### 1. Identification

<table>
<thead>
<tr>
<th>Covestro LLC</th>
<th>CALL CHEMTREC: (800) 424-9300</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Covestro Circle</td>
<td>INTERNATIONAL: (703) 527-3887</td>
</tr>
<tr>
<td>Pittsburgh, PA 15205</td>
<td>NON-TRANSPORTATION</td>
</tr>
<tr>
<td>USA</td>
<td>Emergency Phone: Call Chemtrec</td>
</tr>
<tr>
<td></td>
<td>Information Phone: (844) 646-0545</td>
</tr>
</tbody>
</table>

**Product Name:** BAYSEAL CC X  
**Material Number:** 84017524  
**Chemical Family:** Polyol System  
**Use:** Polyol components for the production of polyurethanes

### 2. Hazards Identification

**GHS Classification**
- Skin irritation: Category 2
- Eye irritation: Category 2A
- Specific target organ toxicity - repeated exposure (Oral): Category 2 (Kidney)

**GHS Label Elements**
- Hazard pictograms:
  - ![Warning](image)

**Signal word:** Warning

**Hazard statements:**
- Causes skin irritation.
- Causes serious eye irritation.
- May cause damage to organs (Kidney) through prolonged or repeated exposure if swallowed.

**Precautionary statements:**

**Prevention:**
- Do not breathe dust, mist, gas, vapors or spray.
- Wash skin and face thoroughly after handling.
- Wear eye and face protection.
- Wear protective gloves.

**Response:**
- IF ON 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. Get medical attention if you feel unwell. If skin irritation occurs: Get medical attention. If eye irritation persists: Get medical attention. Take off contaminated clothing and wash before reuse.

**Disposal:** Dispose of contents and container in accordance with existing federal, state, and local environmental control laws.

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### 3. Composition/Information on Ingredients

#### Hazardous Components

<table>
<thead>
<tr>
<th>Weight Percent</th>
<th>Components</th>
<th>CAS-No.</th>
<th>Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>5 - 10%</td>
<td>Hydrofluorocarbon</td>
<td>460-73-1</td>
<td>Eye irritation Category 2B. Simple Asphyxiant.</td>
</tr>
<tr>
<td>5 - 10%</td>
<td>Tris-(2-chloroisopropyl)-phosphate</td>
<td>13674-84-5</td>
<td>Acute toxicity Category 4 Oral. Eye irritation Category 2B.</td>
</tr>
<tr>
<td>5 - 10%</td>
<td>Triethanolamine</td>
<td>102-71-6</td>
<td>Skin irritation Category 2. Eye irritation Category 2A.</td>
</tr>
<tr>
<td>1 - 5%</td>
<td>Glycol</td>
<td>CAS# is a trade secret</td>
<td>Acute toxicity Category 4 Oral. Specific target organ toxicity - single exposure Category 3 Central nervous system. Specific target organ toxicity - repeated exposure Category 2 Oral Kidney.</td>
</tr>
<tr>
<td>1 - 5%</td>
<td>2-Butoxyethanol</td>
<td>111-76-2</td>
<td>Acute toxicity Category 4 Oral. Acute toxicity Category 3 Inhalation. Acute toxicity Category 4 Dermal. Skin irritation Category 2. Eye irritation Category 2A. Flammable liquids Category 4.</td>
</tr>
<tr>
<td>&lt;5%</td>
<td>Trans-1,2-Dichloroethylene</td>
<td>156-60-5</td>
<td>Acute toxicity Category 4 Oral. Skin irritation Category 2. Eye irritation Category 2A. Specific target organ toxicity - single exposure Category 3 Central nervous system.</td>
</tr>
<tr>
<td>&lt;5%</td>
<td>Ester derivative</td>
<td>CAS# is a trade secret</td>
<td></td>
</tr>
<tr>
<td>0.1 - 1%</td>
<td>Tertiary Amine</td>
<td>CAS# is a trade secret</td>
<td>Skin corrosion Category 1A. Serious eye damage Category 1.</td>
</tr>
<tr>
<td>0.1 - 1%</td>
<td>Tin Catalyst</td>
<td>CAS# is a trade secret</td>
<td>Acute toxicity Category 4 Oral. Skin irritation Category 2. Serious eye damage Category 1.</td>
</tr>
<tr>
<td>----------</td>
<td>--------------</td>
<td>------------------------</td>
<td>----------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>0.1 - 1%</td>
<td>Tertiary Amine</td>
<td>CAS# is a trade secret</td>
<td>Acute toxicity Category 4 Oral. Acute toxicity Category 3 Dermal. Skin corrosion Category 1. Serious eye damage Category 1. HNOC - Halo vision.</td>
</tr>
<tr>
<td>0.1 - 1%</td>
<td>Amine</td>
<td>CAS# is a trade secret</td>
<td>Acute toxicity Category 4 Oral. Skin irritation Category 2. Serious eye damage Category 1. Flammable liquids Category 4.</td>
</tr>
</tbody>
</table>

The specific chemical identity and/or exact percentage of component(s) have been withheld as a trade secret.

### 4. First Aid Measures

**Most Important Symptom(s)/Effect(s)**

**Acute:** Causes serious eye irritation with symptoms of reddening, tearing, swelling, and burning., Causes skin irritation with symptoms of reddening, itching, and swelling., Vapor can reduce oxygen available for breathing.

**Eye Contact**
In case of contact, flush eyes with plenty of water for at least 15 minutes. Call a physician immediately.

**Skin Contact**
In case of skin contact, wash affected areas with soap and water. Immediately remove contaminated clothing and shoes. Get medical attention.

**Inhalation**
If inhaled, remove to fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. Get medical attention.

**Ingestion**
If ingested, do not induce vomiting unless directed to do so by medical personnel. Get medical attention.

### 5. Firefighting Measures

**Suitable Extinguishing Media:** Carbon dioxide (CO2), Dry chemical, Foam, water spray for large fires.

**Unsuitable Extinguishing Media:** High volume water jet

**Fire Fighting Procedure**
Firefighters should be equipped with self-contained breathing apparatus to protect against potentially toxic and irritating fumes. Use cold water spray to cool fire-exposed containers to minimize the risk of rupture.
**Hazardous Decomposition Products**
By Fire and Thermal Decomposition: Carbon dioxide (CO2), carbon monoxide (CO), oxides of nitrogen (NOx), dense black smoke, Chlorine, Hydrogen chloride gas, Hydrogen fluoride, Carbonyl halides, Oxides of phosphorus, Other hazardous decomposition products may be formed.

**Unusual Fire/Explosion Hazards**
The reaction of this product with polymeric MDI ("A" side) will release heat (e.g., it is an exothermic reaction). Thus, spraying foam too thickly in a single lift, or not allowing sufficient time between lifts, can result in excessive heat generation to the point where the foam may char, smolder or burn. Refer to the appropriate technical datasheet for application instructions.

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**6. Accidental Release Measures**

**Spill and Leak Procedures**
Evacuate and keep unnecessary people out of spill area. Remove ignition sources. Notify management. Put on protective equipment. Control source of the leak. Ventilate. Contain the spill. Cover spill with inert material (e.g., dry sand or earth) and collect for proper disposal.

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**7. Handling and Storage**

**Handling/Storage Precautions**
Handle in accordance with good industrial hygiene and safety practices. Wash thoroughly after handling. Keep container closed when not in use. Material is hygroscopic and may absorb small amounts of atmospheric moisture. If contamination with isocyanates is suspected, do not reseal containers. Do not get on skin or clothing. Do not get in eyes. Do not breathe vapours or spray mist.

**Storage Period:**
6 Months

**Storage Temperature**
- Minimum: 10 °C (50 °F)
- Maximum: 27 °C (80.6 °F)

**Storage Conditions**
Store materials between 50°F to 80°F (10°C to 27°C) in a dry and well ventilated area. The transit temperature range is 32°F to 100°F (0°C to 38°C). The pressure in sealed containers can increase under the influence of heat. Protect against heat and direct sunlight.

**Substances to Avoid**
Oxidizing agents, Isocyanates

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**8. Exposure Controls/Personal Protection**

**Exposure Limits**
When this product is heated or spray applied, amine vapors can be released.

**Triethanolamine** (102-71-6)
- **US. ACGIH Threshold Limit Values**
  - Time Weighted Average (TWA): 5 mg/m3

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Material Name: BAYSEAL CC X  
Material Number: 84017524  
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2-Butoxyethanol (111-76-2)
US. ACGIH Threshold Limit Values
Time Weighted Average (TWA): 20 ppm

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)
Permissible exposure limit: 50 ppm, 240 mg/m³

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)
Skin designation: Can be absorbed through the skin.

US. ACGIH Threshold Limit Values
Hazard Designation: Group A3 Confirmed animal carcinogen with unknown relevance to humans.

Trans-1,2-Dichloroethylene (156-60-5)
US. ACGIH Threshold Limit Values
Time Weighted Average (TWA): 200 ppm

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)
Permissible exposure limit: 200 ppm, 790 mg/m³

Industrial Hygiene/Ventilation Measures
When handling this product, ventilation of the work area is recommended.

Respiratory Protection
When this product is sprayed in combination with polymeric MDI ("A" side), a full-face or hood-type supplied air respirator operated in the positive pressure or continuous flow mode is required. For exterior spray applications where the use of supplied air respiratory protection may create a safety hazard (e.g., roof applications), an air purifying respirator with combination organic vapor/particulate (P100) cartridges may be substituted for a supplied air respirator. When handling the liquid product, particularly if heated or in a confined area, an air purifying respirator with combination organic vapor/particulate (P100) cartridges is recommended. The respiratory protection selected must comply with the requirements set forth in OSHA's Respiratory Protection Standard (29 CFR 1910.134). When APRs are used, (a) the cartridges must be equipped with end-of-service life indicators (ESLI) certified by NIOSH, or (b) a change out schedule, based on objective information or data that will ensure that the cartridges are changed out before the end of their service life, must be developed and implemented. The basis for the change out schedule must be described in the written respirator program.

Hand Protection
When this product is sprayed in combination with polymeric MDI ("A" side), fabric gloves coated in nitrile, neoprene, butyl or PVC are recommended. When handling liquid product, nitrile, neoprene, butyl or PVC gloves are recommended.

Eye Protection
When this product is sprayed in combination with polymeric MDI ("A" side), eye protection will be provided by the full-face or hood-type air supplied respirator as mentioned above in the respiratory
protection section. **When handling liquid product**, chemical safety goggles or safety glasses with side-shields are required.

**Skin Protection**
When this product is sprayed in combination with polymeric MDI ("A" side), a disposable full body suit (e.g., Tyvek, Kleenguard, etc.) with attached hood and disposable over-boots are required. **When handling liquid product**, wear cloth work clothing including long pants and long-sleeved shirts. If the potential for splash to the body exists, impermeable protective clothing is recommended.

**Additional Protective Measures**
Employees should wash their hands and face before eating, drinking, or using tobacco products. Educate and train employees in the safe use and handling of this product.

### 9. Physical and Chemical Properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>State of Matter</td>
<td>liquid</td>
</tr>
<tr>
<td>Color</td>
<td>Amber</td>
</tr>
<tr>
<td>Odor</td>
<td>slight, Ether, Amine</td>
</tr>
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<td>Odor Threshold</td>
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</tr>
<tr>
<td>pH</td>
<td>10</td>
</tr>
<tr>
<td>Freezing Point</td>
<td>No Data Available</td>
</tr>
<tr>
<td>Setting Point</td>
<td>No Data Available</td>
</tr>
<tr>
<td>Melting Point</td>
<td>No Data Available</td>
</tr>
<tr>
<td>Boiling Point</td>
<td>No Data Available</td>
</tr>
<tr>
<td>Flash Point</td>
<td>&gt; 100 °C (212 °F) (closed cup)</td>
</tr>
<tr>
<td>Evaporation Rate</td>
<td>No Data Available</td>
</tr>
<tr>
<td>Lower explosion limit</td>
<td>No Data Available</td>
</tr>
<tr>
<td>Upper Explosion Limit</td>
<td>No Data Available</td>
</tr>
<tr>
<td>Vapor Pressure</td>
<td>No Data Available</td>
</tr>
<tr>
<td>Vapor Density</td>
<td>No Data Available</td>
</tr>
<tr>
<td>Density</td>
<td>1.23 g/cm³ @ 20 °C (68 °F)</td>
</tr>
<tr>
<td>Relative Vapor Density</td>
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<tr>
<td>Specific Gravity</td>
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</tr>
<tr>
<td>Solubility in Water</td>
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<tr>
<td>Partition Coefficient: n-octanol/water</td>
<td>No Data Available</td>
</tr>
<tr>
<td>Auto-ignition Temperature</td>
<td>No Data Available</td>
</tr>
<tr>
<td>Decomposition Temperature</td>
<td>Not established</td>
</tr>
<tr>
<td>Dynamic Viscosity</td>
<td>No Data Available</td>
</tr>
<tr>
<td>Kinematic Viscosity</td>
<td>No Data Available</td>
</tr>
</tbody>
</table>

### 10. Stability and Reactivity

**Hazardous Reactions**
Hazardous polymerisation does not occur. The reaction of this product with polymeric MDI ("A" side) will release heat (e.g., it is an exothermic reaction). Thus, spraying foam too thickly in a single lift, or not allowing sufficient time between lifts, can result in excessive heat generation to the point where the foam may char, smolder or burn. Refer to the appropriate technical datasheet for application instructions.

**Stability**
Stable

**Materials to Avoid**
Oxidizing agents, Isocyanates
Hazardous Decomposition Products
By Fire and Thermal Decomposition: Carbon dioxide (CO2), carbon monoxide (CO), oxides of nitrogen (NOx), dense black smoke, Chlorine, Hydrogen chloride gas, Hydrogen fluoride, Carbonyl halides, Oxides of phosphorus, Other hazardous decomposition products may be formed.

11. Toxicological Information

Likely Routes of Exposure: Inhalation
                          Eye Contact
                          Skin Contact

Health Effects and Symptoms
  Acute: Causes serious eye irritation with symptoms of reddening, tearing, swelling, and burning. Causes skin irritation with symptoms of reddening, itching, and swelling. Vapor can reduce oxygen available for breathing.
  Chronic: May cause kidney damage.

Toxicity Data for: BAYSEAL CC X

Acute Oral Toxicity
Acute toxicity estimate: 4937 mg/kg  (Calculation method)

Acute Inhalation Toxicity
Acute toxicity estimate: > 40 mg/l, 4 h, vapour (Calculation method)

Acute Dermal Toxicity
Acute toxicity estimate: > 5000 mg/kg (Calculation method)

Toxicity Data for: Hydrofluorocarbon

Acute Inhalation Toxicity
LC50: > 200000 ppm, 4 h, gas (rat)

Acute Dermal Toxicity
LD50: > 2000 mg/kg (rabbit)
LD50: > 2000 mg/kg (rat)

Skin Irritation
Non-irritating

Eye Irritation
rabbit, Mild eye irritation

Sensitization
Skin sensitisation:: non-sensitizer

Repeated Dose Toxicity
28 d, inhalation: NOAEL: 50,000 ppm, (Rat)
90 d, Inhalation: NOAEL: 2000 ppm, (Rat)

Mutagenicity
Genetic Toxicity in Vitro:
Cytogenetic assay: ambiguous (human lymphocytes, Metabolic Activation: with/without)
Ames: negative (Metabolic Activation: with/without)

Genetic Toxicity in Vivo:
Micronucleus Assay: negative (Mouse)
negative

Developmental Toxicity/Teratogenicity
No Teratogenic effects observed at doses tested.

Toxicity Data for: Tris-(2-chloroisopropyl)-phosphate

Acute Oral Toxicity
LD50: >= 1150 mg/kg (rat)

Acute Inhalation Toxicity
LC50: > 7.14 mg/l, 4 h, dust/mist (rat, male/female)

Skin Irritation
human skin, Patch Test, Non-irritating
human skin, Patch Test, Non-irritating

Eye Irritation
rabbit, OECD Test Guideline 405, Exposure Time: 24 h, Slightly irritating

Sensitization
dermal: non-sensitizer (Guinea pig, Maximization Test)
dermal: non-sensitizer (Human, Patch Test)

Repeated Dose Toxicity
90 Days, oral: NOAEL: 36 mg/kg, (Rat, male)

13 weeks, oral: NOAEL: 2500 ppm, LOAEL: 800 ppm, (Rat, male, daily)

Mutagenicity
Genetic Toxicity in Vitro:
Ames: negative (Salmonella typhimurium, Metabolic Activation: with/without)
Positive and negative results were reported.
Mammalian cell - gene mutation assay: positive (Mouse lymphoma cells (L5178Y/TK), Metabolic Activation: with)
Positive and negative results were reported.

Genetic Toxicity in Vivo:
Micronucleus test: negative (Mouse, male/female, intraperitoneal)
negative

Toxicity to Reproduction/Fertility
Other method, inhalation, daily, (rat, male) Reproductive effects have been observed in animal studies. Two-generation study, (feeding study) oral, daily, (rat, male/female) NOAEL (parental): 85 mg/kg,

Developmental Toxicity/Teratogenicity
rat, female, oral, gestation, daily, NOAEL (teratogenicity): > 1%, NOAEL (maternal): > 1% No Teratogenic effects observed at doses tested.
No fetotoxicity observed at doses tested. rat, female, oral, gestation, NOAEL (teratogenicity): 1,000 mg/kg, NOAEL (maternal): 1,000 mg/kg.

**Toxicity Data for: Triethanolamine**

**Acute Oral Toxicity**
LD50: 6400 mg/kg (rat, male/female) (OECD Test Guideline 401)

**Acute Dermal Toxicity**
LD50: > 2000 mg/kg (rat)

**Skin Irritation**
rabbit, Slightly irritating

Human, irritating

**Eye Irritation**
Human, irritating

**Sensitization**
dermal: non-sensitizer (Guinea pig, Maximization Test)

**Repeated Dose Toxicity**
28 days, inhalation: NOAEL: > 0.5 mg/l, (Rat, Male/Female, 6 hrs/day 5 days/week)
No adverse effects were observed after repeated exposure in animal studies.

13 weeks, dermal: NOAEL: 500 mg/kg, (rat, Male/Female, daily)

**Mutagenicity**
Genetic Toxicity in Vitro:
Ames: negative (Salmonella typhimurium, Metabolic Activation: with/without)

Genetic Toxicity in Vivo:
Drosophila SLRL test: negative (Drosophila melanogaster) negative

**Carcinogenicity**
rat, female, dermal, 2 years, daily negativeMouse, Female, dermal, 2 yearspositiveRat, male, dermal, 2 yearsambiguousMouse, male, dermal, 2 yearsambiguousNitrosamines may be formed with nitrates or nitrous acid under certain conditions. Nitrosamines have shown carcinogenic effects in animal tests.

**Toxicity to Reproduction/Fertility**
Fertility Screening, Oral, daily, (rat, male/female) NOAEL (parental): > 1,000 mg/kg, NOAEL (F1): 300 mg/kg.

**Developmental Toxicity/Teratogenicity**
Rat, Male/Female, oral, daily, NOAEL (maternal): > 1,000 mg/kg.

**Toxicity Data for: Glycol**

**Acute Oral Toxicity**

Available data on diethylene glycol based on human poisoning reports that the median lethal dose is 1.34 ml/kg. Based on the available human toxicology data, it has been decided to classify this material as acute oral category 4.
**Acute Dermal Toxicity**
LD50: 11890 mg/kg (rabbit)

**Skin Irritation**
human skin, Slightly irritating

**Eye Irritation**
rabbit, Non-irritating

**Sensitization**
Maximisation Test: negative (Guinea pig)

**Repeated Dose Toxicity**
90 Days, Oral: NOAEL: 200 mg/kg, (Rat, )

6 months, Inhalation: NOAEL: < 0.02 mg/l, (rat, )

225 days, Oral: NOAEL: 100 mg/kg, (Rat, male/female, daily)

**Mutagenicity**
Genetic Toxicity in Vitro:
Ames: Negative results were reported in various in vitro studies. (Salmonella typhimurium, Metabolic Activation: with/without)
Chromosome aberration test: Negative results were reported in various in vitro studies. (Chinese hamster ovary (CHO) cells, Metabolic Activation: with/without)

Genetic Toxicity in Vivo:
Cytogenetic assay: (hamster, )
positive

Cytogenetic assay: (hamster, )
negative

In vivo micronucleus test: (Mouse, male, intraperitoneal)
negative

**Carcinogenicity**
rat, male/female, Oral, 108, daily
NOAEL: 1,160mg/kg body weight/day
Animal testing did not show any carcinogenic effects.rat, male/female, Oral, 108, ad libitum
NOAEL: 1,160mg/kg body weight/day

**Toxicity to Reproduction/Fertility**
One generation study, oral, (Mouse) NOAEL (parental): 3.5%. Fertility and mating indices were decreased. The survival and growth rates were reduced.Fertility Screening, oral, daily, (Mouse, male/female) NOAEL (parental): 3,060 mg/kg.

**Developmental Toxicity/Teratogenicity**
Mouse, oral, NOAEL (maternal): 1,250 mg/kg. Fetotoxicity seen only with maternal toxicity. Mouse, oral, NOAEL (maternal): 1,250 mg/kg. Fetotoxicity seen only with maternal toxicity. Rabbit, female, oral, GD 7-19, daily, NOAEL (teratogenicity): 1,000 mg/kg, NOAEL (maternal): 1,000 mg/kg.

**Toxicity Data for: 2-Butoxyethanol**

**Acute Oral Toxicity**
LD50: 1746 mg/kg (rat, male) (OECD Test Guideline 401)

**Acute Inhalation Toxicity**
LC50: 2.4 mg/l, 4 h, vapour (rat, male) (OECD Test Guideline 403)
LC50: 2.2 mg/l, 4 h, vapour (rat, female) (OECD Test Guideline 403)

**Acute Dermal Toxicity**
LD50: 2000 mg/kg (rabbit, male/female) (OECD Test Guideline 402)

**Skin Irritation**
rabbit, Exposure Time: 4 h, irritating

**Eye Irritation**
rabbit, OECD Test Guideline 405, irritating

**Sensitization**
dermal: non-sensitizer (Guinea pig, Maximization Test)
dermal: non-sensitizer (Human, Patch Test)

Skin sensitisation according to Magnusson/Kligmann (maximizing test): negative (Guinea pig, OECD Test Guideline 406)

**Repeated Dose Toxicity**
90 Days, inhalation: NOAEL: 0.121 mg/kg, (Rat, Male/Female, daily)

30 Days, inhalation: NOAEL: < 0.27 mg/kg, (Rat, Male/Female, daily)

90 days, dermal: NOAEL: 150 mg/kg, (rabbit, Male/Female, daily)

90 Days, Oral: NOAEL: 0.45 mg/l, (Rat, Male/Female, daily)

14 weeks, inhalation: (Rat, Male/Female, 6 hrs/day 5 days/week)

**Mutagenicity**
Genetic Toxicity in Vitro:
Ames: Negative results were reported in various in vitro studies. (Salmonella typhimurium, Metabolic Activation: with/without)
Mammalian cell - gene mutation assay: Negative results were reported in various in vitro studies. (Chinese hamster ovary (CHO) cells, Metabolic Activation: with/without)

Genetic Toxicity in Vivo:
Micronucleus Assay: negative (Mouse) negative

Micronucleus Assay: negative (rat, male, intraperitoneal) negative

**Carcinogenicity**
Mouse, Male/Female, inhalation, 2 years, daily Animal experiments showed a statistically significant number of tumours.

**Toxicity to Reproduction/Fertility**
Other method, oral, daily, (Rat, Male/Female) NOAEL (parental): 304 mg/kg, Reproductive effects have been observed in animal studies. Two generation study, oral, (Mouse, Male/Female) NOAEL (parental):
720 mg/kg, NOAEL (F1): 720 mg/kg, NOAEL (F2): 720 mg/kg,

**Developmental Toxicity/Teratogenicity**
Rat, female, inhalation, gestation, daily, NOAEL (teratogenicity): 0.97 mg/kg, NOAEL (maternal): 0.24 mg/kg. Teratogenic effects seen only with maternal toxicity. rabbit, female, gestation, daily, NOAEL (teratogenicity): 0.97 mg/kg, NOAEL (maternal): 0.48 mg/kg. Rat, Female, dermal, gestation, daily, NOAEL (teratogenicity): 5,400 mg/kg, NOAEL (maternal): < 1,800 mg/kg, rabbit, female, inhalation, gestation, 6 hours/day, NOAEL (maternal): 50 ppm

**Toxicity Data for: Trans-1,2-Dichloroethylene**

**Acute Oral Toxicity**
LD50: 1235 mg/kg (rat)

**Acute Inhalation Toxicity**
LC50: 95.55 mg/l, 4 h, vapour (rat, male/female) (OECD Test Guideline 403)

**Acute Dermal Toxicity**
LD50: > 5000 mg/kg (rabbit)

**Skin Irritation**
rabbit, Exposure Time: 24 h, Moderately irritating

**Eye Irritation**
Human, irritating

**Repeated Dose Toxicity**
No valid data available. Chronic exposure damages the brain and the central nervous system.

90 days, Inhalation: NOAEL: > 4000 ppm, (rat, male/female, 6 hrs/day 5 days/week)

14 weeks, Oral: (rat, male/female, 6 hrs/day 5 days/week)

**Mutagenicity**
Genetic Toxicity in Vitro:
Sister Chromatid Exchange: negative (Chinese hamster ovary (CHO) cells, Metabolic Activation: with/without)
In vitro tests did not show mutagenic effects
Bacterial - gene mutation assay: negative (Salmonella typhimurium, Metabolic Activation: with/without)
In vitro tests did not show mutagenic effects

Genetic Toxicity in Vivo:
Micronucleus Assay: negative (Mouse, male) negative

**Developmental Toxicity/Teratogenicity**
rat, female, inhalation, GD 7-16, 6 hours/day, NOAEL (maternal): < 2000 ppm

**Other Relevant Toxicity Information**
May cause drowsiness or dizziness.

**Toxicity Data for: Ester derivative**

**Acute Oral Toxicity**
LD50: > 5000 mg/kg (rat, female) (OECD Test Guideline 423)
**Acute Inhalation Toxicity**
LC50: > 11 mg/l, 4 h, aerosol (rat) (OECD Test Guideline 403)

**Acute Dermal Toxicity**
LD50: > 2000 mg/kg (rat) (OECD Test Guideline 402)

**Skin Irritation**
OECD Test Guideline 404, Non-irritating

**Eye Irritation**
rabbit, slight irritant

**Sensitization**
non-sensitizer (Guinea pig)

Skin sensitization (local lymph node assay (LLNA)):: negative (Mouse, OECD Test Guideline 429)

**Repeated Dose Toxicity**
Inhalation: NOAEL: < 0.16 mg/l, (Rat, Male/Female)

2 weeks, dermal: NOAEL: 1,000 mg/kg, (Rat, Male/Female, 6 hrs/day 7 days/week)

**Mutagenicity**
Genetic Toxicity in Vitro:
Ames: negative (Salmonella typhimurium, Metabolic Activation: with/without)
Chromosome aberration test in vitro: negative (Metabolic Activation: with/without)
In vitro mammalian cell gene mutation test: positive (Human lymphocytes, Metabolic Activation: with)
In vitro mammalian cell gene mutation test: negative (Human lymphocytes, Metabolic Activation: without)

Genetic Toxicity in Vivo:
Micronucleus Assay: negative (Mouse, Male/Female, inhalation)
negative

**Toxicity to Reproduction/Fertility**
One generation study, inhalation, (rat, Male/Female) NOAEL (parental): 1 mg/l, NOAEL (F1): 0.4 mg/l,

**Developmental Toxicity/Teratogenicity**
rat, female, inhalation, NOAEL (teratogenicity): 1 mg/l, NOAEL (maternal): 0.16 mg/l, No fetotoxicity observed at doses tested.

**Toxicity Data for: Tertiary Amine**

**Skin Irritation**
rabbit, OECD Test Guideline 404, Exposure Time: 4 h, Corrosive

**Eye Irritation**
rabbit, OECD Test Guideline 405, severe irritant

**Sensitization**
Maximisation Test: negative (Guinea pig, OECD Test Guideline 406)

**Repeated Dose Toxicity**
35 days, Oral: LOAEL: < 25 mg/kg, (rat, male/female, daily)

**Mutagenicity**
Genetic Toxicity in Vitro:
Micronucleus test: negative (Chinese hamster ovary (CHO) cells, Metabolic Activation: with/without)

**Toxicity to Reproduction/Fertility**
Fertility Screening, Oral, daily, (rat, male/female) NOAEL (parental): 100 mg/kg.

**Toxicity Data for: Tin Catalyst**

**Acute Oral Toxicity**
LD50: 1690 mg/kg (rat)

**Acute Dermal Toxicity**
LD50: 3197 mg/kg (rabbit)

**Skin Irritation**
Severely irritating

**Eye Irritation**
Severely irritating

**Toxicity Data for: Tertiary Amine**

**Acute Oral Toxicity**
LD50: 1840 mg/kg (rat, female)

**Acute Dermal Toxicity**
LD50: 569 mg/kg (rat)

**Skin Irritation**
In vitro test system, Corrosive

**Eye Irritation**
Corrosive

**Sensitization**
Skin sensitisation:: sensitizer

**Mutagenicity**
Genetic Toxicity in Vitro:
Ames test: No indication of mutagenic effects.

**Toxicity Data for: Amine**

**Acute Oral Toxicity**
LD50: 1300 mg/kg (rat)

**Skin Irritation**
irritating

**Eye Irritation**
severe irritant

**Carcinogenicity:**
No carcinogenic substances as defined by IARC, NTP and/or OSHA
12. Ecological Information

Ecological Data for: BAYSEAL CC X

No data available for this product.

Ecological Data for Hydrofluorocarbon
Acute and Prolonged Toxicity to Fish
LC50: > 81.8 mg/l (Rainbow trout (Salmo gairdneri), 48 h)

Acute Toxicity to Aquatic Invertebrates
EC50: > 97.9 mg/l (Water flea (Daphnia magna), 96 h)

Ecological Data for Tris-(2-chloroisopropyl)-phosphate
Biodegradation
Aerobic, 0 %, Exposure time: 28 Days. Not readily biodegradable.

Bioaccumulation
Cyprinus carpio (Carp), Exposure time: 42 Days, ca. 0.8 - 2.8 BCF

Acute and Prolonged Toxicity to Fish
LC50: ca. 84 mg/l (Bluegill (Lepomis macrochirus), 96 h)
LC50: 51 mg/l (Fathead minnow (Pimephales promelas), 96 h)
LC50: 30 mg/l (Guppy (Poecilia reticulata), 96 h)

Acute Toxicity to Aquatic Invertebrates
EC50: ca. 131 mg/l (Water flea (Daphnia magna), 48 h)

Toxicity to Aquatic Plants
EC50: 45 mg/l, End Point: biomass (Green algae (Scenedesmus subspicatus), 72 h)
EC50: 41 - 55 mg/l, End Point: biomass (Green algae (Selenastrum capricornutum), 96 h)

Toxicity to Microorganisms
EC50: 295 mg/l, (Photobacterium phosphoreum, 30 min)
EC50: 784 mg/l, (Activated sludge microorganisms, 3 h)

Ecological Data for Triethanolamine
Biodegradation
Aerobic, 82 %, Exposure time: 8 Days
Inherently biodegradable.

Biochemical Oxygen Demand (BOD)
5 Days, 0.17 mg/l

Chemical Oxygen Demand (COD)
0.5 mg/g

Theoretical Biological Oxygen Demand (ThBOD)
1.61 - 2.04 mg/g

Bioaccumulation
Cyprinus carpio (Carp), Exposure time: 42 Days, < 0.4 BCF
Acute and Prolonged Toxicity to Fish
LC50: > 5,000 mg/l (Fathead minnow (Pimephales promelas), 96 h)
LC50: 450 mg/l (Bluegill (Lepomis macrochirus), 96 h)

Acute Toxicity to Aquatic Invertebrates
EC50: 1,386 mg/l (Water flea (Daphnia magna), 24 h)

Toxicity to Aquatic Plants
EC50: 216 - 750 mg/l, End Point: growth (Green algae (Scenedesmus subspicatus), 72 h)

Toxicity to Microorganisms
EC10: 7,650 mg/l, (Pseudomonas putida, 16 h)
EC50: 525 mg/l, (Photobacterium phosphoreum, 30 min)

Ecological Data for Glycol
Biochemical Oxygen Demand (BOD)
5 Days, 4 %
20 Days, 53 %

Acute and Prolonged Toxicity to Fish
LC50: > 10,000 mg/l (Fathead minnow (Pimephales promelas), 48 h)
LC0: > 1,000 mg/l (Bluegill (Lepomis macrochirus), 96 h)

Acute Toxicity to Aquatic Invertebrates
EC50: > 10,000 mg/l (Water flea (Daphnia magna), 24 h)

Toxicity to Aquatic Plants
NOEC: 100 mg/l, End Point: growth (other: algae, 7 d)

Toxicity to Microorganisms
> 10,000 mg/l, (Other bacteria)

Ecological Data for 2-Butoxyethanol
Biodegradation
aerobic, 100 %, Exposure time: 28 Days

Biochemical Oxygen Demand (BOD)
5 Days, 1,300 mg/g
20 Days, 1,800 mg/g

Chemical Oxygen Demand (COD)
2,180 mg/g

Theoretical Biological Oxygen Demand (ThBOD)
2,300 mg/g

Bioaccumulation
c.a. 2.5 BCF

Acute and Prolonged Toxicity to Fish
LC50: 1,490 mg/l (Bluegill (Lepomis macrochirus), 96 h)

1,250 mg/l (Silverside Minnow (Menidia peninsulae), 96 h)

LC50: 2,137 mg/l (Fathead minnow (Pimephales promelas), 96 h)

**Acute Toxicity to Aquatic Invertebrates**

EC50: 1,720 - 1,850 mg/l (Water flea (Daphnia magna), 24 h)

LC50: 800 mg/l (Common shrimp (Crangon crangon), 48 h)

**Toxicity to Aquatic Plants**

EC50: > 1,000 mg/l, (Green algae (Selenastrum capricornutum), 7 Days)

**Toxicity to Microorganisms**

IC50: > 1,000 mg/l, (Activated sludge microorganisms, 16 h)

**Ecological Data for Ester derivative**

**Biodegradation**

aerobic, 75 %, Exposure time: 28 d, i.e. readily biodegradable

**Acute and Prolonged Toxicity to Fish**

LC50: 33.6 mg/l (Fathead minnow (Pimephales promelas), 96 h)

**Ecological Data for Tertiary Amine**

**Biodegradation**

60 %, Exposure time: 28 d, i.e. not readily degradable

**Acute and Prolonged Toxicity to Fish**

LC50: 148 mg/l (fish (pisces), 96 h)

**Ecological Data for Tertiary Amine**

**Additional Ecotoxicological Remarks**

No data available for this component.

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**13. Disposal Considerations**

**Waste Disposal Method**

Waste disposal should be in accordance with existing federal, state and local environmental control laws.

**Empty Container Precautions**

Recondition or dispose of empty container in accordance with governmental regulations.

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**14. Transportation Information**

**Land transport (DOT)**

**Proper Shipping Name:** Other regulated substances, liquid, n.o.s. (contains

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## Material Name

BAYSEAL CC X

## Material Number

84017524

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<table>
<thead>
<tr>
<th>Hazard Class or Division:</th>
<th>Hydrofluorocarbon, trans-Dichloroethylene</th>
</tr>
</thead>
<tbody>
<tr>
<td>UN/NA Number:</td>
<td>9</td>
</tr>
<tr>
<td>Packaging Group:</td>
<td>NA3082</td>
</tr>
<tr>
<td>Hazard Label(s):</td>
<td>Class 9</td>
</tr>
</tbody>
</table>

### RSPA/DOT Regulated Components:
Trans-1,2-Dichloroethylene

### Reportable Quantity:
18155 kg (40025 lb)

### Sea transport (IMDG)

#### Non-Regulated

### Air transport (ICAO/IATA)

#### Proper Shipping Name:
Aviation regulated liquid, n.o.s. (contains Hydrofluorocarbon, trans-Dichloroethylene)

#### Hazard Class or Division:
9

#### UN number:
UN3334

#### Packaging Group:
III

#### Hazard Label(s):
MISCELLANEOUS

### Additional Transportation Information
For ground, vessel, rail, when in quantities less than the RQ, this product ships non-regulated.

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### 15. Regulatory Information

#### United States Federal Regulations

**US. Toxic Substances Control Act:** Listed on the TSCA Inventory.

No substances are subject to TSCA 12(b) export notification requirements.

**US. EPA CERCLA Hazardous Substances (40 CFR 302) Components:**
- 2-Butoxyethanol: Included in the regulation but with no data values. See regulation for further details
- Trans-1,2-Dichloroethylene: Reportable quantity: 1000 lbs

**SARA Section 311/312 Hazard Categories:**
- Acute Health Hazard
- Chronic Health Hazard

**US. EPA Emergency Planning and Community Right-To-Know Act (EPCRA) SARA Title III Section 302 Extremely Hazardous Substance (40 CFR 355, Appendix A) Components:**
- None

**US. EPA Emergency Planning and Community Right-To-Know Act (EPCRA) SARA Title III Section 313 Toxic Chemicals (40 CFR 372.65) - Supplier Notification Required Components:**
- 2-Butoxyethanol
- Trans-1,2-Dichloroethylene

Under RCRA, it is the responsibility of the person who generates a solid waste, as defined in 40 CFR 261.2, to determine if that waste is a hazardous waste.

### State Right-To-Know Information

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The following chemicals are specifically listed by individual states; other product specific health and safety data in other sections of the SDS may also be applicable for state requirements. For details on your regulatory requirements you should contact the appropriate agency in your state.

Massachusetts, New Jersey or Pennsylvania Right to Know Substance Lists:

<table>
<thead>
<tr>
<th>Weight percent</th>
<th>Components</th>
<th>CAS-No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>&gt;=1%</td>
<td>Polyester Polyol</td>
<td>CAS# is a trade secret</td>
</tr>
<tr>
<td>&gt;=1%</td>
<td>Polyether Polyol</td>
<td>CAS# is a trade secret</td>
</tr>
<tr>
<td>5 - 10%</td>
<td>Hydrofluorocarbon</td>
<td>460-73-1</td>
</tr>
<tr>
<td>5 - 10%</td>
<td>Tris-(2-chloroisopropyl)-phosphate</td>
<td>13674-84-5</td>
</tr>
<tr>
<td>3 - 7%</td>
<td>Triethanolamine</td>
<td>102-71-6</td>
</tr>
<tr>
<td>&gt;=1%</td>
<td>Brominated Aromatic Polyalcohol</td>
<td>CAS# is a trade secret</td>
</tr>
<tr>
<td>1 - 5%</td>
<td>Glycol</td>
<td>CAS# is a trade secret</td>
</tr>
<tr>
<td>1 - 5%</td>
<td>2-Butoxyethanol</td>
<td>111-76-2</td>
</tr>
<tr>
<td>&lt;5%</td>
<td>Trans-1,2-Dichloroethylene</td>
<td>156-60-5</td>
</tr>
<tr>
<td>&lt;5%</td>
<td>Ester derivative</td>
<td>CAS# is a trade secret</td>
</tr>
<tr>
<td>0.1 - 1%</td>
<td>Tertiary Amine</td>
<td>CAS# is a trade secret</td>
</tr>
<tr>
<td>0.1 - 1%</td>
<td>Tertiary Amine</td>
<td>CAS# is a trade secret</td>
</tr>
</tbody>
</table>

New Jersey Environmental Hazardous Substances List and/or New Jersey RTK Special Hazardous Substances Lists:

<table>
<thead>
<tr>
<th>Weight percent</th>
<th>Components</th>
<th>CAS-No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 - 5%</td>
<td>2-Butoxyethanol</td>
<td>111-76-2</td>
</tr>
<tr>
<td>&lt;5%</td>
<td>Trans-1,2-Dichloroethylene</td>
<td>156-60-5</td>
</tr>
</tbody>
</table>

California Prop. 65:
Warning! This product contains chemical(s) known to the State of California to be Carcinogenic.

<table>
<thead>
<tr>
<th>Weight percent</th>
<th>Components</th>
<th>CAS-No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;0.1%</td>
<td>Diethanolamine</td>
<td>111-42-2</td>
</tr>
</tbody>
</table>

Based on information provided by our suppliers, this product is considered “DRC Conflict Free” as defined by the SEC Conflict Minerals Final Rule (Release No. 34-67716; File No. S7-40-10; Date: 2012-08-22).

16. Other Information

The method of hazard communication for Covestro LLC is comprised of product labels and safety data sheets. Safety data sheets for all of our products and general product declarations are available for download at www.productsafetyfirst.covestro.com.

Contact: Product Safety Department
Telephone: (412) 413-2835
SDS Number: 112000045841
Version Date: 05/24/2016
SDS Version: 4.0

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Changes since the last version are highlighted in the margin. This version replaces all previous versions.