SAFETY DATA SHEET

1. Identification

Covestro LLC
1 Covestro Circle
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: BAYDUR TB 100-15 COMP B
Material Number: 84146251
Chemical Family: Polyol System
Use: Polyol components for the production of polyurethanes

2. Hazards Identification

GHS Classification
Serious eye damage: Category 1
Specific target organ toxicity - repeated exposure (Oral): Category 2 (Kidney)

GHS Label Elements
Hazard pictograms:

Signal word: Danger

Hazard statements: Causes serious eye damage.
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.
Wear eye and face protection.
Response:
Get medical attention if you feel unwell.
IF IN EYES: Rinse cautiously with water for several minutes.
Remove contact lenses, if present and easy to do. Continue rinsing.
Immediately call a doctor or emergency medical facility (i.e., 911).
Disposal:
Dispose of contents and container in accordance with existing federal,

state, and local environmental control laws.

3. Composition/Information on Ingredients

Hazardous Components

Concentration	Components	CAS-No.
10 - 30%	Polyol	CAS# is a trade secret
10 - 30%	Diethylene Glycol	111-46-6
7 - 13%	Polyether Polyol	67800-94-6
1 - 5%	Ethylene Glycol	107-21-1
0.1 - 1%	Tertiary Amine	CAS# is a trade secret
0.1 - 1%	Tertiary Amine	CAS# is a trade secret

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 damage with symptoms of eye burns, corneal injury, and possible blindness.

Eye Contact

In case of contact, flush eyes with plenty of lukewarm water. Get medical attention.

Skin Contact

In case of skin contact, wash affected areas with soap and water. Immediately remove contaminated clothing and shoes. Get medical attention if irritation develops.

Inhalation

If inhaled, remove to fresh air. Get medical attention if irritation develops.

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: Carbon DioxideCarbon Monoxide Other hazardous decomposition products may be formed.

6. Accidental Release Measures

Spill and Leak Procedures
Cover spill with inert material (e. g., dry sand or earth) and collect for proper disposal. Use appropriate personal protective equipment during clean up. Evacuate and keep unnecessary people out of spill area.

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. Avoid breathing dust, vapor, or mist. Avoid contact with eyes. Avoid contact with skin or clothing.

Storage Period:
12 Months

Storage Temperature
Maximum: 50 °C (122 °F)

Substances to Avoid
Oxidizing agents, Isocyanates

8. Exposure Controls/Personal Protection

The recommendations in this section should not be a substitute for a personal protective equipment (PPE) assessment performed by the employer as required by 29 CFR 1910 Subpart I.

Exposure Limits

Ethylene Glycol (107-21-1**)**

US. ACGIH Threshold Limit Values, as amended
Short Term Exposure Limit (STEL): 10 mg/m3 (Inhalable fraction.)

US. ACGIH Threshold Limit Values, as amended
Short Term Exposure Limit (STEL): 50 ppm (Vapor.)

US. ACGIH Threshold Limit Values, as amended
Time weighted average 25 ppm (Vapor.)

US. ACGIH Threshold Limit Values, as amended
Hazard Designation: Group A4 Not classifiable as a human carcinogen.

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

Use local and general exhaust ventilation to control levels of exposure. Thermal processing operations should be ventilated to control gases and fumes given off during processing.

Respiratory Protection
When workers are facing concentrations above the exposure limit they must use appropriate certified respirators., NIOSH approved, air-purifying respirator with organic vapor cartridges and P-95 filters., At higher concentrations or under uncertain conditions a respirator with independent air supply must be used.

Hand Protection
Ensure gloves remain in good condition during use and replace if any deterioration is observed.

Permeation resistant gloves., butyl-rubber, Nitrile rubber, Neoprene gloves

Eye Protection
Chemical resistant goggles must be worn.

Skin Protection
Wear as appropriate:, Impervious protective clothing.

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:	Black
Odor:	slight, Amine
Odor Threshold:	No Data Available
pH:	No Data Available
Freezing Point:	No Data Available
Setting Point:	No Data Available
Melting Point:	No Data Available
Boiling Point:	No Data Available
Flash Point:	> 93.33 °C (200 °F)
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:	No Data Available
Relative Vapor Density:	No Data Available
Specific Gravity:	1.08 @ 20 °C (68 °F)
Solubility in Water:	partly soluble
Partition Coefficient: n-octanol/water:	No Data Available
Auto-ignition Temperature:	No Data Available
Decomposition Temperature:	No Data Available
Unblocking Temperature:	No Data Available
Softening point:	No Data Available
Dynamic Viscosity:	No Data Available
Kinematic Viscosity:	No Data Available
Bulk Density:	No Data Available
Molecular Weight:	No Data Available

Pour point: No Data Available

10. Stability and Reactivity

Hazardous Reactions
Hazardous polymerisation does not occur.

Stability
Stable

Materials to Avoid
Oxidizing agents, Isocyanates

Hazardous Decomposition Products
By Fire: Carbon Dioxide; Carbon Monoxide; Other hazardous decomposition products may be formed.

11. Toxicological Information

Likely Routes of Exposure: Skin Contact
Eye Contact
Inhalation

Health Effects and Symptoms

Acute: Causes serious eye damage with symptoms of eye burns, corneal injury, and possible blindness.
Chronic: May cause kidney damage.

Toxicity Data for: BAYDUR TB 100-15 COMP B

Acute Oral Toxicity
Acute toxicity estimate: 2,319 mg/kg (Calculation method)

Acute Dermal Toxicity
Acute toxicity estimate: > 5,000 mg/kg (Calculation method)

Toxicity Data for: Polyol

Acute Dermal Toxicity
LD50: 11,890 mg/kg (rabbit)

Skin Irritation
rabbit, OECD Test Guideline 404, slight irritant
Studies of a comparable product.

Eye Irritation
In vitro test system, HET-CAM test, severe irritant
Studies of a comparable product.

Sensitization
Skin sensitization (local lymph node assay (LLNA)):: negative (Mouse, OECD Test Guideline 429)
Studies of a comparable product.

Toxicity Data for: Diethylene 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 Inhalation Toxicity
LC50: > 4.6 mg/l, 4 h, dust/mist (rat)

Acute Dermal Toxicity
LD50: 11,890 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: Polyether Polyol

Acute Oral Toxicity
LD50: 1,400 mg/kg (rat, male/female) (Directive 84/449/EEC, B.1)

Acute Dermal Toxicity
LD50: > 2,000 mg/kg (rat, male/female) (OECD Test Guideline 402)

Skin Irritation
rabbit, OECD Test Guideline 404, non-irritant

Eye Irritation
rabbit, OECD Test Guideline 405, Slightly irritating

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

Repeated Dose Toxicity
4 w, Oral: NOAEL: 40 mg/kg, (rat, male/female, daily)
Studies of a comparable product.

Mutagenicity
Genetic Toxicity in Vitro:
Salmonella/microsome test (Ames test): No indication of mutagenic effects. (Metabolic Activation: with/without)
In vitro mammalian cell gene mutation test: negative (Chinese hamster V79 cell line, Metabolic Activation: with/without)
Chromosome aberration test in vitro: negative (Chinese hamster V79 cell line, Metabolic Activation: with/without)
Ames: negative (Salmonella typhimurium, Metabolic Activation: with/without)

Carcinogenicity
No data available.
Toxicity to Reproduction/Fertility
Oral, daily, (rat, male/female) Fertility and developmental toxicity tests did not reveal any effect on reproduction.
Studies of a comparable product.Fertility Screening, Oral, daily, (rat, male/female) Fertility and developmental toxicity tests did not reveal any effect on reproduction.
Studies of a comparable product.

Developmental Toxicity/Teratogenicity
rat, female, Oral, 58 d, NOAEL (maternal): 10 mg/kg, Fertility and developmental toxicity tests did not reveal any effect on development.
Studies of a comparable product.

Toxicity Data for: Ethylene Glycol

Acute Oral Toxicity

A review by LaKind (1999) summarized the toxicity of ethylene glycol. The lethal oral dose in humans has been estimated to be 1.4 ml/kg or approximately 100 ml/adult. This is based on accidental poisoning and intentional ingestion and was derived from the lowest dose reported to cause death in a human. Ethylene glycol appears to be two to five times more acutely toxic in humans and cats than to other experimental animals. The same data and lethal dose for ethylene glycol is cited in numerous other papers and in toxicology books. Based on the available human toxicology data, it has been decided to classify this material as acute oral category 4.

Acute Dermal Toxicity
LD50: 9,530 mg/kg (rabbit)

Skin Irritation
Draize Test, Mild skin irritation

Eye Irritation
rabbit, Draize, Mild eye irritation

Sensitization
Skin sensitisation according to Magnusson/Kligmann (maximizing test):: negative

Repeated Dose Toxicity
16 Weeks, Inhalation: NOAEL: 3.49 mg/l, (Rat, Male/Female, daily)

6 Weeks, Inhalation: NOAEL: 48 mg/kg, LOAEL: 107 mg/kg, (Rat, Male/Female, 7 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)

Genetic Toxicity in Vivo:
Dominant Lethal Assay: (rat, male, oral)
negative

Micronucleus Assay: (Mouse,)
negative

Drosophila SLRL test: (Drosophila melanogaster,)
positive

Dominant Lethal Assay: negative (rat, male, Oral)
negative

Carcinogenicity
rat, oral, 2 years, daily Did not show carcinogenic effects in animal experiments.Mouse, dermal, lifetime, daily negativeMouse, oral, 2 years, daily

Toxicity to Reproduction/Fertility
Fertility Screening, oral, (Mouse, Male/Female) NOAEL (parental): 2,500 mg/kg, NOAEL (F1): > 750 mg/kg, No effects on Reproductive parameters observed at doses tested.Three generation study, oral, daily, (rat) NOAEL (parental): > 1,000 mg/kg, NOAEL (F1): > 1,000 mg/kg, NOAEL (F2): > 1,000 mg/kg,

Developmental Toxicity/Teratogenicity
rabbit, female, dermal, NOAEL (teratogenicity): ca. 2,000 mg/kg, NOAEL (maternal): > 1,000 mg/kg, Teratogenic effects have been observed in animal studies.

Fetotoxicity has been observed in animal studies.Rat, female, oral, NOAEL (teratogenicity): < 500 mg/kg, NOAEL (maternal): 1,000 mg/kg, Teratogenic effects have been observed in animal studies.
Fetotoxicity has been observed in animal studies.

Toxicity Data for: Tertiary Amine

Acute Oral Toxicity
LD50: 1,840 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: Tertiary Amine

Acute Oral Toxicity
LD50: 700 mg/kg (rat)

Acute Inhalation Toxicity
LC50: > 5 mg/l, 4 h, dust/mist (rat)
4 hour test is calculated.

LC50: > 20 mg/l, 1 h, dust/mist (rat)

Acute Dermal Toxicity
LD50: > 2,000 mg/kg (rat)

Skin Irritation
Moderately irritating

Eye Irritation
rabbit, Severely irritating

Repeated Dose Toxicity
28 d, Oral: NOAEL: 100 mg/kg, (rat)

28 d, Inhalation: NOAEL: 0.0058 mg/l, (rat,)

Mutagenicity

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

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

Other Relevant Toxicity Information
May cause irritation of respiratory tract.

Carcinogenicity:
No carcinogenic substances as defined by IARC, NTP and/or OSHA

12. Ecological Information

Ecological Data for: BAYDUR TB 100-15 COMP B

No data available for this product.Please find below the data available to us for the hazardous components:

Ecological Data for Polyol
Biodegradation
60 %, Exposure time: 28 d, i.e. not readily degradable
Studies of a comparable product.

Acute and Prolonged Toxicity to Fish
LC50: > 100 mg/l (Brachydanio rerio (Zebra barbel), 96 h)
Studies of a comparable product.

Acute Toxicity to Aquatic Invertebrates
EC50: > 100 mg/l (Daphnia magna (Water flea), 48 h)
Studies of a comparable product.

Toxicity to Aquatic Plants
ErC50: 157 mg/l, (Desmodesmus subspicatus (Green algae), 72 h)

Ecological Data for Diethylene 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 Polyether Polyol
Biodegradation
aerobic, 27 %, Exposure time: 28 d, i.e. not readily degradable

Zahn-Wellens Test, 42 %, Exposure time: 27 d, i.e. not inherently degradable

Bioaccumulation
Due to the low n-octanol-water partition coefficient, an accumulation in organisms is not to be expected.

Acute and Prolonged Toxicity to Fish
LC50: > 100 mg/l (Danio rerio (zebra fish), 96 h)

Acute Toxicity to Aquatic Invertebrates
EC50: > 100 mg/l (Daphnia magna (Water flea), 48 h)

Toxicity to Aquatic Plants
ErC50: 208.9 mg/l, (Desmodesmus subspicatus (Green algae), 72 h)

Toxicity to Microorganisms
EC10: ca. 1,800 mg/l, (activated sludge, 3 h)
Studies of a comparable product.

Ecological Data for Ethylene Glycol
Biodegradation
Aerobic, > 40 %, Exposure time: 20 Days

Biochemical Oxygen Demand (BOD)
5 Days, 0.78 - 1.81 g/g

Chemical Oxygen Demand (COD)
1.19 - 1.29 g/g

Theoretical Biological Oxygen Demand (ThBOD)
1.26 - 1.29 g/g

Bioaccumulation
Leuciscus idus (Golden orfe), Exposure time: 3 Days, 10 BCF

Acute and Prolonged Toxicity to Fish
41,000 mg/l (Coho salmon, silver salmon (Oncorhynchus kisutch), 96 h)

LC50: 49,000 - 57,000 mg/l (Fathead minnow (Pimephales promelas), 96 h)

LC50: 18,500 mg/l (Rainbow trout (Salmo gairdneri), 96 h)

Acute Toxicity to Aquatic Invertebrates
EC50: 46,300 - 57,600 mg/l (Water flea (Daphnia magna), 48 h)

EC50: 13,900 - 29,700 mg/l (Ceriodaphnia sp, 48 h)

Toxicity to Aquatic Plants
EC50: 6,500 - 13,000 mg/l, End Point: growth (Green algae (Selenastrum capricornutum), 96 h)

Toxicity to Microorganisms
EC50: 10,000 mg/l, (Pseudomonas putida, 16 h)

EC50: 621 mg/l, (Photobacterium phosphoreum, 30 min)

Ecological Data for Tertiary Amine

Additional Ecotoxicological Remarks
No data available for this component.

Ecological Data for Tertiary Amine
Biodegradation
7 %, Exposure time: 28 Days

Acute and Prolonged Toxicity to Fish
LC50: 1,730 mg/l (Fathead minnow (Pimephales promelas), 96 h)

Acute Toxicity to Aquatic Invertebrates
EC50: 92 mg/l (Water flea (Daphnia magna), 48 h)

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)
Non-Regulated

Sea transport (IMDG)
Non-Regulated

Air transport (ICAO/IATA)
Non-Regulated

15. Regulatory Information

United States Federal Regulations
US. Toxic Substances Control Act: Listed on the Active Portion of the TSCA Inventory.

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

US. EPA CERCLA Hazardous Substances (40 CFR 302) Components:
Ethylene Glycol Reportable quantity: 5000 lbs

SARA Section 311/312 Hazard Categories:
Refer to hazard classification information in Section 2.

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:
Ethylene Glycol

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:

Concentration	Components	CAS-No.
>=1%	Polyether Polyol	9082-00-2
>=1%	Polyether Polyol	25791-96-2
10 - 30%	Polyol	CAS# is a trade secret
10 - 30%	Diethylene Glycol	111-46-6
7 - 13%	Polyether Polyol	67800-94-6
>=1%	Dipropylene Glycol	25265-71-8
1 - 5%	Ethylene Glycol	107-21-1

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

Concentration	Components	CAS-No.
1 - 5%	Ethylene Glycol	107-21-1

Massachusetts Right to Know Extraordinarily Hazardous Substance List:

Concentration	Components	CAS-No.
<100 ppm	1,4-Dioxane	123-91-1

California Proposition 65 List:

Concentration	Components	CAS-No.
1 - 5%	Ethylene Glycol	107-21-1
<100 ppm	1,4-Dioxane	123-91-1

CFATS (Chemical Facility Anti-Terrorism Standards) Chemicals
To the best of our knowledge, this product does not contain Appendix A Chemicals of Interest (COI), at or above the Screening Threshold Quantity (STQ), as defined by the Department of Homeland Security Chemical Facility Anti-terrorism Standard (CFATS, 6 CFR Part 27).

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

Version Date: 05/26/2022
SDS Version: 5.4

Information contained in this SDS is believed to be accurate but is furnished without warranty, express or implied, including warranties of merchantability or fitness for a particular purpose. The information 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 and such information shall in no case be considered a part of our terms and conditions of sale. The user is responsible for determining whether the Covestro product is suitable for user's method of use or application. Covestro is not liable for any failure to observe the precautionary measures described in this SDS or for any misuse of the product.

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