAR

VOC CONTENT:
PART A ONLY: <100
PART B ONLY: 0
AS APPLIED: <50

CATEGORY:
INDUSTRIAL MAINTENANCE COATING

COMMON NAME:
HARDENER FOR EPOXY RESIN COATING

MANUFACTURER:
VEXCON CHEMICALS, INC

ADDRESS:
7240 STATE RD, PHILADELPHIA, PA 19135

EMERGENCY NO:
800.858.2828 (PolySat Inc)
CHEMTREC NO:
800.424.9300 (CCN# 23822)

PREPARED:
NOVEMBER 2016
UPDATED:
AUGUST 2017
PREPARED BY:
DARRYL F. MANUEL, PRESIDENT

SECTION II – HAZARD IDENTIFICATION

- Skin Corrosion/Burns
- Eye Damage
- Corrosive to metals
- Carcinogen
- Mutagenicity
- Reproductive Toxicity
- Respiratory Sensitizer
- Target Organ Toxicity
- Irritant (Eye & Skin)
- Skin Sensitizer
- Acute Toxicity
- Narcotic Effect
- Respiratory Tract Irritant

HEALTH AND SAFETY: DANGER: HARMFUL IF SWALLOWED OR IF INHALED. CAUSES SEVERE SKIN BURNS AND EYE DAMAGE. MAY CAUSE AN ALLERGIC SKIN REACTION. SUSPECTED OF DAMAGING FERTILITY OF THE UNBORN CHILD. USE ONLY WITH ADEQUATE VENTILATION. DO NOT INDUCE VOMITING. USE OF SOLVENT RESISTANT GLOVES, GOGGLES AND OTHER PROTECTIVE EQUIPMENT IS ADVISED. ASPIRATION OF MATERIAL INTO THE LUNGS CAN CAUSE CHEMICAL PNEUMONITIS WHICH CAN BE FATAL. USE OF RESPIRATORS IS ADVISED WHEN USING PRODUCT IN CONFINED AREA.

SECTION III HAZARDOUS INGREDIENTS

<table>
<thead>
<tr>
<th>MATERIAL OR COMPONENTS</th>
<th>CAS NO.</th>
<th>%</th>
<th>HAZARD DATA</th>
</tr>
</thead>
<tbody>
<tr>
<td>BENZYL ALCOHOL</td>
<td>100-51-6</td>
<td>15-40%</td>
<td>US WEEL: TWA 10 ppm</td>
</tr>
<tr>
<td>3-AMINOMETHYL-3,5,5-TRIMETHYLCYCLOHEXYLAMINE (ISOPHORONEDIAMINE)</td>
<td>2855-13-2</td>
<td>15-40%</td>
<td>NA</td>
</tr>
<tr>
<td>1,3 BENZENEDIMETHANAMINE</td>
<td>1477-55-0</td>
<td>5-15%</td>
<td>ACGIH: CEILING 0.5 mg/m³ ACGIH: CEILING ABSORBED VIA SKIN</td>
</tr>
<tr>
<td>1,3 BENZENEDIMETHANAMINE, POLYMER WITH 2,2-[(1-METHYLETHYLIDENE) BIS (4,1-PHENYLENOXYMETHYLENE)] BIS [OXIRANE]</td>
<td>110839-13-9</td>
<td>10-30%</td>
<td>DOW IHG: TWA 1 ppm DOW IHG: STEL 3 ppm</td>
</tr>
<tr>
<td>4-NONYLPHENOL, BRANCHED</td>
<td>84852-15-3</td>
<td>3-7%</td>
<td>NA</td>
</tr>
<tr>
<td>SALICYLIC ACID</td>
<td>69-75-7</td>
<td>1-5%</td>
<td>NA</td>
</tr>
<tr>
<td>BENZYLDIMETHYLAMINE</td>
<td>103-83-3</td>
<td>1-5%</td>
<td>NA</td>
</tr>
</tbody>
</table>

SECTION IV FIRST AID MEASURES

HEALTH HAZARD DATA HAZARD CLASSIFICATION BASIS FOR CLASSIFICATION SOURCE

ROUTE OF EXPOSURE:

| INHALATION: | THIS PRODUCT MAY CREATE BREATHING DIFFICULTIES, DIZZINESS, LIGHTHEADEDNESS WHEN WORKING IN AREAS WITH HIGH VAPOR CONCENTRATION. |
| SKIN CONTACT: | THIS PRODUCT MAY CAUSE SKIN IRRITATION UPON PROLONGED OR REPEATED CONTACT. |
| SKIN ABSORPTION: | THIS PRODUCT MAY CAUSE SKIN IRRITATION UPON PROLONGED OR REPEATED CONTACT. |
| EYE CONTACT: | THIS PRODUCT MAY BE AN EYE IRRITANT. |
| INGESTION / INHALATION: | CAN CAUSE GASTROINTESTINAL IRRITATION, NAUSEA, VOMITING. SMALL AMOUNTS OF LIQUID ASPIRATED INTO THE RESPIRATORY SYSTEM DURING INGESTION, OR FROM VOMITING, MAY CAUSE BRONCHOPNEUMONIA OR PULMONARY EDEMA. DO NOT INDUCE VOMITING. SEEK IMMEDIATE MEDICAL ATTENTION. |
| ACUTE OVEREXPOSURE: | ANESTHESIA, HEADACHE, NAUSEA, DIZZINESS. MODERATE IRRITATION BY LIQUID TO SKIN AND EYES. PROLONGED CONTACT ON THE SKIN WILL CLAY AND DEFAT THE SKIN POSSIBLY CAUSING DERMATITIS. |

EMERGENCY AND FIRST AID PROCEDURES:

EYES: FLUSH WITH PLenty OF WATER FOR AT LEAST 30 MINUTES. SEEK IMMEDIATE MEDICAL ATTENTION. CONSULT A PHYSICIAN.

SKIN: WASH WITH SOAP AND LARGE QUANTITIES OF WATER FOR AT LEAST 15 MINS. SEEK MEDICAL ATTENTION IF SKIN IRRITATION DEVELOPS AND PERSISTS.
INHALATION: MOVE TO LOCATION FREE FROM VAPORS. IF BREATHING IS DIFFICULT, GIVE OXYGEN. IF BREATHING STOPS, BEGIN ARTIFICIAL RESPIRATION AND SEEK IMMEDIATE MEDICAL ATTENTION. THIS PRODUCT CONTAINS SMALL QUANTITIES OF CRYSTALLINE SILICA. PROLONGED / REPEATED INHALATION OF RESPIRABLE CRYSSTALLINE SILICA MAY CAUSE DELAYED LUNG INJURY (SILICOSIS) AND INCREASE THE RISKS OF DEVELOPING RESPIRATORY CANCER.

INGESTION: DO NOT INDUCE VOMITING; GIVE ONE CUP (8OZ OR 240 ml) OF WATER OR MILK IF AVAILABLE. DO NOT GIVE ANYTHING BY MOUTH UNLESS THE PERSON IS FULLY CONSCIOUS. SEEK IMMEDIATE MEDICAL ATTENTION.

SECTION V FIREFIGHTING MEASURES

EXTINGUISHING MEDIA: EXCLUDE AIR. FIRES INVOLVING THIS PRODUCT MAY BE CONTROLLED BY REGULAR FOAM, CARBON DIOXIDE, DRY CHEMICALS OR WATER. ALCOHOL RESISTANT FOAMS (ATC TYPE) ARE PREFERRED. DO NOT USE DIRECT WATER STREAM. MAY SPREAD FIRE.

GENERAL HAZARD: HAZARDOUS COMBUSTION PRODUCTS: DURING A FIRE, SMOKE MAY CONTAIN THE ORIGINAL MATERIAL IN ADDITION TO COMBUSTION PRODUCTS OF VARYING COMPOSITION WHICH MAY BE TOXIC AND/OR IRRITATING. COMBUSTION PRODUCTS MAY INCLUDE AND ARE NOT LIMITED TO NITROGEN OXIDES, CARBON MONOXIDE, CARBON DIOXIDE.

UNUSUAL FIRE AND EXPLOSION HAZARD: VIOLENT STEAM GENERATION OR ERUPTION MAY OCCUR UPON APPLICATION OF DIRECT WATER STREAM TO HOT LIQUIDS. DENSE SMOKE IS PRODUCED WHEN PRODUCT BURNS. THE USE OF SELF-CONTAINED BREATHING APPARATUS WITH FULL FACE PIECE OPERATED IN PRESSURE-DEMAND OR OTHER POSITIVE PRESSURE MODE SHOULD BE PROVIDED FOR FIRE FIGHTERS IN BUILDINGS OR CONFINED AREAS WHERE THIS PRODUCT IS STORED. STORAGE CONTAINERS EXPOSED TO FIRE SHOULD BE KEPT COOL WITH WATER SPRAY IN ORDER TO PREVENT PRESSURE BUILD UP. USE WATER SPRAY TO COOL FIRE EXPOSED SURFACES AND TO PROTECT PERSONNEL. ISOLATE “FUEL” SUPPLY FROM FIRE. AVOID SPREADING BURNING LIQUID WITH WATER USED FOR COOLING PURPOSES.

SECTION VI ACCIDENTAL RELEASE MEASURES

STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED: ELIMINATE SOURCES OF IGNITION (FIRES, FLAMES, PILOT LIGHTS, ELECTRICAL SPARKS). PREVENT ADDITIONAL DISCHARGE OF MATERIAL; IF POSSIBLE TO DO SO WITHOUT HAZARD. FOR SMALL SPILLS, IMPLEMENT CLEANUP PROCEDURES. FOR LARGE SPILLS, IMPLEMENT CLEANUP PROCEDURES AND IF IN PUBLIC AREA, KEEP PUBLIC AWAY AND ADVISE AUTHORITIES. DIKE SPILL AREA, KEEP PUBLIC AWAY AND ADVISE AUTHORITIES. DIKE SPILL AREA WITH SAND OR EARTH TO CONTAIN SPILLED LIQUID AND PREVENT SPREADING. DO NOT USE COMBUSTIBLE MATERIALS SUCH AS SAWDUST. PUMP LIQUID TO SALVAGE TANK. REMAINING LIQUID CAN BE TAKEN UP ON SAND, EARTH, FLOOR ABSORBENT, OR WITH ANOTHER SUITABLE ABSORBENT MATERIAL AND SHOVELED INTO CONTAINERS. CONSULT AN EXPERT ON DISPOSAL OF RECOVERED MATERIAL AND ENSURE CONFORMITY TO EPA, FEDERAL, STATE, AND LOCAL DISPOSAL REGULATIONS.

SECTION VII HANDLING AND STORAGE

PRECAUTIONARY STATEMENTS: PERSONNEL SHOULD AVOID INHALATION OF VAPORS. PERSONAL CONTACT WITH THE PRODUCT SHOULD BE AVOIDED. SHOULD CONTACT BE MADE, REMOVE SATURATED APPAREL AND FLUSH AFFECTED BODY AREAS WITH WATER. CLOTHING MUST BE WASHED AND DRIED BEFORE REUSE. CONTAINERS OF THIS MATERIAL MAY BE HAZARDOUS WHEN EMPTYED SINCE EMPTYED CONTAINERS RETAIN PRODUCT RESIDUE (VAPOR, LIQUID AND/OR SOLID). ALL HAZARD PRECAUTIONS GIVEN IN THIS DATA SHEET MUST BE OBSERVED. FIRE FIGHTING: WATER MAY BE UNSUITABLE AS AN EXTINGUISHING MEDIA BUT HELPFUL IN KEEPING ADJACENT CONTAINERS COOL. AVOID SPREADING BURNING LIQUID WITH WATER USED FOR COOLING PURPOSES. PERSONNEL SHOULD AVOID INHALATION OF VAPORS.

SECTION VIII EXPOSURE CONTROLS / PERSONAL PROTECTION

RESPIRATORY (SPECIFY IN DETAIL): THE USE OF RESPIRATORY PROTECTION DEPENDS ON VAPOR CONCENTRATION ABOVE THE TIME WEIGHTED TLEV USE OF OSHA APPROVED CARTRIDGE RESPIRATOR OR GAS MASK OR AIR-PACK. CHEMICAL CARTRIDGE RESPIRATOR: HALF MASK ORGANIC VAPOR CARTRIDGE. FULL FACE ORGANIC VAPOR CARTRIDGE IF EYE PROTECTION IS NEEDED. EYES: CHEMICAL GOGGLES AND/OR FACE SHIELD ARE RECOMMENDED TO SAFEGUARD AGAINST POTENTIAL EYE CONTACT, IRRITATION OR INJURY.

OTHER CLOTHING AND EQUIPMENT: TO PREVENT BODY CONTACT, IMPERVIOUS CLOTHING AND BOOTS ARE RECOMMENDED. IMPERVIOUS APRONS AND HELMETS (HEAD COVER) ARE RECOMMENDED WHEN WORKING WITH THIS PRODUCT. THE AVAILABILITY OF EYE WASHES AND SAFETY SHOWERS IN WORK AREAS IS RECOMMENDED.

SECTION IX PHYSICAL / CHEMICAL CHARACTERISTICS

BOILING POINT: (760mmHg) 221°C / 430°F 1.55mmHg@68°F/20°C

VAPOR PRESSURE: SOLUBILITY IN H2O % BY WT:%

% VOLATILES BY VOL: 3-6%

EVAPORATION RATE (BuAc=1): NA

REALITVE DENSITY (H2O=1): 1.032

PH (AS IS): 8.03

APPEARANCE AND ODOR: CLEAR OR PIGMENTED LIQUID. MODERATE AMINE ODOR

FLASH POINT: (TEST METHOD) 93°C / 200°F (TCC)

AUTOIGNITION TEMP: NA

FLAMMABLE LIMITS IN AIR, % BY VOL: NA

SECTION X STABILITY AND REACTIVITY

CONDITIONS CONTRIBUTING TO INSTABILITY: THIS PRODUCT IS STABLE.

INCOMPATIBILITY: THIS PRODUCT IS INCOMPATIBLE WITH STRONG OXIDIZING AGENTS, STRONG ACIDS OR BASES, AND SELECTED AMINES.

HAZARDOUS DECOMPOSITION PRODUCTS: THERMAL DECOMPOSITION IN THE PRESENCE OF AIR MAY YIELD CARBON MONOXIDE AND/OR CARBON DIOXIDE, AND UNIDENTIFIED ORGANICS.

CONDITIONS CONTRIBUTING TO HAZARDOUS POLYMERIZATION: N/A WILL NOT OCCUR
### SECTION XI TOXICOLOGICAL INFORMATION

#### ACUTE TOXICITY

<table>
<thead>
<tr>
<th>Aspect</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>ACUTE ORAL TOXICITY</strong></td>
<td>LOW TOXICITY IF SWALLOWED. SWALLOWING MAY RESULT IN GASTROINTESTINAL IRRITATION OR ULCERATION. SWALLOWING MAY RESULT IN BURNS OF THE MOUTH AND THROAT. AS PRODUCT: SINGLE DOSE ORAL LD50 HAS NOT BEEN DETERMINED. BASED ON INFORMATION FOR COMPONENT (S): LD50 RAT, 1,000 mg/kg ESTIMATED.</td>
</tr>
<tr>
<td><strong>ACUTE DERMAL TOXICITY</strong></td>
<td>PROLONGED OR WIDESPREAD SKIN CONTACT MAY RESULT IN ABSORPTION OF POTENTIALLY HARMFUL AMOUNTS. THE DERMAL LD50 HAS NOT BEEN DETERMINED.</td>
</tr>
<tr>
<td><strong>ACUTE INHALATION TOXICITY</strong></td>
<td>EXCESSIVE EXPOSURE MAY CAUSE IRRITATION TO UPPER RESPIRATORY TRACT (NOSE, THROAT). MAY CAUSE CENTRAL NERVOUS SYSTEM DEPRESSION. SYMPTOMS MAY INCLUDE HEADACHE, DIZZINESS AND DROWSINESS, PROGRESSING TO IN COORDINATION AND UNCONSCIOUSNESS. PROLONGED EXCESSIVE EXPOSURE MAY CAUSE SERIOUS ADVERSE EFFECTS, EVEN DEATH.</td>
</tr>
</tbody>
</table>

#### SKIN CORROSION/IRRITATION

| Description | Brief contact may cause skin burns. Symptoms may include pain, severe local redness and tissue damage. |

#### SERIOUS EYE DAMAGE/EYE IRRITATION

| Description | May cause severe irritation with corneal injury which may result in permanent impairment of vision, even blindness. Chemical burns may occur. Vapor may cause lacrimation (tears). |

#### SENSITIZATION

| Description | Skin contact may cause an allergic skin reaction. A component in the mixture has caused allergic skin reactions in humans. Contains component(s) which have caused allergic skin sensitization in guinea pigs. Contains component(s) which have demonstrated the potential for contact allergy in mice. For respiratory sensitization: No relevant data found. |

#### SPECIFIC TARGET ORGAN SYSTEMIC TOXICITY (SINGLE EXPOSURE)

| Description | Evaluation of available data suggests that this material is not a STOT-SE toxicant. |

#### SPECIFIC TARGET ORGAN SYSTEMIC TOXICITY (REPEATED EXPOSURE)

| Description | For the component(s) tested: in animals, effects have been reported on the following organs: CENTRAL NERVOUS SYSTEM MUSCLES THYMUS URINARY TRACT RESPIRATORY TRACT LIVER KIDNEY GASTROINTESTINAL TRACT TESTES |

#### CARCINOGENICITY

| Description | Contains component(s) which do not cause cancer in laboratory animals. |

#### TERATOGENICITY

| Description | Based on information for component(s): has caused birth defects in laboratory animals only at doses toxic to the mother. Has been toxic to the fetus in laboratory animals at doses toxic to the mother. Did not cause birth defects in the fetus even at doses which caused toxic effects in the mother. |

#### REPRODUCTIVE TOXICITY

| Description | In a three-generation reproduction study in rats, nonylphenol did not interfere with standard reproductive parameter. However, some additional endpoints which are considered markers of potential reproductive toxicity were affected at higher doses that produced systemic toxicity to the parent animals. Contains component(s) which did not interfere with fertility in animal studies. Contains component(s) which did not interfere with reproduction in animals studies. |

#### MUTAGENICITY

| Description | Contains component(s) which were negative in some in vitro genetic toxicity studies and positive in others. Contains a component(s) which were negative in the in vitro genetic toxicity studies. Contains component(s) which were negative in animal genetic toxicity studies. |

#### ASPIRATION HAZARD

| Description | Based on physical properties, not likely to be an aspiration hazard. |

#### COMPONENTS INFLUENCING TOXICOLOGY

<table>
<thead>
<tr>
<th>Component</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>BENZYL ALCOHOL</td>
<td>ACUTE DERMAL TOXICITY LD50, RABBIT, &gt;2,000 mg/kg. No deaths occurred at this concentration.</td>
</tr>
<tr>
<td></td>
<td>ACUTE INHALATION TOXICITY LC50, RAT, 4 HOURS, VAPOUR, 11 mg/l</td>
</tr>
<tr>
<td>Compound</td>
<td>Acute Dermal Toxicity</td>
</tr>
<tr>
<td>------------------------------------------------</td>
<td>----------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>3-AMINOMETHYL-3,5,5-TRIMETHYLCYCLOHEXYLAMINE</td>
<td>LD50, RATE, MALE AND FEMALE, &gt;2,000 mg/kg, NO DEATHS OCCURRED AT THIS CONCENTRATION.</td>
</tr>
<tr>
<td>1,3 BENZENEDIMETHANAMINE, POLYMER WITH 2,2'-(1-METHYLETHYLIDENE)BIS (4,1-PHENYLENOXYMETHYLENE)] BIS [OXIRANE]</td>
<td>LD50, RAT, &gt;3,100 mg/kg, NO DEATHS OCCURRED AT THIS CONCENTRATION.</td>
</tr>
<tr>
<td>4-NONYLPHENOL, BRANCHED</td>
<td>LD50, RABBIT, 2.031 – 2,831 mg/kg</td>
</tr>
<tr>
<td>SALICYLIC ACID</td>
<td>LD50, RAT, &gt; 2,000 mg/kg, ESTIMATED.</td>
</tr>
<tr>
<td>BENZYLDIMETHYLAMINE</td>
<td>LD50, RAT, MALE, 1,477 mg/kg</td>
</tr>
</tbody>
</table>

**SECTION XII ECOLOGICAL INFORMATION**

<table>
<thead>
<tr>
<th>Compound</th>
<th>Acute Toxicity to Fish</th>
<th>Acute Toxicity to Aquatic Invertebrates</th>
<th>Acute Toxicity to Algae/Aquatic Plants</th>
</tr>
</thead>
<tbody>
<tr>
<td>TOXICITY ENXYL ALCOHOL</td>
<td>MATERIAL IS PRACTICALLY NON-TOXIC TO AQUATIC ORGANISMS ON AN ACUTE BASIS (LC50&lt;EC50&lt;EL50&lt;LL50 &gt; 100 mg/l IN MOST SENSITIVE SPECIES TESTED). LC50, PIMEPHALES PROMELAS (FATHEAD MINNOW), STATIC, 96 HOUR, 460 mg/l METHOD NO SPECIFIED.</td>
<td>EC50, DAPHNIA MAGNA (WATER FLEA) 48 HOUR, 15.2 mg/l OECD TEST GUIDELINE 202 OR EQUIVALENT.</td>
<td>EC50, ALGA SCENEDESMUS SP STATIC TEST, 72 HOUR BIOMASS, 12 mg/l OECD TEST GUIDELINE 201 OR EQUIVALENT.</td>
</tr>
<tr>
<td>1,3 BENZENEDIMETHANAMINE, POLYMER WITH 2,2'-(1-METHYLETHYLIDENE)BIS (4,1-PHENYLENOXYMETHYLENE)] BIS [OXIRANE]</td>
<td>MATERIAL IS MODERATELY TOXIC TO AQUATIC ORGANISMS ON AN ACUTE BASIS (LC50&lt;EC50&lt;EL50&lt;LL50 BETWEEN 1 AND 10 mg/l IN THE MOST SENSITIVE SPECIES TESTED). LC50, RAINBOW TROUT (ONCORHYNCHUS MYKISS) STATIC TEST, 96 HOUR, 64 mg/l OECD TEST GUIDELINE 203 OR EQUIVALENT.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
SUBCAPITATA (GREEN ALGAE) STATIC TEST, 72 HOURS, CELL YIELD INHIBITION, > 30 mg/l OECD TEST GUIDELINE 201 OR EQUIVALENT.

TOXIC TO BACTERIA
EC50 ACTIVATED SLUDGE, AEROBIC, 3 HOUR RESPIRATION RATES, 88.9 mg/l ACTIVATED SLUDGE TEST (OECD 209).

4-NONYLPHENOL, BRANCHED
ACUTE TOXICITY TO FISH
MATERIAL IS HIGHLY TOXIC TO AQUATIC ORGANISMS ON AN ACUTE BASIS (LC50/EC50 BETWEEN 0.1 AND 1 mg/l IN THE MOST SENSITIVE SPECIES TESTED).

LC50, PIMEPHALES PROMELAS (FATHEAD MINNOW) FLOW-THROUGH TEST, 96 HOUR 0.135 mg/l OECD TEST GUIDE LINE 203.

ACUTE TOXICITY TO AQUATIC INVERTEBRATES
EC50, DAPHNIA MAGNA (WATER FLEA) 48 HOUR, 0.14 mg/l DIRECTIVE 84/449/EEC, C.2

ACUTE TOXICITY TO ALGAE/AQUATIC PLANTS.
EC50, SCENEDESMUS SP. 72 HOUR BIOMASS, 1.3 mg/l METHOD NOT SPECIFIED.

CHRONIC TOXICITY TO FISH
NOEC, PIMEPHALES PROMELAS (FATHEAD MINNOW) FLOW THROUGH TEST 96 HOUR 37.8 mg/l OECD TEST GUIDELINE 203.

ACUTE TOXICITY TO ALGAE/AQUATIC PLANTS.
EC50, SCENEDESMUS SP. 72 HOUR GROWTH RATE INHIBITION, 1.34 mg/l OECD TEST GUIDE LINE 203.

TOXIC TO BACTERIA
EC50, PSEUDOMONAS PUTIDA, GROWTH INHIBITION, 17 HOUR GROWTH INHIBITION, 534 mg/l DIN 38412

ACUTE TOXICITY TO AQUATIC INVERTEBRATES.
EC50, DAPHNIA MAGNA (WATER FLEA) STATIS TEST, 48 HOUR, >100 mg/l OECD TEST GUIDE LINE 202.

CHRONIC TOXICITY TO AQUATIC INVERTEBRATES.
NOEC, DAPHNIA MAGNA (WATER FLEA) SEMI-STATIC TEST 21 DAY NUMBER OF OFFSPRING, 0.789 mg/l

ACUTE TOXICITY TO AQUATIC INVERTEBRATES.
LC50, DAPHNIA MAGNA (WATER FLEA). 24 HOUR, 105-230 mg/l METHOD NOT SPECIFIED.

TOXIC TO BACTERIA
EC50, PSEUDOMONAS PUTIDA, GROWTH INHIBITION, 17 HOUR GROWTH INHIBITION, 534 mg/l DIN 38412

ACUTE TOXICITY TO AQUATIC INVERTEBRATES.
NOEC, DAPHNIA MAGNA (WATER FLEA) SEMI-STATIC TEST 21 D NUMBER OF OFFSPRING, 0.024 mg/l

PERSISTENCE OF DEGRADABILITY
BENZYL ALCOHOL
BIODEGRADABILITY: MATER IS READILY BIODEGRADABLE. PASSES OECD TEST(S) FOR READY BIODEGRADABILITY
10 DAY WINDOW: NA

BIODEGRADATION: 92-96%
EXPOSURE TIME: 14D
METHOD: OECD TEST GUIDE LINE 301C OR EQUIVALENT

THEORETICAL OXYGEN DEMAND: 2.52 mg/l

PHOTO DEGRADATION
TEST TYPE: HALF-LIFE (INDIRECT PHOTOLYSIS)
SENSITIZER: OH RADICALS
ATMOSPHERIC HALF-LIFE: 1.296D
METHOD: ESTIMATED

3-AMINOMETHYL-3,5,5-TRIMETHYLCYCLOHEXYLAMINE (ISOPHORONEDIAMINE)
BIODEGRADABILITY: MATERIALS EXPECTED TO BIODEGRADE VERY SLOWLY (IN THE ENVIRONMENT). FAILS TO PASS OECD/EEC TEST FOR READILY BIODEGRADABILITY
10 DAY WINDOW: FAIL

BIODEGRADATION: 6%
EXPOSURE TIME: 28 D
METHOD: OECD TEST GUIDE LINE 301A OR EQUIVALENT

10-DAY WINDOW: NA

BIODEGRADATION: 42%
EXPOSURE TIME: 3 HOURS
METHOD: OECD TEST GUIDE LINE 303A OR EQUIVALENT

THEORETICAL OXYGEN DEMAND: 3.38 mg/l

PHOTO DEGRADATION
TEST TYPE: HALF-LIFE (INDIRECT PHOTOLYSIS)
SENSITIZER: OH RADICALS
ATMOSPHERIC HALF-LIFE: 0.126D
METHOD: ESTIMATED.

SALICYLIC ACID
ACUTE TOXICITY TO FISH
MATERIAL IS SLIGHTLY TOXIC TO AQUATIC ORGANISMS ON AN ACUTE BASIS (LC50/EC50 BETWEEN 10 AND 100 mg/l IN THE MOST SENSITIVE SPECIES TESTED).

LC50, EMERALD SHINER (NOTROPIS AETHERINOIDES), 96 HOUR >150 mg/l METHOD NOT SPECIFIED.

LC50, LEUCISCUS IDUS (GOLDEN ORFE) STATIC TEST, 48 HOUR 90 mg/l METHOD NOT SPECIFIED.

ACUTE TOXICITY TO AQUATIC INVERTEBRATES
LC50, DAPHNIA MAGNA (WATER FLEA), 24 HOUR, 105-230 mg/l METHOD NOT SPECIFIED.

TOXIC TO BACTERIA
EC50, ACTIVATED SLUDGE, 3 HOURS, 37.8 mg/l OECD TEST 209.

SALICYLIC ACID
ACUTE TOXICITY TO FISH
MATERIAL IS SLIGHTLY TOXIC TO AQUATIC ORGANISMS ON AN ACUTE BASIS (LC50/EC50 BETWEEN 10 AND 100 mg/l IN THE MOST SENSITIVE SPECIES TESTED).

LC50, EMERALD SHINER (NOTROPIS AETHERINOIDES), 96 HOUR >150 mg/l METHOD NOT SPECIFIED.

LC50, LEUCISCUS IDUS (GOLDEN ORFE) STATIC TEST, 48 HOUR 90 mg/l METHOD NOT SPECIFIED.

ACUTE TOXICITY TO AQUATIC INVERTEBRATES
LC50, DAPHNIA MAGNA (WATER FLEA), 24 HOUR, 105-230 mg/l METHOD NOT SPECIFIED.

TOXIC TO BACTERIA
EC50, ACTIVATED SLUDGE, 3 HOURS, 37.8 mg/l OECD TEST 209.
<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Biodegradability</th>
<th>Photo Degradation</th>
<th>Bioaccumulative Potential</th>
</tr>
</thead>
<tbody>
<tr>
<td>1,3-Benzenedimethanamine</td>
<td>Material is inherently biodegradable (reached &gt;20% biodegradation in OECD test(s) for inherent biodegradability). Based on stringent OECD test guidelines, this material cannot be considered as readily biodegradable. However, these results do not necessarily mean that the material is not biodegradable under environmental conditions.</td>
<td>Test type: Half-life (indirect photolysis)</td>
<td>Bioconcentration potential is low (BCF &lt;100 or log POW &lt;3).</td>
</tr>
<tr>
<td>4-Nonylphenol, Branched</td>
<td>Biodegradability: Based on stringent OECD test guidelines, this material cannot be considered as readily biodegradable. However, these results do not necessarily mean that the material is not biodegradable under environmental conditions.</td>
<td>Test type: Half-life (indirect photolysis)</td>
<td>Bioconcentration potential is low (BCF &lt;100 or log POW &lt;3).</td>
</tr>
</tbody>
</table>

### Salicylic Acid
- **Biodegradability:** Material is readily biodegradable. Passes OECD test(s) for ready biodegradability.
- **10-Day Window:** NA
- **Biodegradation:** 95.1%
- **Exposure Time:** 14 D
- **Method:** OECD test guideline 301C or equivalent.
- **Theoretical Oxygen Demand:** 1.62 mg/mg
- **Photo Degradation:** Test type: Half-life (indirect photolysis)
- **Sensitizer:** OH radicals
- **Atmospheric Half-life:** 0.823 D
- **Method:** Estimated.

### Benzyldimethylamine
- **Biodegradability:** Material is expected to biodegrade very slowly (in the environment). Fails to pass OECD/EEC test for ready biodegradability. Material is ultimately biodegradable (reaches >70% mineralization in OECD test(s) for inherent biodegradability).
- **10-Day Window:** NA
- **Biodegradation:** 0 – 2%
- **Exposure Time:** 28 D
- **Method:** OECD test guideline 301C or equivalent.
- **Theoretical Oxygen Demand:** 3.17 mg/l
- **Photo Degradation:** Test type: Half-life (indirect photolysis)
- **Sensitizer:** OH radicals
- **Atmospheric Half-life:** 0.15 D
- **Method:** Estimated.

### Benzyl Alcohol
- **Biodegradation:** Based on stringent OECD test guidelines, this material cannot be considered as readily biodegradable. However, these results do not necessarily mean that the material is not biodegradable under environmental conditions.
- **10-Day Window:** Fail
- **Biodegradation:** 48.2%
- **Exposure Time:** 35 D
- **Method:** OECD test guideline 301B or equivalent.
- **Theoretical Oxygen Demand:** 3.29 mg/mg
- **Photo Degradation:** Test type: Half-life (indirect photolysis)
- **Sensitizer:** OH radicals
- **Atmospheric Half-life:** 0.207 D
- **Method:** Estimated.

### 3-Aminomethyl-3,5,5-trimethylcyclohexylamine (isophoronediamine)
- **Biodegradation:** Based on stringent OECD test guidelines, this material cannot be considered as readily biodegradable. However, these results do not necessarily mean that the material is not biodegradable under environmental conditions.
- **10-Day Window:** Fail
- **Biodegradation:** 48.2%
- **Exposure Time:** 35 D
- **Method:** OECD test guideline 301B or equivalent.
- **Theoretical Oxygen Demand:** 3.29 mg/mg
- **Photo Degradation:** Test type: Half-life (indirect photolysis)
- **Sensitizer:** OH radicals
- **Atmospheric Half-life:** 0.207 D
- **Method:** Estimated.

### 1,3-Benzenedimethanamine
- **Biodegradation:** Material is inherently biodegradable (reached >20% biodegradation in OECD test(s) for inherent biodegradability). Based on stringent OECD test guidelines, this material cannot be considered as readily biodegradable. However, these results do not necessarily mean that the material is not biodegradable under environmental conditions.
- **10-Day Window:** Fail
- **Biodegradation:** 0%
- **Exposure Time:** 28 D
- **Method:** OECD test guideline 301B or equivalent.
- **Theoretical Oxygen Demand:** 3.17 mg/l
- **Photo Degradation:** Test type: Half-life (indirect photolysis)
- **Sensitizer:** OH radicals
- **Atmospheric Half-life:** 0.15 D
- **Method:** Estimated.
1,3-DENZENEDIMETHANAMINE, POLYMER WITH 2,2-{1-METHYLETHYLIDENE) BIS (4,1-PHENYLENOXYMETHYLENE]) BIS [OXIRANE]

**PARTITION COEFFICIENT:** N-OCTANOL/WATER (LOG POW): 3.6 AT 25˚C

**BIOCONCENTRATION FACTOR (BCF):** 4.77 FISH ESTIMATED.

**BIODISTRIBUTION:** BIOACCUMULATION: BIOCONCENTRATION POTENTIAL IS LOW (BCF <100 OR LOG POW <3).

**PARTITION COEFFICIENT:** N-OCTANOL/WATER (LOG POW): 5.4 AT 23˚C OECD GUIDELINE 117 (PARTITION COEFFICIENT (N-OCTANOL/WATER), HPLC METHOD.

**BIOCONCENTRATION FACTOR (BCF):** 271 PIMEPHALES PROMELAS (FATHEAD MONNOWS) 20 D MEASURED.

**MOBILITY IN SOIL**

**BENZYL ALCOHOL**

**PARTITION COEFFICIENT (KOC):** 16 ESTIMATED.

**BIODISTRIBUTION:** BIOACCUMULATION: BIOCONCENTRATION POTENTIAL IS LOW (BCF <100 OR LOG POW <3).

**PARTITION COEFFICIENT:** N-OCTANOL/WATER (LOG POW): 1.98 MEASURED.

**BIOCONCENTRATION FACTOR (BCF):** <= 22 CYPRINUS CARPIO (CARP) 42 DAY MEASURED.

**SALICYLIC ACID**

**PARTITION COEFFICIENT (KOC):** 24 ESTIMATED.

**BIODISTRIBUTION:** BIOACCUMULATION: BIOCONCENTRATION POTENTIAL IS LOW (BCF <100 LOG POW <3).

**PARTITION COEFFICIENT:** N-OCTANOL/WATER (LOG POW): 2.26 MEASURED.

**MOBILITY IN SOIL**

**BENZYLDIMETHYLAMINE**

**PARTITION COEFFICIENT (KOC):** 630 ESTIMATED.

**BIODISTRIBUTION:** BIOACCUMULATION: BIOCONCENTRATION POTENTIAL IS LOW (BCF <100 OR LOG POW <3).

**PARTITION COEFFICIENT:** N-OCTANOL/WATER (LOG POW): 2.66 MEASURED.

**BIOCONCENTRATION FACTOR (BCF):** <= 22 CYPRINUS CARPIO (CARP) 42 DAY MEASURED.

**3-AMINOMETHYL-3,5,5-TRIMETHYLCYCLOHEXYLAMINE (ISOPHORONEDIAMINE)**

**PARTITION COEFFICIENT (KOC):** 16 ESTIMATED.

**BIODISTRIBUTION:** BIOACCUMULATION: BIOCONCENTRATION POTENTIAL IS LOW (BCF <100 OR LOG POW <3).

**PARTITION COEFFICIENT:** N-OCTANOL/WATER (LOG POW): 1.98 MEASURED.

**BIOCONCENTRATION FACTOR (BCF):** <= 22 CYPRINUS CARPIO (CARP) 42 DAY MEASURED.

**4-NONYLPHENOL, BRANCHED**

**PARTITION COEFFICIENT (KOC):** >5000 ESTIMATED.

**BIODISTRIBUTION:** BIOACCUMULATION: BIOCONCENTRATION POTENTIAL IS HIGH (BCF >3000 OR LOG POW BETWEEN 5 AND 7).

**PARTITION COEFFICIENT:** N-OCTANOL/WATER (LOG POW): 5.4 AT 23˚C OECD GUIDELINE 117 (PARTITION COEFFICIENT (N-OCTANOL/WATER), HPLC METHOD.

**BIOCONCENTRATION FACTOR (BCF):** 271 PIMEPHALES PROMELAS (FATHEAD MONNOWS) 20 D MEASURED.

**MOBILITY IN SOIL**

**BENZYLDIMETHYLAMINE**

**PARTITION COEFFICIENT (KOC):** 340 ESTIMATED.

**BIODISTRIBUTION:** BIOACCUMULATION: BIOCONCENTRATION POTENTIAL IS MEDIUM (KOC BETWEEN 150 AND 500).

**PARTITION COEFFICIENT:** N-OCTANOL/WATER (LOG POW): 2.66 MEASURED.

**BIOCONCENTRATION FACTOR (BCF):** <= 22 CYPRINUS CARPIO (CARP) 42 DAY MEASURED.

**4-NONYLPHENOL, BRANCHED**

**PARTITION COEFFICIENT (KOC):** >5000 ESTIMATED.

**BIODISTRIBUTION:** BIOACCUMULATION: BIOCONCENTRATION POTENTIAL IS HIGH (BCF >3000 OR LOG POW BETWEEN 5 AND 7).

**PARTITION COEFFICIENT:** N-OCTANOL/WATER (LOG POW): 5.4 AT 23˚C OECD GUIDELINE 117 (PARTITION COEFFICIENT (N-OCTANOL/WATER), HPLC METHOD.

**BIOCONCENTRATION FACTOR (BCF):** 271 PIMEPHALES PROMELAS (FATHEAD MONNOWS) 20 D MEASURED.

**MOBILITY IN SOIL**

**BENZYL ALCOHOL**

**PARTITION COEFFICIENT (KOC):** 16 ESTIMATED.

**BIODISTRIBUTION:** BIOACCUMULATION: BIOCONCENTRATION POTENTIAL IS LOW (BCF <100 OR LOG POW <3).

**PARTITION COEFFICIENT:** N-OCTANOL/WATER (LOG POW): 1.98 MEASURED.

**BIOCONCENTRATION FACTOR (BCF):** <= 22 CYPRINUS CARPIO (CARP) 42 DAY MEASURED.

**3-AMINOMETHYL-3,5,5-TRIMETHYLCYCLOHEXYLAMINE (ISOPHORONEDIAMINE)**

**PARTITION COEFFICIENT (KOC):** 16 ESTIMATED.

**BIODISTRIBUTION:** BIOACCUMULATION: BIOCONCENTRATION POTENTIAL IS LOW (BCF <100 OR LOG POW <3).

**PARTITION COEFFICIENT:** N-OCTANOL/WATER (LOG POW): 1.98 MEASURED.

**BIOCONCENTRATION FACTOR (BCF):** <= 22 CYPRINUS CARPIO (CARP) 42 DAY MEASURED.

**1,3-BENZENEDIMETHANAMINE**

**PARTITION COEFFICIENT (KOC):** 340 ESTIMATED.

**BIODISTRIBUTION:** BIOACCUMULATION: BIOCONCENTRATION POTENTIAL IS LOW (KOC BETWEEN 500 AND 2000).

**PARTITION COEFFICIENT:** N-OCTANOL/WATER (LOG POW): 2.66 MEASURED.

**BIOCONCENTRATION FACTOR (BCF):** <= 22 CYPRINUS CARPIO (CARP) 42 DAY MEASURED.

**1,3-BENZENEDIMETHANAMINE, POLYMER WITH 2,2-{1-METHYLETHYLIDENE} BIS (4,1-PHENYLENOXYMETHYLENE]) BIS [OXIRANE]**

**PARTITION COEFFICIENT (KOC):** >910 ESTIMATED.

**BIODISTRIBUTION:** BIOACCUMULATION: BIOCONCENTRATION POTENTIAL IS LOW (KOC BETWEEN 500 AND 2000).

**PARTITION COEFFICIENT:** N-OCTANOL/WATER (LOG POW): 2.66 MEASURED.

**BIOCONCENTRATION FACTOR (BCF):** <= 22 CYPRINUS CARPIO (CARP) 42 DAY MEASURED.

**SECTION XIII DISPOSAL CONSIDERATIONS**

**WASTE DISPOSAL METHOD:** IF POSSIBLE, PUMP TO CONTROLLED CONTAINMENT AREA. ABSORB ON CLAY OR SAND. DISPOSE OF IN COMPLIANCE WITH EPA, FEDERAL, STATE, AND LOCAL REGULATIONS. TREATMENT, TRANSPORTATION AND DISPOSAL MUST BE IN COMPLIANCE WITH EPA FEDERAL, STATE, AND LOCAL REGULATIONS UNDER THE RESOURCES CONSERVATION AND RECOVERY ACT (RCRA, 40 CFR 261). TYPICALLY CONTROLLED BURNING, INCINERATION OR APPROVED LAND FILL SITES ARE AVAILABLE.

**AQUATIC TOXICITY (E.G. 96HR.TLM):** DO NOT DISCHARGE THIS PRODUCT INTO PUBLIC WATERS OR WATERWAYS UNLESS AUTHORIZED BY A NATIONAL POLLUTION DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT ISSUED BY THE ENVIRONMENTAL PROTECTION AGENCY (EPA)

**SECTION XIV TRANSPORTATION INFORMATION**

<table>
<thead>
<tr>
<th>Governing Body</th>
<th>Mode</th>
<th>UN Number</th>
<th>Proper Shipping Name</th>
<th>Hazard Class</th>
<th>Packing Group</th>
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<tbody>
<tr>
<td>DOT</td>
<td>GROUND</td>
<td>2735</td>
<td>AMINES, LIQUID, CORROSIVE N.O.S. (ISOPHORONEDIAMINE, 1,3-BENZENEDIMETHANAMINE)</td>
<td>III</td>
<td>I</td>
</tr>
<tr>
<td>IATA</td>
<td>AIR</td>
<td>2735</td>
<td>AMINES, LIQUID, CORROSIVE N.O.S. (ISOPHORONEDIAMINE, 1,3-BENZENEDIMETHANAMINE)</td>
<td>III</td>
<td>I</td>
</tr>
<tr>
<td>IMDG</td>
<td>OCEAN</td>
<td>2735</td>
<td>AMINES, LIQUID, CORROSIVE N.O.S. (ISOPHORONEDIAMINE, 1,3-BENZENEDIMETHANAMINE)</td>
<td>III</td>
<td>I</td>
</tr>
</tbody>
</table>

**MARINE POLLUTANT:** THIS PRODUCT DOES CONTAIN A MATERIAL. ON THE MARINE POLLUTANTS TABLE (HMT 172.101 APPENDIX B) 4-NONYLPHENOL, BRANCHED
SECTION XV REGULATORY INFORMATION

CERCLA: IF THE REPORTABLE QUANTITY OF THIS PRODUCT IS ACCIDENTALLY SPILLED, THE INCIDENT IS SUBJECT TO THE PROVISIONS OF THE COMPREHENSIVE ENVIRONMENTAL RESPONSE COMPENSATION AND LIABILITY ACT (CERCLA) AND MUST BE REPORTED TO THE NATIONAL RESPONSE CENTER BY CALLING 1-800-424-8802 or 202-426-2875. NO REPORTABLE SPILL QUANTITY (RQ) HAS BEEN ESTABLISHED FOR THIS PRODUCT

SARA TITLE III: UNDER THE PROVISIONS OF TITLE III, SECTIONS 311/312 OF THE SUPERFUND AMENDMENTS AND RE-AUTHORIZATION ACT, THIS PRODUCT IS CLASSIFIED INTO THE FOLLOWING HAZARD CATEGORIES: ACUTE HEALTH HAZARD

ADDITIONAL REGULATORY CONCERNS: (FEDERAL, FDA, USDA, CPSC, STATE, OTHER)

PENNSYLVANIA WORKER AND COMMUNITY RIGHT TO KNOW ACT: THE FOLLOWING CHEMICALS ARE LISTED BECAUSE OF THE ADDITIONAL REQUIREMENTS OF PENNSYLVANIA LAW: BENZYL ALCOHOL, 100-51-6, 1,3-BENZENEDIMETHANAMINE 1477-55-0

MARINE POLLUTANTS: YES. THIS PRODUCT DOES CONTAIN A MATERIAL ON THE MARINE POLLUTANTS TABLE (HMT 172.101 Appendix B), 4-NONYLPHENOL, BRANCHED

CALIFORNIA PROP 65: WARNING: This product DOES NOT contain chemicals known to the state of California to cause cancer or birth defects or other reproductive harm. (Epichlorohydrin, Ethylbenzene, Crystalline Silica particles of respirable size)

CERCLA / RQ: THIS PRODUCT DOES NOT CONTAIN A MATERIAL ON THE RQ TABLE (HMT 172.101 Appendix A):

TSCA: IS THIS PRODUCT, OR ALL ITS INGREDIENTS, BEING CERTIFIED FOR INCLUSION ON THE TOXIC SUBSTANCES CONTROL ACT INVENTORY OF CHEMICAL SUBSTANCES? YES

SECTION XVI OTHER INFORMATION

PREPARED BY DARRYL MANUEL / PRESIDENT
COMPANY: VEXCON CHEMICALS, INC.
ADDRESS: 7240 STATE RD., PHILA., PA 19135 USA

THE INFORMATION PROVIDED IN THIS MATERIAL SAFETY DATA SHEET HAS BEEN OBTAINED FROM SOURCES BELIEVED TO BE RELIABLE. VEXCON PROVIDES NO WARRANTIES, EXPRESSED OR IMPLIED, AND ASSUMES NO RESPONSIBILITY FOR THE ACCURACY OR COMPLETENESS OF THE INFORMATION CONTAINED HEREIN.

HMIS HAZARD RATINGS:
THIS INFORMATION IS FOR PEOPLE TRAINED IN: NATIONAL PAINT AND COATINGS ASSOCIATIONS (NPCA) HAZARDOUS MATERIALS IDENTIFICATION SYSTEM (HMIS) NATIONAL FIRE PROTECTION ASSOCIATION (NFPA 704) IDENTIFICATION OF FIRE HAZARDS OF MATERIALS

PROCOAT HBE SYSTEM PART A CLEAR NPCA-HMIS NFPA 704
HEALTH 3 3 3 -- SERIOUS
FLAMMABILITY 1 1 1 -- SLIGHT
REACTIVITY 0 0 0 -- MINIMAL

KEY
4 -- SEVERE
3 -- MODERATE
2 -- SEVERE
1 -- MODERATE
0 -- MINIMAL

NPCA-HMIS NFPA 704
3 -- SERIOUS

HEALTH 3 3
FLAMMABILITY 1 1
REACTIVITY 0 0
SECTION I - GENERAL INFORMATION

PRODUCT IDENTIFICATION:

PROCOAT HBE SYSTEM – Part B CLEAR

VOC CONTENT:
- PART A ONLY: <100
- PART B ONLY: 0

CATEGORY:
- INDUSTRIAL MAINTENANCE COATING

COMMON NAME:
- EPOXY RESIN COATING

MANUFACTURER:
- VEXCON CHEMICALS, INC

ADDRESS:
- 7240 STATE RD, PHILADELPHIA, PA 19135

EMERGENCY NO:
- 800.858.2828 (PolySat Inc)

TELEPHONE NO:
- 215.332.7709 (Vexcon)

CHEMTREC NO:
- 800.424.9300 (CCN# 23822)

PREPARED:
- NOVEMBER 2016

UPDATED:
- AUGUST 2017

PREPARED BY:
- DARRY F. MANUEL , PRESIDENT

SECTION II – HAZARD IDENTIFICATION

HAZARD CLASSIFICATION
- Irritant
- Dermal Sensitizer
- Acute Toxicity
- Narcotic Effects
- Respiratory Tract Irritation

SKIN IRRITATION – CATEGORY 2
EYE IRRITATION – CATEGORY 2A
SKIN SENSITIZATION – CATEGORY 1

SINGLE WORD: WARMING

HAZARDS: CAUSES SKIN IRRITATION. MAY CAUSE AN ALLERGIC SKIN REACTION. CAUSES SERIOUS EYE IRRITATION.

PRECAUTIONARY STATEMENTS

PREVENTION:
- AVOID BREATHING DUST/FUME/GAS/MIST/VAPORS/SPRAY.
- WASH SKIN THOROUGHLY AFTER HANDLING.
- CONTAMINATED WORK CLOTHING SHOULD NOT BE ALLOWED OUT OF THE WORK PLACE.
- WEAR PROTECTIVE GLOVES/EYE PROTECTION/FACE PROTECTION.
- IF IN SKIN: WASH WITH PLENTY OF SOAP AND WATER.
- IF IN EYES: RINSE CAUTIOUSLY WITH WATER FOR SEVERAL MINUTES.
- REMOVE CONTACT LENSES. IF PRESENT AND EASY TO DO, CONTINUE RINSING.
- IF SKIN IRRITATION OR RASH OCCURS, GET MEDICAL ADVICE/ATTENTION. IF EYE IRRITATION PERSISTS; GET MEDICAL ADVICE ATTENTION. TAKE OFF CONTAMINATED CLOTHING AND WASH BEFORE REUSE.

SECTION III HAZARDOUS INGREDIENTS

<table>
<thead>
<tr>
<th>MATERIAL OR COMPONENTS</th>
<th>CAS NO.</th>
<th>%</th>
<th>HAZARD DATA</th>
<th>UN#</th>
</tr>
</thead>
<tbody>
<tr>
<td>BISPHENOL A / EPICHLOROHYDRIN EPOXY RESIN</td>
<td>25068-38-6</td>
<td>75-85%</td>
<td>NONE ESTABLISHED</td>
<td>D</td>
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<tr>
<td>3082</td>
<td>(Environmentally hazardous substance, liquid, n.o.s.)</td>
<td>HMIS 1-1-2</td>
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</tbody>
</table>

SECTION IV FIRST AID MEASURES

HEALTH HAZARD DATA

HAZARD CLASSIFICATION

BASES FOR CLASSIFICATION SOURCE

ROUTES OF EXPOSURE:

INHALATION:
- VAPOR INHALATION CAN CAUSE NASAL AND RESPIRATORY IRRITATION. DIZZINESS, WEAKNESS, FATIGUE, NAUSEA OR HEADACHE.

SKIN CONTACT:
- THIS PRODUCT MAY CAUSE SKIN IRRITATION UPON PROLONGED OR REPEATED CONTACT.

SKIN ABSORPTION:
- THIS PRODUCT MAY CAUSE SKIN IRRITATION UPON PROLONGED OR REPEATED CONTACT.

EYE CONTACT:
- THIS PRODUCT MAY BE AN EYE IRRITANT.

INGESTION / INHALATION:
- CAN CAUSE GASTROINTESTINAL IRRITATION, NAUSEA, VOMITING. SMALL AMOUNTS OF LIQUID ASPIRATED INTO THE RESPIRATORY SYSTEM DURING INGESTION, OR FROM VOMITING, MAY CAUSE BRONCHOPNEUMONIA OR PULMONARY EDEMA. DO NOT INDUCE VOMITING. SEEK IMMEDIATE MEDICAL ATTENTION.

EFFECTS OF OVEREXPOSURE:
- ANESTHESIA, HEADACHE, NAUSEA, DIZZINESS. LIQUIDS MODERATELY IRRITATING ON SKIN AND EYES.

ACUTE OVEREXPOSURE:
- ANESTHESIA, HEADACHE, NAUSEA, DIZZINESS. MODERATE IRRITATION BY LIQUID TO SKIN AND EYES. PROLONGED CONTACT ON THE SKIN WILL CLAY AND DEFAT THE SKIN POSSIBLY CAUSING DERMATITIS.

EMERGENCY AND FIRST AID PROCEDURES:

EYES:
- FLUSH WITH PLENTY OF WATER FOR AT LEAST 15 MINUTES. SEEK IMMEDIATE MEDICAL ATTENTION. CONSULT A PHYSICIAN.

SKIN:
- WASH WITH SOAP AND LARGE QUANTITIES OF WATER. SEEK MEDICAL ATTENTION IF SKIN IRRITATION DEVELOPS AND PERSISTS.

INHALATION:
- MOVE TO LOCATION FREE FROM VAPORS. IF BREATHING IS DIFFICULT, GIVE OXYGEN. IF BREATHING STOPS, BEGIN ARTIFICIAL RESPIRATION AND SEEK IMMEDIATE MEDICAL ATTENTION.

INGESTION:
- DO NOT INDUCE VOMITING; SEEK IMMEDIATE MEDICAL ATTENTION.

SECTION V FIREFIGHTING MEASURES

EXTINGUISHING MEDIA:
- EXCLUDE AIR.
- FIRES INVOLVING THIS PRODUCT MAY BE CONTROLLED BY REGULAR FOAM, CARBON DIOXIDE, DRY CHEMICALS OR WATER SPRAY.

GENERAL HAZARD:
- WATER MAY BE USED TO REDUCE THE RATE OF BURNING AND FOR COOLING PURPOSES. AVOID SPRAYING WATER DIRECTLY INTO STORAGE CONTAINERS DUE TO DANGER OF BOIL OVER. DO NOT USE DIRECT WATER STREAM. MAY SPREAD FIRE.

GENERAL HAZARD:
- CAN FORM COMBUSTIBLE MIXTURES AT TEMPERATURES AT OR ABOVE THE FLASH POINT.
- SMOKE MAY CONTAIN THE ORIGINAL MATERIAL IN ADDITION TO COMBUSTION PRODUCTS OF VARYING COMPOSITION WHICH MAY BE TOXIC AND/OR IRRITATING.
- COMBUSTION PRODUCTS MAY INCLUDE AND ARE NOT LIMITED TO: PHENOLICS, CARBON MONOXIDE, CARBON DIOXIDE.
SECTION VI ACCIDENTAL RELEASE MEASURES

AQUATIC TOXICITY (E.G. 96HR.TLM): DO NOT DISCHARGE THIS PRODUCT INTO PUBLIC WATERS OR WATERWAYS UNLESS AUTHORIZED BY A NATIONAL POLLUTION DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT ISSUED BY THE ENVIRONMENTAL PROTECTION AGENCY (EPA).

STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED:
1. LAND SPILL: Eliminate sources of ignition. Prevent additional discharge of material; if possible to do so without hazard. For small spills, implement cleanup procedures. For large spills, implement cleanup procedures and, if in public area, keep public away and advise authorities. Also, if this product is subject to CERCLA REPORTING NOTIFY THE NATIONAL RESPONSE CENTER.
2. WATER SPILL: Prevent liquid from entering sewers, watercourses, or low areas. Contain spilled liquid with sand or earth. Do not use combustible materials such as sawdust.
3. RECOVER BY PUMP (USE AN EXPLOSION PROOF OR HAND PUMP) OR WITH A SUITABLE ABSORBENT. CONSULT AN EXPERT ON DISPOSAL OF RECOVERED MATERIAL AND ENSURE CONFORMITY TO EPA, FEDERAL, STATE, AND LOCAL DISPOSAL REGULATIONS.

SECTION VII HANDLING AND STORAGE

PRECAUTIONARY STATEMENTS: PERSONAL SHOULD AVOID INHALATION OF VAPORS. PERSONAL CONTACT WITH THE PRODUCT SHOULD BE AVOIDED. SHOULD CONTACT BE MADE, REMOVE SATURATED APPAREL AND FLUSH AFFECTED BODY AREAS WITH WATER. CLOTHING MUST BE WASHED AND DRIED BEFORE REUSE. CONTAINERS OF THIS MATERIAL MAY BE HAZARDOUS WHEN EMPTIED SINCE EMPTIED CONTAINERS RETAIN PRODUCT RESIDUE (VAPOR, LIQUID AND/OR SOLID). ALL HAZARD PRECAUTIONS GIVEN IN THIS DATA SHEET MUST BE OBSERVED.

FIRE FIGHTING: WATER MAY BE UNSUITABLE AS AN EXTINGUISHING MEDIUM BUT HELPFUL IN KEEPING ADJACENT CONTAINERS COOL. AVOID SPREADING BURNING LIQUID WITH WATER USED FOR COOLING PURPOSES. PERSONNEL SHOULD AVOID INHALATION OF VAPORS.

OTHER HANDLING AND STORAGE REQUIREMENTS: STORE AND USE IN WELL VENTILATED AREA. EQUIVALENT TO FRESH AIR, KEEP CONTAINERS COOL, DRY, AND AWAY FROM SOURCES OF IGNITION. KEEP CONTAINER TIGHTLY CLOSED. DO NOT STORE WITH INCOMPATIBLE MATERIALS. STORE IN ACCORDANCE WITH FEDERAL, STATE, AND LOCAL REGULATIONS. DO NOT STORE OR CONSUME FOOD, DRINK, OR TOBACCO IN AREAS WHERE THEY MAY BECOME CONTAMINATED WITH THIS MATERIAL. KEEP AWAY FROM HIGH TEMPERATURES, OPEN FLAMES, SPARKS, SOURCES OF IGNITION, ETC. USE WITH EXPLOSION PROOF EQUIPMENT IS HIGHLY ADVISABLE.
### SECTION XI TOXICOLOGICAL INFORMATION

#### ACUTE TOXICITY

**ACUTE ORAL TOXICITY**
- Very low toxicity if swallowed.
- Harmful effects not anticipated from swallowing small amounts.
  - LD50, Rat >15,000 mg/kg

**ACUTE DERMAL TOXICITY**
- Prolonged skin contact is unlikely to result in absorption of harmful amounts.
  - LD50, Rabbit, 23,000 mg/kg

**ACUTE INHALATION TOXICITY**
- At room temperatures, exposure to vapor is minimal due to low volatility. Vapor from heated material, mist or aerosols may cause respiratory irritation. The LC50 has not been determined.

**SYSTEMIC TOXICITY (SINGLE EXPOSURE)**
- No relevant sensitization.

**TERATOGENICITY**
- Resin-based on the diglycidyl ether or bisphenol A (DGEBPA) did not cause birth defects or other adverse effects on the fetus when pregnant rabbits were exposed by skin contact. The most likely route of exposure or when pregnant rats or rabbits were exposed orally.

**REPRODUCTIVE TOXICITY**
- In animal studies, did not interfere with reproduction.

#### MUTAGENICITY
- In vitro genetic toxicity studies were negative in some cases and positive in other cases. Animals genetic toxicity studies were negative.

#### ASPIRATION HAZARD
- Based on physical properties, not likely to be an aspiration hazard.

#### COMPONENTS INFLUENCING TOXICOLOGY
- Propane, 2,2-bis-[p-(2,3-epoxypropoxy)phenyl]-polymers

**ACUTE INHALATION TOXICITY**
- The LC50 has not been determined.

### SECTION XII ECOLOGICAL INFORMATION

#### TOXICITY

**ACUTE TOXICITY TO FISH MATERIAL**
- Moderately toxic to aquatic organisms on an acute basis (LC50:650 between 10 and 10 mg/L in the most sensitive species tested).
  - LC50, Oncorhynchus mykiss (rainbow trout), semi-static test, 96 hour, 2 mg/L.

**ACUTE TOXICITY TO AQUATIC INVERTEBRATES**
- EC50, Daphnia magna (water flea), static test, 48 hour, 1.8 mg/L.

**ACUTE TOXICITY TO ALGAE/AQUATIC PLANTS**
- ErC50, Scenedesmus capricornutum (fresh water algae), static test, 72 hour, growth rate inhibition, 11 mg/L.

**TOXICITY TO BACTERIA**
- (C50, Bacteria, 18 hour, respiration rates, >42.6 mg/L)

**CHRONIC AQUATIC TOXICITY**
- MATC (maximum acceptable toxicant level), Daphnia magna (water flea), static test, 21 day, number of offspring, 0.55 mg/L.

#### PERSISTENCE AND DEGRADABILITY
- Biodegradability: Based on OECD test guidelines, this material cannot be considered as readily biodegradable; however, these results do not necessarily mean that the material is not biodegradable under environmental conditions.
  - 10-day window: Not applicable
  - Biodegradation: 12%
  - Exposure time: 28 days

**THEORETICAL OXYGEN DEMAND**
- 2.35 mg/mg estimated.

**PHOTO DEGRADATION**
- Test type: Half-life (indirect photolysis)
- Sensitizer: OH radicals
- Atmospheric half-life: 1.92 hour

#### BIOACCUMULATIVE POTENTIAL
- Bioaccumulation: Bioconcentration potential is moderate (BCF between 100 and 3000 or log POW between 3 and 5).
MOBILITY IN SOIL

Potential for mobility in soil is low (KOC between 500 and 2000). Giving its very low Henry’s constant, volatilization from natural bodies of water or moist soil is not expected to be an important fate process.


SECTION XIII DISPOSAL CONSIDERATIONS

Waste Disposal Method: If possible, pump to controlled containment area. Absorb on clay or sand. Dispose of in compliance with EPA, federal, state, and local regulations. Treatment, transportation and disposal must be in compliance with EPA, federal, state, and local regulations under the Resources Conservation and Recovery Act (RCRA, 40 CFR 261). Typically controlled burning, incineration or approved land fill sites are available.

Aquatic Toxicity (E.G. 96HR.TLM): Do not discharge this product into public waters or waterways unless authorized by a National Pollution Discharge Elimination System (NPDES) permit issued by the Environmental Protection Agency (EPA).

SECTION XIV TRANSPORTATION INFORMATION

<table>
<thead>
<tr>
<th>Governing Body</th>
<th>Mode</th>
<th>UN Number</th>
<th>Proper Shipping Name</th>
<th>Hazard Class</th>
<th>Packing Group</th>
</tr>
</thead>
<tbody>
<tr>
<td>DOT (Ground)</td>
<td>NON-REGULATED</td>
<td>3082</td>
<td>ENVIRONMENTAL HAZARDOUS SUBSTANCE, LIQUID N.O.S. (EPOXY RESIN)</td>
<td>9 III</td>
<td>NA</td>
</tr>
<tr>
<td>DOT (Bulk)</td>
<td>NON-REGULATED</td>
<td>3082</td>
<td>ENVIRONMENTAL HAZARDOUS SUBSTANCE, LIQUID N.O.S. (EPOXY RESIN)</td>
<td>9 III</td>
<td>NA</td>
</tr>
<tr>
<td>IATA Air</td>
<td>3082</td>
<td>ENVIRONMENTAL HAZARDOUS SUBSTANCE, LIQUID N.O.S. (EPOXY RESIN)</td>
<td>9 III</td>
<td>NA</td>
<td></td>
</tr>
<tr>
<td>IMDG Ocean</td>
<td>3082</td>
<td>ENVIRONMENTAL HAZARDOUS SUBSTANCE, LIQUID N.O.S. (EPOXY RESIN)</td>
<td>9 III</td>
<td>NA</td>
<td></td>
</tr>
<tr>
<td>Marine Pollutant</td>
<td>This product contains a material on the marine pollutants table (HMT 172.101 Appendix B): Epoxy Resin</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

HMIS HAZARD RATINGS:

<table>
<thead>
<tr>
<th></th>
<th>NPCA-HMIS</th>
<th>NFPA 704</th>
</tr>
</thead>
<tbody>
<tr>
<td>HEALTH</td>
<td>1 1</td>
<td>2 -- MODERATE</td>
</tr>
<tr>
<td>FLAMMABILITY</td>
<td>1 1</td>
<td>1 -- SLIGHT</td>
</tr>
<tr>
<td>REACTIVITY</td>
<td>0 0</td>
<td>0 -- MINIMAL</td>
</tr>
</tbody>
</table>

SECTION XV REGULATORY INFORMATION

CERCLA: If the reportable quantity of this product is accidentally spilled, the incident is subject to the provisions of the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) and must be reported to the National Response Center by calling 1-800-424-8802 or 202-426-2675.

NO REPORTABLE SPILL QUANTITY (RQ) HAS BEEN ESTABLISHED FOR THIS PRODUCT.

SARA TITLE III: Under the provisions of Title III, sections 311/312 of the Superfund Amendments and Reauthorization Act, this product is classified into the following hazard categories: ACUTE HEALTH HAZARD

ADDITIONAL REGULATORY CONCERNS: (FEDERAL, FDA, USDA, CPSC, STATE, OTHER)

FEDERAL / FDA / USDA:

MARINE POLLUTANTS: YES. This product does contain a material on the marine pollutants table (HMT 172.101 Appendix B): Epoxy Resin

CALIFORNIA PROP 65: WARNING: This product does not contain chemicals known to the state of California to cause cancer or birth defects or other reproductive harm. (Epichlorohydrin, Ethylbenzene, Crystalline Silica particles of respirable size)

CERCLA / RQ:

THIS PRODUCT DOES NOT CONTAIN A MATERIAL ON THE RQ TABLE (HMT 172.101 Appendix A):

TSCA: Is this product, or all its ingredients, being...