

SAFETY DATA SHEET



1. Identification

Covestro LLC
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Pittsburgh, PA 15205
USA

TRANSPORTATION EMERGENCY

CALL CHEMTREC: (800) 424-9300
INTERNATIONAL: (703) 527-3887

NON-TRANSPORTATION

Emergency Phone: Call Chemtrec
Information Phone: (844) 646-0545

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:



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.

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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.

The following percentage of the mixture consists of ingredient(s) with unknown acute toxicity:
 49 %

3. Composition/Information on Ingredients

Hazardous Components

<u>Weight Percent</u>	<u>Components</u>	<u>CAS-No.</u>	<u>Classification</u>
5 - 10%	Hydrofluorocarbon	460-73-1	Eye irritation Category 2B. Simple Asphyxiant.
5 - 10%	Tris-(2-chloroisopropyl)-phosphate	13674-84-5	Acute toxicity Category 4 Oral. Eye irritation Category 2B.
5 - 10%	Triethanolamine	102-71-6	Skin irritation Category 2. Eye irritation Category 2A.
1 - 5%	Glycol	CAS# is a trade secret	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.
1 - 5%	2-Butoxyethanol	111-76-2	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.
<5%	Trans-1,2-Dichloroethylene	156-60-5	Acute toxicity Category 4 Oral. Skin irritation Category 2. Eye irritation Category 2A. Specific target organ toxicity - single exposure Category 3 Central nervous system.
<5%	Ester derivative	CAS# is a trade secret	Eye irritation Category 2A.

0.1 - 1%	Tertiary Amine	CAS# is a trade secret	Skin corrosion Category 1A. Serious eye damage Category 1.
0.1 - 1%	Tin Catalyst	CAS# is a trade secret	Acute toxicity Category 4 Oral. Skin irritation Category 2. Serious eye damage Category 1.
0.1 - 1%	Tertiary Amine	CAS# is a trade secret	Acute toxicity Category 4 Oral. Acute toxicity Category 3 Dermal. Skin corrosion Category 1. Serious eye damage Category 1. HNOC - Halo vision.
0.1 - 1%	Amine	CAS# is a trade secret	Acute toxicity Category 4 Oral. Skin irritation Category 2. Serious eye damage Category 1. Flammable liquids Category 4.

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 No Data Available

Fire Fighting Procedure

Firefighters should be equipped with self-contained breathing apparatus to protect against potentially toxic

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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 (NO_x), 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.

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.

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:

3 Months

Storage Temperature

Minimum: 21.11 °C (70 °F)

Maximum: 26.67 °C (80 °F)

Storage Conditions

Store materials between 70°F to 80°F (21°C to 27°C) in a dry and well ventilated area for a minimum of 48 hours prior to application of material. 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

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

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Time Weighted Average (TWA): 5 mg/m³

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

US. ACGIH Threshold Limit Values

Time Weighted Average (TWA): 200 ppm

Any component which is listed in section 3 and is not listed in this section does not have a known ACGIH TLV, OSHA PEL or supplier recommended occupational exposure limit.

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

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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

State of Matter:	liquid
Color:	Amber
Odor:	slight, Ether, Amine
Odor Threshold:	No Data Available
pH:	ca. 10
Freezing Point:	No Data Available
Setting Point:	No Data Available
Melting Point:	No Data Available
Boiling Point:	No Data Available
Flash Point:	> 100 °C (212 °F) (closed cup)
Evaporation Rate:	No Data Available
Lower explosion limit:	No Data Available
Upper Explosion Limit:	No Data Available
Vapor Pressure:	No Data Available
Vapor Density:	No Data Available
Density:	1.23 g/cm ³ @ 20 °C (68 °F)
Relative Vapor Density:	No Data Available
Specific Gravity:	No Data Available
Solubility in Water:	No Data Available
Partition Coefficient: n-octanol/water:	No Data Available
Auto-ignition Temperature:	No Data Available
Decomposition Temperature:	Not established
Dynamic Viscosity:	No Data Available
Kinematic Viscosity:	No Data Available

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

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Oxidizing agents, Isocyanates

Hazardous Decomposition Products

By Fire and Thermal Decomposition: Carbon dioxide (CO₂), carbon monoxide (CO), oxides of nitrogen (NO_x), 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:

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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 negative
Mouse, Female, dermal, 2 years positive
Rat, male, dermal, 2 years ambiguous
Mouse, male, dermal, 2 years ambiguous
Nitrosamines 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

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human skin, Slightly irritating

Eye Irritation

rabbit, Non-irritating

Sensitization

Maximisation Test (GPMT): 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, Draize, Moderately irritating

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 (GPMT): 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)

Material Name: BAYSEAL CC X

Material Number: 84017524

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

ca. 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)

Acute Toxicity to Aquatic Invertebrates

EC50: 122.1 - 163.5 mg/l (Water flea (Daphnia magna), 48 h)

Toxicity to Microorganisms

EC10: 62.5 mg/l, (Pseudomonas putida, 18 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.

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.

14. Transportation Information

Land transport (DOT)

Proper Shipping Name: Other regulated substances, liquid, n.o.s. (contains Hydrofluorocarbon, trans-Dichloroethylene)
Hazard Class or Division: 9
UN/NA Number: NA3082
Packaging Group: III
Hazard Label(s): Class 9

RSPA/DOT Regulated Components:

Trans-1,2-Dichloroethylene

Reportable Quantity: 18155 kg (40025 lb)

Sea transport (IMDG)

Material Name: BAYSEAL CC X

Material Number: 84017524

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.

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

US. EPA Resource Conservation and Recovery Act (RCRA) Composite List of Hazardous Wastes and Appendix VIII Hazardous Constituents (40 CFR 261):

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

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:

<u>Weight percent</u>	<u>Components</u>	<u>CAS-No.</u>
>=1%	Polyester Polyol	CAS# is a trade secret
>=1%	Polyether Polyol	CAS# is a trade secret
5 - 10%	Hydrofluorocarbon	460-73-1
5 - 10%	Tris-(2-chloroisopropyl)-phosphate	13674-84-5

Material Name: BAYSEAL CC X

Material Number: 84017524

3 - 7%	Triethanolamine	102-71-6
>=1%	Brominated Aromatic Polyalcohol	CAS# is a trade secret
1 - 5%	Glycol	CAS# is a trade secret
1 - 5%	2-Butoxyethanol	111-76-2
<5%	Trans-1,2-Dichloroethylene	156-60-5
<5%	Ester derivative	CAS# is a trade secret
0.1 - 1%	Tertiary Amine	CAS# is a trade secret
0.1 - 1%	Tertiary Amine	CAS# is a trade secret

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

<u>Weight percent</u>	<u>Components</u>	<u>CAS-No.</u>
1 - 5%	2-Butoxyethanol	111-76-2
<5%	Trans-1,2-Dichloroethylene	156-60-5

California Prop. 65:

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

<u>Weight percent</u>	<u>Components</u>	<u>CAS-No.</u>
<0.1%	Diethanolamine	111-42-2

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.

Contact: Product Safety Department
 Telephone: (412) 413-2835
 SDS Number: 112000045841
 Version Date: 09/02/2015
 SDS Version: 3.0

This information is furnished without warranty, express or implied. This information is believed to be accurate to the best knowledge of Covestro LLC. The information in this SDS relates only to the specific material designated herein. Covestro LLC assumes no legal responsibility for use of or reliance upon the information in this SDS.

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