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:	TEXIN STX-LG-20 000000
Material Number:	
Chemical Family:	Aromatic thermoplastic polyurethane
Use:	Production of molded plastic articles

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.

Concentration	Components	CAS-No.
20 - 30%	Fiberglass	65997-17-3

5 - 10%	Impact Modifier	CAS# is a trade secret
0.1 - 1%	Carbon Black	1333-86-4

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: High Pressure Water Streams

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 cyanide4,4'-Diphenylmethane Diisocyanate (MDI) Aldehydes, Carbon monoxide, Amines, Nitriles, Nitrogen oxides (NOx), Hydrocarbons

Unusual Fire/Explosion Hazards
Toxic and irritating gases/fumes may be given off during burning or thermal decomposition. Avoid generating dust; fine dust dispersed in air in sufficient concentrations, and in the presence of an ignition

source is a potential dust explosion hazard.

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)

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

Thermoplastic Polyurethane (TPU) is generally non-hazardous under ambient conditions., 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 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

Fiberglass (65997-17-3**)**

US. ACGIH Threshold Limit Values
Time Weighted Average (TWA): 5 mg/m3 (Inhalable fraction.)

US. ACGIH Threshold Limit Values
Time Weighted Average (TWA): 1 fibers/cm3 (Fiber.)F: Respirable fibers: length > 5 micrometers; aspect ration >= 3:1, as determined by the membrane filter method at 400-450X magnification (4-mm objective), using phase-contrast illumination.

US. ACGIH Threshold Limit Values
Time weighted average 5 mg/m3 (Inhalable fraction.)

US. ACGIH Threshold Limit Values
Time weighted average 1 fibers/cm3 (Fiber.)F: Respirable fibers: length > 5 micrometers; aspect ration >= 3:1, as determined by the membrane filter method at 400-450X magnification (4-mm objective), using phase-contrast illumination.

US. ACGIH Threshold Limit Values
Time weighted average 1 fibers/cm3 (Fiber.)F: Respirable fibers: length > 5 micrometers; aspect ration >= 3:1, as determined by the membrane filter method at 400-450X magnification (4-mm objective), using phase-contrast illumination.

US. ACGIH Threshold Limit Values
Time weighted average 1 fibers/cm3 (Fiber.)F: Respirable fibers: length > 5 micrometers; aspect ration >= 3:1, as determined by the membrane filter method at 400-450X magnification (4-mm objective), using phase-contrast illumination.

US. ACGIH Threshold Limit Values
Time weighted average 1 fibers/cm3 (Fiber.)F: Respirable fibers: length > 5 micrometers; aspect ration >= 3:1, as determined by the membrane filter method at 400-450X magnification (4-mm objective), using phase-contrast illumination.

US. ACGIH Threshold Limit Values
Time weighted average 1 fibers/cm3 (Fiber.)F: Respirable fibers: length > 5 micrometers; aspect ration >= 3:1, as determined by the membrane filter method at 400-450X magnification (4-mm objective), using phase-contrast illumination.

US. ACGIH Threshold Limit Values
Time weighted average 0.2 fibers/cm3 (Fiber.)F: Respirable fibers: length > 5 micrometers; aspect ration >= 3:1, as determined by the membrane filter method at 400-450X magnification (4-mm objective), using phase-contrast illumination.

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

Carbon Black (1333-86-4**)**
US. ACGIH Threshold Limit Values
Time weighted average 3 mg/m3 (Inhalable fraction.)

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)
Permissible exposure limit 3.5 mg/m3

US. ACGIH Threshold Limit Values
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
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:	No Data Available
Relative Vapor Density:	No Data Available
Specific Gravity:	1.1
Solubility in Water:	insoluble
Partition Coefficient: n-	No Data Available

octanol/water:	
Auto-ignition Temperature:	> 210 °C (> 410 °F)
Decomposition Temperature:	Decomposition begins at 230 °C.
Softening point:	180 °C (356 °F)
Dynamic Viscosity:	No Data Available
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
Generation of dust clouds.

Hazardous Decomposition Products
By Fire and Thermal Decomposition: Carbon Dioxide; hydrogen cyanide; 4,4'-Diphenylmethane Diisocyanate (MDI); Aldehydes, Carbon monoxide, Amines, Nitriles, Nitrogen oxides (NOx), 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.

Toxicity Data for: TEXIN STX-LG-20 000000

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

Acute Inhalation:
The following effects reflect the potential health hazards associated with overexposure to 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 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.

Toxicity Data for: Fiberglass

Toxicity Data for: Impact Modifier

Acute Oral Toxicity
LD50: > 5,000 mg/kg (rat)

Acute Dermal Toxicity
LD50: > 5,000 mg/kg (rabbit)

Skin Irritation
Slightly irritating

Eye Irritation
rabbit, Slightly irritating

Toxicity Data for: Carbon Black

Acute Oral Toxicity
LD50: > 8,000 mg/kg (rat, male/female) (OECD Test Guideline 401)

Acute Dermal Toxicity
LD50: > 3,000 mg/kg (rabbit)

Skin Irritation
rabbit, Non-irritating

Eye Irritation
Human, non-irritant

Sensitization
Buehler Test: negative (Guinea pig, OECD Test Guideline 406)

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

Repeated Dose Toxicity
13 weeks, Inhalative: NOAEL: 0.0011 mg/kg, (rat,)

Mutagenicity
Genetic Toxicity in Vitro:
Salmonella/microsome test (Ames test): negative

Mammalian cell - gene mutation assay: positive (other mammalian cell line, Metabolic Activation: without)
Micronucleus test: positive (other human cell line, Metabolic Activation: without)

Genetic Toxicity in Vivo:
Other assay: negative (Mouse, male, intraperitoneal)
negative

Carcinogenicity
Several inhalation studies involving carbon black in female rats have shown increases in benign and malignant lung tumors. Although a large body of data on possible mechanisms of carcinogenicity in rats was considered by the IARC Working Group, it was not possible to state with confidence that the mechanisms of carcinogenicity in rats correlate to exposure in humans. Tumors have not been observed in other animal species (i.e., mouse and hamster) under similar circumstances and study conditions.
Developmental Toxicity/Teratogenicity
rat, female, Inhalative, 10 days, daily,

Other Relevant Toxicity Information
May cause irritation of respiratory tract.

Carcinogenicity:
Carbon Black **IARC** - Overall evaluation: 2B Possibly carcinogenic to humans.

12. Ecological Information

Ecological Data for: TEXIN STX-LG-20 000000

No data available for this product.

The components in this product are either not classified, below the relevant concentration limits, or do not have any ecotoxicity data.

Ecological Data for Fiberglass
Additional Ecotoxicological Remarks
This product has no known eco-toxicological effects.

Ecological Data for Impact Modifier
Additional Ecotoxicological Remarks
No data available for this component.

Ecological Data for Carbon Black
Acute and Prolonged Toxicity to Fish
LC0: > 1,000 mg/l (Danio rerio (zebra fish), 96 h)

Acute Toxicity to Aquatic Invertebrates
EC50: > 5,600 mg/l (Water flea (Daphnia magna), 24 h)

Toxicity to Microorganisms
EC0: 100 - 800 mg/l, (Activated sludge microorganisms, 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:
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.
>=1%	Polyurethane polyester elastomer	CAS# is a trade secret
15 - 25%	Fiberglass	65997-17-3
5 - 10%	Impact Modifier	CAS# is a trade secret
>=1%	Polyurethane polyether elastomer	CAS# is a trade secret
0.1 - 1%	Carbon Black	1333-86-4

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

Concentration	Components	CAS-No.
15 - 25%	Fiberglass	65997-17-3
0.1 - 1%	Carbon Black	1333-86-4

California Proposition 65 List:
None.

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:	05/16/2019
SDS Version:	2.4

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