

SAFETY DATA SHEET



1. Identification

Covestro LLC
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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: BAYFILL 53IF33M
Material Number: 81803218
Chemical Family: Polyol System
Use: Polyol components for the production of polyurethanes

2. Hazards Identification

GHS Classification

Eye irritation: Category 2A
Skin sensitisation: Category 1

GHS Label Elements

Hazard pictograms:



Signal word: Warning

Hazard statements: May cause an allergic skin reaction.
Causes serious eye irritation.

Precautionary statements:

Prevention:

Avoid breathing dust, mist, gas, vapors or spray.
Wash skin and face thoroughly after handling.
Contaminated work clothing must not be allowed out of the workplace.
Wear eye and face protection.
Wear protective gloves.

Response:

IF ON SKIN: Wash with plenty of soap and water.
If skin irritation or rash occurs: Get medical attention.
Wash contaminated clothing before reuse.
IF IN EYES: Rinse cautiously with water for several minutes.

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Remove contact lenses, if present and easy to do. Continue rinsing.
If eye irritation persists: Get medical attention.

Disposal:

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

3. Composition/Information on Ingredients

Hazardous Components

<u>Concentration</u>	<u>Components</u>	<u>CAS-No.</u>
1 - 5%	Triethanolamine	102-71-6
0.1 - 1%	Polyether Polyol	25214-63-5
0.1 - 1%	Diethyltoluenediamine (DETDA)	68479-98-1
0.1 - 1%	N-[2-(dimethylamino) ethoxy]ethyl]-n-methyl-1,3-propanediamine	189253-72-3

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., May cause allergic skin reaction with symptoms of reddening, itching, swelling, and rash.

Eye Contact

In case of contact, flush with plenty of water for at least 15 minutes. Use fingers to ensure that eyelids are separated and that the eye is being irrigated. Get medical attention if irritation develops.

Skin Contact

Immediately remove contaminated clothing and shoes. Wash affected areas, including hair, beneath nails and other concealed areas with Polyethylene Glycol 400. Repeat the washing with soap and water. If Polyethylene Glycol 400 is not available, wash immediately with soap and plenty of cold water. Wash clothing and shoes before reuse. Get medical attention if irritation develops.

Inhalation

If inhaled, remove to fresh air. If not breathing, give artificial respiration using a pocket mask type resuscitator. If breathing is difficult, give oxygen. In case of blue discoloration (cyanosis) of skin, lips, or fingernails, give oxygen to breathe. Get medical attention.

Ingestion

If ingested, do not induce vomiting unless directed to do so by medical personnel. Give two glasses of water for dilution. Do not give anything by mouth to an unconscious person. Call a physician.

Notes to Physician

Immediately give oxygen if victim turns blue (lips, ears, fingernails). Since reversion of methaemoglobin to haemoglobin occurs spontaneously after termination of exposure, moderate degrees of cyanosis need to be treated only by supportive measures.

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. Toxic and irritating gases/fumes may be given off during burning or thermal decomposition. Use cold water spray to cool fire-exposed containers to minimize the risk of rupture.

Hazardous Decomposition Products

By Fire: Carbon Dioxide Carbon Monoxide Hydrogen cyanide, Nitrogen oxides (NO_x), Amines, Other hazardous decomposition products may be formed.

Unusual Fire/Explosion Hazards

If this polyol is combined with phosphorus compounds, trimethylolpropanephosphate (TMPP), a known neurotoxin, can be given off in the event of a fire. Therefore, we do not recommend mixing this polyol with phosphorus compounds.

6. Accidental Release Measures

Spill and Leak Procedures

Remove all sources of ignition, including flames, heat, and sparks. Ventilate area to remove vapors or dust. Evacuate and keep unnecessary people out of spill area. Use appropriate personal protective equipment during clean up. Dike or dam spilled material and control further spillage, if possible. Do not allow spilled material or wash water to enter sewers, surface waters, or groundwater systems. Large spills should be contained and pumped into original or similar containers. Cover spill with inert material (e. g., dry sand or earth) and collect for proper disposal. Wash spill area with soap and water. Collect wash water for approved disposal. Notify local health and safety authorities and other appropriate agencies if necessary.

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

Maximum: 30 °C (86 °F)

Substances to Avoid

Oxidizing agents, Isocyanates, Phosphorus compounds

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

Triethanolamine (102-71-6)

US. ACGIH Threshold Limit Values, as amended

Time weighted average 5 mg/m³

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.

Personal protective equipment

Avoid contact with skin, eyes and clothing.

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

The following respirator is recommended if airborne concentrations exceed the appropriate standard/guideline., 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 safety goggles or safety glasses with side-shields.

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:	characteristic
Odor Threshold:	No Data Available
pH:	No Data Available
Melting Point:	No Data Available
Boiling Point:	No Data Available

Flash Point:	102 °C (215.6 °F) @ 1,013 hPa (calculated) > 100 °C (> 212 °F) @ 780 hPa (ASTM D 93)
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:	1.041 g/cm ³ @ 20 °C (68 °F)
Relative Vapor Density:	No Data Available
Specific Gravity:	1.041 @ 20 °C (68 °F)
Solubility in Water:	completely soluble
Partition Coefficient: n-octanol/water:	No Data Available
Auto-ignition Temperature:	No Data Available
Decomposition Temperature:	Not established
Dynamic Viscosity:	1,200 mPa.s @ 25 °C (77 °F)
Kinematic Viscosity:	No Data Available

10. Stability and Reactivity

Hazardous Reactions

Hazardous polymerisation does not occur.

Stability

Stable

Materials to Avoid

Oxidizing agents, Isocyanates, Phosphorus compounds

Hazardous Decomposition Products

By Fire: Carbon Dioxide; Carbon Monoxide; Hydrogen cyanide, Nitrogen oxides (NO_x), Amines, Other hazardous decomposition products may be formed.

11. Toxicological Information

Likely Routes of Exposure: Eye Contact
Skin Contact
Inhalation

Health Effects and Symptoms

Acute: Causes serious eye irritation with symptoms of reddening, tearing, swelling, and burning., May cause allergic skin reaction with symptoms of reddening, itching, swelling, and rash.

Chronic: Not expected to cause adverse chronic health effects.

Toxicity Data for: BAYFILL 53IF33M

Acute Oral Toxicity

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

Toxicity Data for: Triethanolamine

Acute Oral Toxicity

LD50: 6,400 mg/kg (rat, male/female) (OECD Test Guideline 401)

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Acute Dermal Toxicity

LD50: > 2,000 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: Polyether Polyol**Acute Oral Toxicity**

LD50: > 2,000 mg/kg (rat, male/female) (OECD Test Guideline 401)

Acute Dermal Toxicity

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

Skin Irritation

rabbit, OECD Test Guideline 404, slight irritant

Eye Irritation

rabbit, moderate irritant

Toxicity Data for: Diethyltoluenediamine (DETDA)

Material Name: BAYFILL 53IF33M

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Acute Oral Toxicity

LD50: 738 mg/kg (rat, male/female) (OECD Test Guideline 401)

Acute Dermal Toxicity

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

Skin Irritation

rabbit, OECD Test Guideline 404, Non-irritating

Eye Irritation

rabbit, irritating

Sensitization

Skin sensitisation:: negative (Guinea pig)

Repeated Dose Toxicity

90 Days, Oral: NOAEL: 3 mg/kg, LOAEL: 8 mg/kg, (Rat, male/female, daily)

21 d, Dermal: NOAEL: 100 mg/kg, (rabbit, male/female, 6 hours a day, 5 days a week)

2 a, Oral: NOAEL: 0.4 mg/kg, LOAEL: 3.2 mg/kg, (rat, male/female, daily)

Mutagenicity

Genetic Toxicity in Vitro:

Ames: positive (Salmonella typhimurium, Metabolic Activation: with)

Positive and negative results were seen in various in vitro studies.

Mammalian cell - gene mutation assay: positive (Mouse lymphoma cells (L5178Y/TK), Metabolic Activation: with)

Positive and negative results were seen in various in vitro studies.

Mammalian cell - gene mutation assay: negative (Mouse lymphoma cells (L5178Y/TK), Metabolic Activation: without)

Positive and negative results were seen in various in vitro studies.

Chromosome aberration test: ambiguous (human lymphocytes, Metabolic Activation: with/without)

Positive and negative results were seen in various in vitro studies.

Genetic Toxicity in Vivo:

Dominant Lethal Assay: (rat, Male/Female, oral)

negative

Cytogenetic assay: (Rat, male, oral)

positive

Micronucleus Assay: (Mouse, Male/Female, intraperitoneal)

negative

Micronucleus Assay: (Mouse, Male/Female, Oral)

negative

Carcinogenicity

Rat, Male/Female, oral, 2 years, daily positive Rat, Male/Female, oral, 2 years, daily

LOAEL: >=3.2

Developmental Toxicity/Teratogenicity

rat, female, Oral, NOAEL (maternal): 2.63 mg/kg,

Toxicity Data for: N-[2-(dimethylamino) ethoxy]ethyl]-n-methyl-1,3-propanediamine

Acute Oral Toxicity

LD50: 300 - 2,000 mg/kg (rat)

Skin Irritation

Corrosive

Eye Irritation

Severely irritating

Sensitization

sensitizer

May cause sensitisation of susceptible persons by skin contact.

Skin sensitisation:: positive

Mutagenicity

Genetic Toxicity in Vitro:

Chromosome aberration test: negative (Metabolic Activation: with/without)

Bacterial - gene mutation assay: negative

Carcinogenicity:

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

12. Ecological Information

Ecological Data for: BAYFILL 53IF33M

No data available for this product.

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 Polyether Polyol**Biodegradation**

aerobic, < 50 %, Exposure time: 28 d

Acute and Prolonged Toxicity to Fish

LC0: > 1,000 mg/l (Zebra fish (Brachydanio rerio), 48 h)

Toxicity to Microorganisms

EC0: > 1,000 mg/l, (Activated sludge microorganisms, 3 h)

Ecological Data for Diethyltoluenediamine (DETDA)**Biodegradation**

aerobic, 0.00 %, Exposure time: 28 Days

Chemical Oxygen Demand (COD)

2,370 mg/g

Acute and Prolonged Toxicity to Fish

LC50: Approximately 194 mg/l (Golden orfe (Leuciscus idus), 48 h)

Acute Toxicity to Aquatic Invertebrates

EC50: Approximately 0.5 mg/l (Water flea (Daphnia magna), 48 h)

Toxicity to Microorganisms

EC10: 170 mg/l, (Pseudomonas putida, 24 h)

Ecological Data for N-[2-(dimethylamino) ethoxy]ethyl]-n-methyl-1,3-propanediamine**Biodegradation**

Not readily biodegradable.

Bioaccumulation

Not expected to bio-accumulate.

Acute and Prolonged Toxicity to Fish

LC50: > 100 mg/l (Common Carp (Cyprinus carpio), 96 h)

Acute Toxicity to Aquatic Invertebrates

EC50: > 100 mg/l (Water flea (Daphnia magna), 48 h)

Toxicity to Aquatic Plants

EC50: 64 mg/l, (Pseudokirchneriella subcapitata (microalgae), 72 h)

EC50: > 100 mg/l, (Pseudokirchneriella subcapitata (microalgae), 72 h)

Toxicity to Microorganisms

Material Name: BAYFILL 53IF33M

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EC50: > 100 mg/l, (Activated sludge microorganisms)

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. Do not heat or cut container with electric or gas torch. Empty containers retain product residue (dust, liquid, vapor and/or gases) and can be dangerous.

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:

This product and its components are either on the Active Portion of the TSCA Inventory or meet the requirements for the Polymer Exemption (PE).

US. EPA CERCLA Hazardous Substances (40 CFR 302) Components:

None

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:

None

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

Material Name: BAYFILL 53IF33M

Material Number: 81803218

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>Concentration</u>	<u>Components</u>	<u>CAS-No.</u>
>=1%	Polyether Polyol	CAS# is a trade secret
>=1%	Polyester Polyol	CAS# is a trade secret
>=1%	Polyether Polyol	CAS# is a trade secret
>=1%	Water	7732-18-5
1 - 5%	Triethanolamine	102-71-6
0.1 - 1%	Diethyltoluenediamine (DETDA)	68479-98-1
0.1 - 1%	N-[2-(dimethylamino) ethoxy]ethyl]- n-methyl-1,3-propanediamine	189253-72-3

California Proposition 65 List:

<u>Concentration</u>	<u>Components</u>	<u>CAS-No.</u>
<0.1%	Carbon Black	1333-86-4
<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. 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: 10/23/2019
SDS Version: 1.6

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