

# 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:** MULTRANOL 4012  
**Material Number:** 05288649  
**Chemical Family:** Polyol  
**Use:** Polyol components for the production of polyurethanes

## 2. Hazards Identification

This product is not classified as hazardous according to OSHA HazCom 2012 (29 CFR 1910.1200).

## 3. Composition/Information on Ingredients

### Hazardous Components

There are no hazardous components above the relevant concentration limits according to OSHA HazCom 2012.

## 4. First Aid Measures

### Eye Contact

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

### Skin Contact

In case of skin contact, wash affected areas with soap and water. Get medical attention if irritation develops and persists.

### Inhalation

If inhaled, remove to fresh air. If breathing is difficult, give oxygen. Get medical attention if irritation develops.

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### **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 (CO<sub>2</sub>), 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 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 and Thermal Decomposition: Carbon dioxide (CO<sub>2</sub>), carbon monoxide (CO), oxides of nitrogen (NO<sub>x</sub>), dense black smoke., Other undetermined compounds

### **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**

Dike or dam spilled material and control further spillage, if possible. Cover spill with inert material (e. g., dry sand or earth) and collect for proper disposal. Collect and place in appropriately marked sealable containers for disposal. Wash spill area with soap and water.

## **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 inhalation of vapour or mist.

### **Storage Temperature**

**Maximum:** 50 °C (122 °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

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.

## Respiratory Protection

None required under normal conditions of use.

## Hand Protection

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

Permeation resistant gloves., Butyl rubber gloves., Nitrile rubber gloves., Neoprene gloves

## Eye Protection

Safety glasses with side-shields

## Skin Protection

No special skin protection requirements during normal handling and use.

## 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

<b>State of Matter:</b>	liquid
<b>Color:</b>	Colorless
<b>Odor:</b>	slight
<b>Odor Threshold:</b>	No Data Available
<b>pH:</b>	5
<b>Boiling Point:</b>	290 °C (554 °F) @ 1,013 hPa (DIN 53171)
<b>Flash Point:</b>	188 °C (370.4 °F)
<b>Evaporation Rate:</b>	No Data Available
<b>Lower explosion limit:</b>	No Data Available
<b>Upper Explosion Limit:</b>	No Data Available
<b>Vapor Pressure:</b>	No Data Available
<b>Vapor Density:</b>	No Data Available
<b>Density:</b>	No Data Available
<b>Relative Vapor Density:</b>	No Data Available
<b>Specific Gravity:</b>	1.03 @ 25 °C (77 °F)
<b>Solubility in Water:</b>	Soluble
<b>Partition Coefficient: n-octanol/water:</b>	No Data Available
<b>Auto-ignition Temperature:</b>	370 °C (698 °F) (DIN 51794)
<b>Decomposition Temperature:</b>	> 200 °C (> 392 °F)
<b>Dynamic Viscosity:</b>	600 mPa.s @ 25 °C (77 °F) (DIN 53019)
<b>Kinematic Viscosity:</b>	No Data Available
<b>Bulk Density:</b>	1,029 kg/m <sup>3</sup>
<b>Pour point:</b>	-23 °C (-9.4 °F) (ISO 3016)

## 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 and Thermal Decomposition: Carbon dioxide (CO<sub>2</sub>), carbon monoxide (CO), oxides of nitrogen (NO<sub>x</sub>), dense black smoke., Other undetermined compounds

## 11. Toxicological Information

**Likely Routes of Exposure:** Skin Contact  
Eye Contact

### Toxicity Data for: MULTRANOL 4012

#### Skin Irritation

rabbit, OECD Test Guideline 404, non-irritant

#### Eye Irritation

Eye effect:

rabbit, OECD Test Guideline 405, slight irritant

Effect on the respiratory tract: No data available.

#### Sensitization

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

Respiratory sensitization:

No data available.

#### Repeated Dose Toxicity

4 w, Oral: NOAEL: >= 1,000 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)

Studies of a comparable product.

Chromosome aberration test in vitro: negative (Chinese hamster V79 cell line, Metabolic Activation: with/without)

Studies of a comparable product.

Chromosome aberration test in vitro: negative (Human lymphocytes, Metabolic Activation: with/without)

Studies of a comparable product.

**Carcinogenicity**

Based on available data, the classification criteria are not met.

**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.

Based on available data, the classification criteria are not met.

**Developmental Toxicity/Teratogenicity**

rat, female, Oral, Daily from day 6 to day 20 of the gestation, NOAEL (teratogenicity): 1,000 mg/kg, NOAEL (maternal): 1,000 mg/kg,

Did not show teratogenic effects in animal experiments., Studies of a comparable product.

Based on available data, the classification criteria are not met.

**Carcinogenicity:**

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

**12. Ecological Information****Biodegradation**

aerobic, 84 %, Exposure time: 28 d, i.e. readily biodegradable

**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 Microorganisms**

EC10: > 10,000 mg/l, (activated sludge, 3 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. Empty containers retain product residue; observe all precautions for product.

**14. Transportation Information****Land transport (DOT)**

**Non-Regulated**

**Sea transport (IMDG)**

Material Name: MULTRANOL 4012

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**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:**

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**

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	25723-16-4

**California Proposition 65 List:**

None.

**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](http://www.productsafetyfirst.covestro.com).

Contact: Product Safety Department  
Telephone: (412) 413-2835  
Version Date: 03/06/2020  
SDS Version: 3.9

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