

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: TEXIN 385AE 000000 (FORMERLY DESMOPAN 385E)
Material Number: 86241145
Chemical Family: Aromatic thermoplastic polyurethane
Use: Production of molded plastic articles
Restrictions on use: Do-It-Yourself Applications

2. Hazards Identification

GHS Classification

This product is not hazardous in the form in which it is shipped by the manufacturer.

GHS Label Elements

Signal word: Warning

Hazard statements: If fine particles are generated during further processing, handling or by other means, product may form combustible dust concentrations in air.

3. Composition/Information on Ingredients

Hazardous Components

The following potentially hazardous ingredient(s) are used to formulate this product. As supplied, the ingredient(s) are bound in the polymer matrix. Because they are bound in the matrix, they are not expected to create any unusual hazards when handled and processed according to good manufacturing and industrial hygiene practices and the guidelines provided in this SDS.

<u>Concentration</u>	<u>Components</u>	<u>CAS-No.</u>
0.1 - 1%	2,2',6,6'-Tetraisopropylidiphenyl Carbodiimide	2162-74-5

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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: Contact with heated material can cause thermal burns., Causes a slipping hazard if spilled., Vapors released from thermal decomposition may cause eye irritation with symptoms of burning and tearing, as well as respiratory tract irritation.

Eye Contact

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

Skin Contact

Get medical attention if thermal burn occurs.

Inhalation

If inhaled, remove to fresh air.

Ingestion

Get medical attention.

Notes to Physician

In the event of possible diisocyanate exposure: Eyes: Stain for evidence of corneal injury. If cornea is burned, instill antibiotic/steroid preparation as needed. Workplace vapors could produce reversible corneal epithelial edema impairing vision. Skin: Treat symptomatically as for thermal burn. Ingestion: Treat symptomatically. Inhalation: Treatment is essentially symptomatic. An individual having a pulmonary sensitization reaction to this material should be removed from further exposure to any diisocyanate.

5. Firefighting Measures

Suitable Extinguishing Media: Water, Foam, Dry chemical

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.

Hazardous Decomposition Products

By Fire and Thermal Decomposition: Carbon Dioxidehydrogen cyanide2,2',6,6'-Tetraisopropyldiphenyl Carbodiimide2,6-Diisopropylphenyl Isocyanate (DIPPI)4,4'-Diphenylmethane Diisocyanate (MDI) Aldehydes, Carbon monoxide, Amines, Nitriles, Nitrogen oxides (NO_x), Hydrocarbons

Unusual Fire/Explosion Hazards

Toxic and irritating gases/fumes may be given off during burning or thermal decomposition. Dust may form explosive mixtures with air.

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6. Accidental Release Measures

Spill and Leak Procedures

If molten, allow material to cool and place into an appropriate marked container for disposal. Sweep up and shovel into suitable containers for disposal. Dust deposits should not be allowed to accumulate on surfaces, as these may form an explosive mixture as they are released into the atmosphere in sufficient concentrations. Avoid dispersal of dust in the air (e.g., cleaning dust from surfaces with compressed air).

7. Handling and Storage

Handling/Storage Precautions

Handle in accordance with good industrial hygiene and safety practices. Wash thoroughly after handling. Avoid breathing dust. Containers should be kept tightly closed to prevent contamination. Material is hygroscopic and may absorb small amounts of atmospheric moisture. Minimize dust generation and accumulation. Routine housekeeping should be instituted to ensure that dust does not accumulate on surfaces. Solid particulate can generate electrical charging during operations such as unloading from containers and pneumatic transfer. Provide adequate precautions, such as electrical grounding and bonding, where conductive equipment is involved.

Storage Period:

Not Established

Storage Temperature

Maximum: 30 °C (86 °F)

Storage Conditions

Protect equipment (e.g. storage bins, conveyors, dust collectors) with explosion vents.

Substances to Avoid

None known.

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

The following exposure limits do not apply to the product in its supplied form; however, when the product is heated (i.e, during processing or thermal decomposition conditions), there is a potential for the release of 2,6-diisopropylphenyl isocyanate (DIPPI) and 4,4'-diphenylmethane diisocyanate (MDI) vapors.

4,4'-Diphenylmethane Diisocyanate (MDI) (101-68-8)

US. ACGIH Threshold Limit Values
Time weighted average 0.005 ppm

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)
Ceiling Limit Value 0.02 ppm, 0.2 mg/m³

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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

During normal processing, use general dilution and local exhaust as necessary to control airborne vapors, mists, dusts and thermal decomposition products below appropriate airborne concentration standards/guidelines. Special ventilation and personal protective equipment (PPE) is required to control exposure to potentially harmful decomposition products whenever a TPU is heated to temperatures above its decomposition temperature. Examples would include hot knife cutting, grinding, or sawing.

Respiratory Protection

In the absence of sufficient general dilution or local exhaust ventilation a NIOSH approved air-supplied respirator may be needed during die cleaning, high temperature processing, purging or when thermal decomposition is suspected.

Hand Protection

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

Wear heat resistant gloves when handling molten material.

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. Purgings should be collected as small flat thin shapes or thin strands to allow for rapid cooling.

9. Physical and Chemical Properties

State of Matter:	solid
Appearance:	pellets
Color:	Natural
Odor:	Odorless
Odor Threshold:	No Data Available
pH:	No Data Available
Melting Point:	220 °C (428 °F)
Boiling Point:	No Data Available
Flash Point:	250 °C (482 °F)
Evaporation Rate:	No Data Available
Flammability:	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. 1.2 g/cm ³
Relative Vapor Density:	No Data Available
Specific Gravity:	1.1
Solubility in Water:	insoluble
Partition Coefficient: n-	No Data Available

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octanol/water:
Auto-ignition Temperature: > 210 °C (> 410 °F)
Decomposition Temperature: Decomposition begins at 230 °C.
Softening point: 180 °C (356 °F)
Dynamic Viscosity: not applicable
Kinematic Viscosity: No Data Available
Bulk Density: 500 - 700 kg/m³
Self Ignition: not applicable

10. Stability and Reactivity

Hazardous Reactions

Hazardous polymerisation does not occur.

Stability

Stable

Materials to Avoid

None known.

Conditions to Avoid

None known.

Hazardous Decomposition Products

By Fire and Thermal Decomposition: Carbon Dioxide; hydrogen cyanide; 2,2',6,6'-Tetraisopropylidiphenyl Carbodiimide; 2,6-Diisopropylphenyl Isocyanate (DIPPI); 4,4'-Diphenylmethane Diisocyanate (MDI); Aldehydes, Carbon monoxide, Amines, Nitriles, Nitrogen oxides (NO_x), Hydrocarbons

11. Toxicological Information

Likely Routes of Exposure: Inhalation
Skin Contact
Eye Contact

Health Effects and Symptoms

Acute: Contact with heated material can cause thermal burns., Causes a slipping hazard if spilled., Vapors released from thermal decomposition may cause eye irritation with symptoms of burning and tearing, as well as respiratory tract irritation.

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In the event of material decomposition due to exceeding the decomposition temperature of this product, release of DIPPI and MDI may occur.

Acute Inhalation:

The following effects reflect the potential health hazards associated with overexposure to DIPPI and MDI. Diisocyanate vapors or mist at concentrations above the TLV or PEL can irritate (burning sensation) the mucous membranes in the respiratory tract (nose, throat, lungs) causing runny nose, sore throat, coughing, chest discomfort, shortness of breath and reduced lung function (breathing obstruction). Persons with a preexisting, nonspecific bronchial hyperreactivity can respond to concentrations below the TLV or PEL with similar symptoms as well as asthma attack or asthma-like symptoms. Exposure well above the TLV or PEL may lead to bronchitis, bronchial spasm and pulmonary edema (fluid in lungs). Chemical or hypersensitivity pneumonitis, with flu-like symptoms (e.g., fever, chills), has also been reported. These

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symptoms can be delayed up to several hours after exposure. These effects are usually reversible.

Chronic Inhalation:

As a result of previous repeated overexposures or a single large dose, certain individuals may develop sensitization to diisocyanates (asthma or asthma-like symptoms) that may cause them to react to a later exposure to diisocyanates at levels well below the TLV or PEL. These symptoms, which can include chest tightness, wheezing, cough, shortness of breath or asthmatic attack, could be immediate or delayed up to several hours after exposure. Extreme asthmatic reactions can be life threatening. Similar to many non-specific asthmatic responses, there are reports that once sensitized an individual can experience these symptoms upon exposure to dust, cold air or other irritants. This increased lung sensitivity can persist for weeks and in severe cases for several years. Sensitization can be permanent. Chronic overexposure to diisocyanates has also been reported to cause lung damage (including fibrosis, decrease in lung function) that may be permanent.

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Acute Oral Toxicity

LD50: 500 mg/kg (rat, female)

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, OECD Test Guideline 405, Non-irritating

Sensitization

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

Repeated Dose Toxicity

28 d, Oral: NOAEL: 4 mg/kg, (rat, male/female)

Mutagenicity

Genetic Toxicity in Vitro:

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

In vitro mammalian cell gene mutation test: negative (Chinese hamster V79 cell line, Metabolic Activation: with/without)

Toxicity to Reproduction/Fertility

Oral, (rat, male/female) NOAEL (parental): 3 mg/kg, May impair fertility.

Developmental Toxicity/Teratogenicity

rat, Oral, NOAEL (teratogenicity): 1 mg/kg,

Carcinogenicity:

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

12. Ecological Information

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Ecological Data for: TEXIN 385AE 000000 (FORMERLY DESMOPAN 385E)

No data available for this product.

Ecological Data for 2,2',6,6'-Tetraisopropylidiphenyl Carbodiimide

Biodegradation

1 %, Exposure time: 28 d, i.e. not readily degradable

Bioaccumulation

1,912 BCF

Accumulation in aquatic organisms is unlikely.

Acute and Prolonged Toxicity to Fish

(Oncorhynchus mykiss (rainbow trout), 96 h)

No toxic effects in the water-soluble range.

Acute Toxicity to Aquatic Invertebrates

(Daphnia magna (Water flea), 48 h)

No toxic effects in the water-soluble range.

Toxicity to Aquatic Plants

(Desmodesmus subspicatus (Green algae), 72 h)

No toxic effects in the water-soluble range.

Toxicity to Microorganisms

EC50: > 1,000 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.

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:

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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

>=1%

Components

Polyurethane polyester elastomer

CAS-No.

CAS# is a trade secret

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.

Contact: Product Safety Department
Telephone: (412) 413-2835
Version Date: 08/26/2019
SDS Version: 1.2

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

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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.

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