

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: DESMOSEAL S XP 2821
Material Number: 80789521
Use: Raw material for coatings, adhesives, sealants, or elastomers in industrial applications

2. Hazards Identification

GHS Classification

Flammable liquids: Category 3

GHS Label Elements

Hazard pictograms:



Signal word: Warning

Hazard statements: Flammable liquid and vapour.

Precautionary statements:

Prevention:

Keep away from heat, sparks, open flames, and hot surfaces. - No smoking
Keep container tightly closed.
Ground/bond container and receiving equipment.
Use explosion-proof electrical, ventilating and lighting equipment.
Use only non-sparking tools.
Take precautionary measures against static discharge.
Wear permeation resistant protective gloves and clothing. Wear eye and face protection.

Response:

IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
In case of fire: Use dry chemical, carbon dioxide (CO₂), foam, or

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water spray (for large fires) to extinguish.

Storage:

Store in a well-ventilated place. Keep cool.

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.
<3%	Ethanol	64-17-5

4. First Aid Measures

Most Important Symptom(s)/Effect(s)

Acute: Not expected to cause adverse acute health effects.

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. Thoroughly clean shoes before reuse. Wash clothing before reuse. 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.

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 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.

Special Fire Hazards

Cool containers/tanks with water spray.

Hazardous Decomposition Products

By Fire and Thermal Decomposition: Carbon dioxide (CO₂), carbon monoxide (CO), oxides of nitrogen (NO_x), dense black smoke., Other undetermined compounds

Unusual Fire/Explosion Hazards

Flammable Liquid. Vapors may spread long distances and ignite. Vapors or mist may be a fire and explosion hazard when exposed to high temperature or ignition. Vapors or fumes may form explosive mixture with air. Toxic and irritating gases/fumes may be given off during burning or thermal decomposition.

6. Accidental Release Measures

Spill and Leak Procedures

Dike or dam spilled material and control further spillage, if possible. Remove all sources of ignition, including flames, heat, and sparks. 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. Keep away from heat, sparks and open flames. Ground and bond containers and equipment before transferring to avoid static sparks. 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 Period:

6 Months: after receipt of material by customer

Storage Temperature

Maximum: 50 °C (122 °F)

Storage Conditions

Store separate from food products.

Employee education and training in the safe use and handling of this product are required under the OSHA Hazard Communication Standard 29 CFR 1910.1200.

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

Ethanol (64-17-5)

US. ACGIH Threshold Limit Values, as amended

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Short term exposure limit 1,000 ppm

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000), as amended
Permissible exposure limit 1,000 ppm, 1,900 mg/m³

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

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

State of Matter:	liquid
Color:	Yellow
Odor:	almost odourless
Odor Threshold:	No Data Available
pH:	not measurable
Boiling Point:	ca. 182 °C (359.6 °F) @ 1,013 hPa (DIN 53171)
Flash Point:	ca. 57 °C (134.6 °F) (DIN EN ISO 2719) Not classified as inflammable based on the test for sustained combustibility of liquids; UN Manual of Tests and Criteria, III, 32.5.2.
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:	ca. 1.07 g/cm ³ @ 20 °C (68 °F) (DIN 51757)
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:	ca. 385 °C (725 °F) (DIN 51794)
Decomposition Temperature:	No Data Available
Dynamic Viscosity:	ca. 20,580 mPa.s @ 20 °C (68 °F) (DIN 53019)
Kinematic Viscosity:	No Data Available
Pour point:	ca. -18 °C (-0.4 °F) (ISO 3016)
Self Ignition:	not applicable

10. Stability and Reactivity

Hazardous Reactions

Hazardous polymerisation does not occur.

Stability

Stable

Materials to Avoid

Oxidizing agents, Isocyanates

Conditions to Avoid

Heat, flames and sparks.

Hazardous Decomposition Products

By Fire and Thermal Decomposition: Carbon dioxide (CO₂), carbon monoxide (CO), oxides of nitrogen (NO_x), dense black smoke., Other undetermined compounds

11. Toxicological Information

Likely Routes of Exposure: Skin Contact
Eye Contact

Health Effects and Symptoms

Acute: Not expected to cause adverse acute health effects.

Chronic: Not expected to cause adverse chronic health effects.

Toxicity Data for: DESMOSEAL S XP 2821

Acute Oral Toxicity

LD50: > 2,500 mg/kg (rat)

Acute Dermal Toxicity

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

Skin Irritation

rabbit, OECD Test Guideline 404, non-irritant
Toxicological studies of a comparable product.

Eye Irritation

rabbit, OECD Test Guideline 405, non-irritant
Toxicological studies of a comparable product.

Sensitization

Skin sensitization (local lymph node assay (LLNA)):: negative (Mouse, OECD Test Guideline 406)

Toxicological studies of a comparable product.

Toxicity Data for: Ethanol

Acute Oral Toxicity

LD50: 10,470 mg/kg (rat, male/female) (OECD Test Guideline 401)

Acute Inhalation Toxicity

LC50: 8.85 mg/l, 4 h, aerosol (rat)
4 hour test is calculated.

LC50: 5.9 mg/l, 6 h, aerosol (rat)

Acute Dermal Toxicity

LD50: > 20,000 mg/kg (rabbit)

Skin Irritation

OECD Test Guideline 404, Exposure Time: 24 h, Non-irritating

Eye Irritation

rabbit, OECD Test Guideline 405, irritating

Sensitization

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

Repeated Dose Toxicity

84 Days, oral: NOAEL: 10 g/kg, (Rat)
There were no adverse effects seen at highest dose tested.

74 Days, inhalation: NOAEL: 3000 ppm, (Guinea pig)
There were no adverse effects seen at highest dose tested.

Mutagenicity

Genetic Toxicity in Vitro:

Ames: negative (Salmonella typhimurium, Metabolic Activation: with/without)

Genetic Toxicity in Vivo:

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

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

Carcinogenicity

Rat, Male/Female, oral, 2 Yearsnegative

Toxicity to Reproduction/Fertility

Reproductive effects have been observed in animal studies. Two-generation study, Oral, daily, (Mouse, male/female) NOAEL (parental): 15 %, NOAEL (F1): 15 %, NOAEL (F2): 10 % No toxicity to reproduction

Developmental Toxicity/Teratogenicity

Fetotoxicity has been observed in animal studies.

Teratogenic effects have been observed in animal studies. rat, inhalation, 7 hr/day, daily, NOAEL (teratogenicity): > 20000 ppm, NOAEL (maternal): 16000 ppm

Carcinogenicity:

Ethanol

IARC - Overall evaluation: 1 Carcinogenic to humans.

12. Ecological Information

Acute and Prolonged Toxicity to Fish

LC50: > 100 mg/l (Danio rerio (zebra fish), 96 h)

Ecotoxicological reports on a comparable product

Acute Toxicity to Aquatic Invertebrates

(Daphnia magna (Water flea), 48 h)

No toxic effects with saturated solution. Ecotoxicological reports on a comparable product

Toxicity to Aquatic Plants

IC50: > 100 mg/l, (Desmodesmus subspicatus (Green algae), 72 h)

Ecotoxicological reports on a comparable product

Toxicity to Microorganisms

EC50: > 10,000 mg/l, (activated sludge, 3 h)

Ecotoxicological reports on a comparable product

Ecological Data for Ethanol

Biodegradation

Aerobic, 84 %, Exposure time: 20 Days

Readily biodegradable.

Chemical Oxygen Demand (COD)

1,700 mg/g

Acute and Prolonged Toxicity to Fish

LC50: 14,200 mg/l (Fathead minnow (Pimephales promelas), 96 h)

LC50: 8,140 mg/l (Golden orfe (Leuciscus idus), 48 h)

Acute Toxicity to Aquatic Invertebrates

EC50: 10,800 mg/l (Water flea (Daphnia magna), 24 h)

Toxicity to Aquatic Plants

EC50: 9,310 mg/l, End Point: growth (Green algae (Chlorella pyrenoidosa))

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. Do not heat or cut container with electric or gas torch.

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:

To the best of our knowledge, this material is not included in the Toxic Substances Control Act (TSCA) Inventory, and is defined as a new chemical substance which cannot be imported or manufactured for commercial purposes without complying with the Pre-manufacture Notice (PMN) requirements codified at 40CFR Part 720. Therefore, we are providing you a small quantity (as defined at 40CFR Part 720.36 (a) (1)) of this product with the understanding it is to be used solely in the course of Research and Development (R&D), as defined in Section 5 (h) (3) of TSCA and 40 CFR Part 720.

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:

Concentration

Components

CAS-No.

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>=1%	Silane Terminated Polyurethane Prepolymer	CAS# is a trade secret
<3%	Ethanol	64-17-5

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

<u>Concentration</u>	<u>Components</u>	<u>CAS-No.</u>
<3%	Ethanol	64-17-5

Massachusetts Right to Know Extraordinarily Hazardous Substance List:

<u>Concentration</u>	<u>Components</u>	<u>CAS-No.</u>
30 - 35 ppm	Dibutyl Phosphate	107-66-4

California Proposition 65 List:

<u>Concentration</u>	<u>Components</u>	<u>CAS-No.</u>
<0.1%	2-Chloropropanoic acid	598-78-7
<=20 ppm	Toluene	108-88-3
<1 ppm	Hexachlorobenzene	118-74-1

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:	03/06/2020
SDS Version:	4.4

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.