

# Carlisle TyrFil

## Safety Data Sheet

### 1. Identification of Substance:

Product Name: TyrFil Hevi-Duty ISO Component

**Supplier Identification:**  
Carlisle TyrFil

**Telephone:**  
(440) 260-9830

**Address:**  
140 Sheldon Road  
Berea, OH 44017

**24-Hr. Emergency Phone Number:**  
CHEMTREC (800) 424-9300  
INTERNATIONAL: +1-(703) 527-3887

Product Use: Polyurethane isocyanate component

### 2. Hazards Identification:

#### GHS Ratings:

Inhalation Toxicity	Acute Tox. 2	Gases>100+<=500ppm, Vapors>0.5+<=2mg/l, Dusts&mists>0.05+<=0.5mg/l
Skin corrosive	2	Reversible adverse effects in dermal tissue, Draize score: >= 2.3 < 4.0 or persistent inflammation
Eye corrosive	2A	Eye irritant: Subcategory 2A, Reversible in 21 days
Respiratory sensitizer	1	Respiratory sensitizer
Skin sensitizer	1	Skin sensitizer
Mutagen	1B	Known to produce heritable mutations in human germ cellsSubcategory 1B, Positive results: In vivo heritable germ cell tests in mammals, Human germ cell tests, In vivo somatic mutagenicity tests, combined with some evidence of germ cell mutagenicity
Carcinogen	1B	Presumed Human Carcinogen, Based on demonstrated animal carcinogenicity
Reproductive toxin	1B	Presumed, Based on experimental animals
Organ toxin single exposure	2	Presumed to be harmful to human health- Animal studies with significant toxic effects relevant to humans at generally moderate exposure (guidance) - Human evidence in exceptional cases
Organ toxin repeated exposure	1	Significant toxicity in humans- Reliable, good quality human case studies or epidemiological studies Presumed significant toxicity in humans- Animal studies with significant and/or severe toxic effects relevant to humans at generally low exposure
Aspiration hazard	1	Aspiration Toxicity Category 1: Known (regarded)- human evidence - hydrocarbons with kinematic viscosity ? 20.5 mm2/s at 40° C.

#### GHS Hazards

H304	May be fatal if swallowed and enters airways
H315	Causes skin irritation
H317	May cause an allergic skin reaction

H319	Causes serious eye irritation
H330	Fatal if inhaled
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled
H340	May cause genetic defects
H350	May cause cancer
H360	May damage fertility or the unborn child
H371	May cause damage to organs
H372	Causes damage to organs through prolonged or repeated exposure

### **GHS Precautions**

P201	Obtain special instructions before use
P202	Do not handle until all safety precautions have been read and understood
P260	Do not breathe dust/fume/gas/mist/vapors/spray
P261	Avoid breathing dust/fume/gas/mist/vapors/spray
P264	Wash hands thoroughly after handling
P270	Do not eat, drink or smoke when using this product
P271	Use only outdoors or in a well-ventilated area
P272	Contaminated work clothing should not be allowed out of the workplace
P280	Wear protective gloves/protective clothing/eye protection/face protection
P281	Use personal protective equipment as required
P285	In case of inadequate ventilation wear respiratory protection
P311	Call a POISON CENTER or doctor/physician
P314	Get Medical advice/attention if you feel unwell
P321	Specific treatment is urgent (see Section 4 First Aid measures)
P331	Do NOT induce vomiting
P362	Take off contaminated clothing and wash before reuse
P363	Wash contaminated clothing before reuse
P301+P310	IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician
P302+P352	IF ON SKIN: Wash with soap and water
P304+P340	IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing
P304+P341	IF INHALED: If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing
P305+P351+P338	IF IN EYES: Rinse continuously with water for several minutes. Remove contact lenses if present and easy to do – continue rinsing
P308+P313	IF exposed or concerned: Get medical advice/attention
P309+P311	IF exposed or you feel unwell: Call a POISON CENTER or doctor/physician
P332+P313	If skin irritation occurs: Get medical advice/attention
P333+P313	If skin irritation or a rash occurs: Get medical advice/attention
P337+P313	Get medical advice/attention
P342+P311	Call a POISON CENTER or doctor/physician
P405	Store locked up
P403+P233	Store in a well ventilated place. Keep container tightly closed
P501	Dispose of contents/container in accordance with existing federal, state, and local environmental control laws.

**Signal Word: Danger**



### **Acute Health Effects:**

**Eyes:** Severe irritation, tearing, swelling, and possible damage to cornea.

**Skin:** Irritation, redness, swelling, skin sensitization, rash, scaling, and blistering.

**Inhalation:** Mucous membrane and respiratory tract irritation, tightness of chest, isocyanate sensitization.

**Conditions Aggravated by Exposure:** Asthma, respiratory disorders, skin disorders, and eye

disorders.

**Chronic Health Effects:** Isocyanates may cause skin and respiratory sensitivity in some individuals. Sensitized individuals may react to very low levels diisocyanates below the PEL. Sensitized people who continue to work with diisocyanates may develop symptoms sooner after each exposure. Limited evidence of possible carcinogenic effects. Possible other harmful target organ effects.

### **3. Composition/Data on Components:**

<b>Chemical Name</b>	<b>CAS number</b>	<b>Weight Concentration %</b>
Distillates, petroleum, heavy thermal cracked	64741-81-7	30.00% - 40.00%
Oxirane, methyl-, polymer with oxirane, ether with 1,2,3-propanetriol (3:1), polymer with 1,3-diisocyanatomethylbenzene	57516-88-8	40.00% - 50.00%
Distillates, petroleum, catalytic reformer fractionator residue, intermediate-boiling	68477-30-5	5.00% - 10.00%
Toluene Diisocyanate, mixed isomers	26471-62-5	10.00% - 15.00%
Distillates, petroleum, light catalytic cracked	64741-59-9	1.00% - 5.00%
Polycyclic aromatic hydrocarbons	130498-29-2	0.10% - 1.00%

### **4. First Aid Measures:**

**After Inhalation:** May cause severe irritation to upper respiratory tract and lungs, respiratory sensitization, decreased lung capacity.

Remove from exposure area to fresh air. Administer oxygen or artificial respiration as needed. Obtain medical attention.

**After Eye Contact:** Rinse opened eye for at least 15 minutes under running water. Remove contact lenses if present and easy to do so, and continue rinsing.

**After Skin Contact:** Remove contaminated clothing. Clean affected area with soap and plenty of water. Call a physician if irritation or rash develops.

**After Swallowing:** Do not induce vomiting. If conscious, give 1 to 2 cups of milk or water to drink. Consult a physician at once.

**Notes to Physician:** Treat symptomatically. Following severe exposure the patient should be kept under medical observation for a least 48 hours.

### **5. Fire Fighting Measures:**

Flash Point: 128 C (262 F)

LEL: N/A

UEL: N/A

**Upper and lower explosive limits listed if known**

**Suitable Extinguishing Agents:** Water spray, CO2, Foam, Dry chemical

**Information about Protection against Explosions and Fires:** During the incipient stage of a fire, containers should be kept cool by spraying with water (i.e., water suppression system) on the outside of container. Water spray will help prevent containers from overheating. Use cold-water spray to cool fire-exposed containers to minimize risk of rupture. Large fires can be extinguished with high volumes of water, such as from a fire hose applied from a safe distance. Closed containers may rupture when

exposed to extreme heat due to build-up of pressure from thermal degradation and/or carbon dioxide generation.

Section 5 pertains to fire-fighting measures and reactivity is addressed in section 10.

**Dangerous Products of Decomposition:** Oxides of carbon, oxides of nitrogen, isocyanates and traces of HCN.

**Protective Equipment:** Full emergency equipment with self-contained breathing apparatus and full protective clothing should be worn by firefighters.

#### **6. Accidental Release Measures:**

**Person-Related Safety Precautions:** Evacuate all non-essential personnel. Avoid contact with skin. Do not breathe aerosols or vapors.

**Measures for Environmental Protection:** Cover and contain spill with absorbent material. Place waste in open container. Remove to well ventilated area and dilute with ammonia solution (water 90%, concentrated ammonia 8%, detergent 2%). Collect for proper disposal according to local, state, and federal regulations.

**Small Spills:** Absorb with earth, sand or other absorbent material and transfer to containers for later disposal. Wipe up with absorbent material (e.g. cloth, fleece) clean surface thoroughly to remove residual contamination.

**Large Spills:** Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Evacuate area and isolate to prevent unauthorized access. Call CHEMTREC at 1-800-424-9300 for assistance and advice.

#### **7. Handling and Storage:**

**Information for Safe Handling:** Do not breathe fumes, vapors or mists. Use only with adequate ventilation. Avoid contact with skin or eyes. Immediately report spills or leaks.

**Storage Requirements:** Store in dry, well ventilated area. Keep containers tightly closed. Store between 60°F-100°F.

**Regulatory Requirements:** Store according to all local, state, and federal regulations.

#### **8. Exposure Controls and Personal Protection:**

<b>Chemical Name / CAS No.</b>	<b>OSHA Exposure Limits</b>	<b>ACGIH Exposure Limits</b>	<b>Other Exposure Limits</b>
Distillates, petroleum, heavy thermal cracked 64741-81-7	Not Established	Not Established	Not Established
Oxirane, methyl-, polymer with oxirane, ether with 1,2,3-propanetriol (3:1), polymer with 1,3-diisocyanatomethylbenzene 57516-88-8	Not Established	Not Established	Not Established

Distillates, petroleum, catalytic reformer fractionator residue, intermediate-boiling 68477-30-5	Not Established	Not Established	Not Established
Toluene Diisocyanate, mixed isomers 26471-62-5	20 ppb PEL	0.02 ppm STEL 0.005 ppm TWA	Not Established
Distillates, petroleum, light catalytic cracked 64741-59-9	Not Established	Not Established	Not Established
Polycyclic aromatic hydrocarbons 130498-29-2	Not Established	Not Established	Not Established

**Engineering Controls:** Use local exhaust ventilation to maintain airborne concentrations below the TLV, especially if heating or spraying. Use only in a well ventilated area to keep vapors below exposure limits. Use local exhaust ventilation if necessary.

**General Protective and Hygienic Measures:** Usual precautionary measures should be adhered to when handling chemicals.

**Personal Protective Equipment:**

**Respiratory Protection:** Do not inhale vapors. Use NIOSH approved respiratory protection if TLV/PEL is exceeded. Do not enter storage area unless adequately ventilated.

**Hand Protection:** Protective butyl rubber or nitrile rubber gloves.

**Eye Protection:** Chemical safety goggles.

**Body Protection:** Protective impervious work clothing. Launder separately.

Contaminated Gear: Observe local requirements. Dispose of in accordance with local/state/federal regulations.

**9. Physical and Chemical Properties:**

Physical properties listed where known.

<p><b>Appearance:</b> Brown liquid</p> <p><b>Vapor Pressure:</b> N/A</p> <p><b>Vapor Density:</b> N/A</p> <p><b>Specific Gravity:</b> 1.05</p> <p><b>Freezing point:</b> N/A</p> <p><b>Boiling range:</b> N/A</p> <p><b>Evaporation rate:</b> N/A</p> <p><b>Explosive Limits:</b> N/A</p> <p><b>Autoignition temperature:</b> N/A</p>	<p><b>Odor:</b> Pungent</p> <p><b>Odor threshold:</b> N/A</p> <p><b>pH:</b> N/A</p> <p><b>Melting point:</b> N/A</p> <p><b>Solubility:</b> N/A</p> <p><b>Flash point:</b> 262°F, 128°C</p> <p><b>Flammability:</b> N/A</p> <p><b>Partition coefficient (n-octanol/water):</b> N/A</p> <p><b>Decomposition temperature:</b> N/A</p>
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**10. Stability and Reactivity:**

**Chemical Incompatible Materials:** Isocyanates will react with a wide range of common chemicals.

During use of this product in the work environment, protect the product from contamination such as inadvertent contact with water, amines, strong bases and alcohols. For example, allowing water inside a container containing isocyanates will lead to the generation of carbon dioxide gas and result in the development of excess pressure if the container is tightly re-sealed.

**Hazardous Polymerization:** Not expected to occur under normal conditions.

**Dangerous Products of Decomposition:** Oxides of carbon, oxides of nitrogen, hydrocarbons, isocyanates, and traces of HCN.

## **11. Toxicological Information:**

### **Mixture Toxicity**

Inhalation Toxicity LC50: 1mg/L

### **Component Toxicity**

## **Toxicity Values Listed if Known**

### **Acute Health Effects:**

**Eyes:** Severe irritation, tearing, swelling, and possible damage to cornea.

**Skin:** Irritation, redness, swelling, skin sensitization, rash, scaling, and blistering.

**Inhalation:** Mucous membrane and respiratory tract irritation, tightness of chest, isocyanate sensitization.

**Ingestion:** Irritating and corrosive to mouth, stomach, and digestive tract.

**Chronic Health Effects:** Isocyanates may cause skin and respiratory sensitivity in some individuals. Sensitized individuals may react to very low levels diisocyanates below the PEL. Sensitized people who continue to work with diisocyanates may develop symptoms sooner after each exposure. Limited evidence of possible carcinogenic effects.

Other harmful target organ effects have been associated with exposure to aromatic oils.

**Conditions Aggravated by Exposure:** Asthma, respiratory disorders, skin allergies, eczema.

**Routes of Entry:** Inhalation, ingestion, skin contact, eye contact

**Target Organs:** Respiratory track, eyes, skin, digestive tract, reproductive system, liver, blood, thymus.

### **Chemicals with Known or Possible Carcinogenic Effects:**

<u>CAS Number</u>	<u>Description</u>	<u>% Weight</u>	<u>Carcinogen Rating</u>
130498-29-2	Polycyclic aromatic hydrocarbons	0.1 to 1.0%	Polycyclic aromatic hydrocarbons: OSHA: listed
26471-62-5	Toluene Diisocyanate, mixed isomers	10 to 15%	Toluene Diisocyanate, mixed isomers: IARC: Possible human carcinogen OSHA: listed
64741-59-9	Distillates, petroleum, light catalytic cracked	1 to 5%	Distillates, petroleum, light catalytic cracked: EU REACH: Present
64741-81-7	Distillates, petroleum, heavy thermal cracked	30 to 40%	Distillates, petroleum, heavy thermal cracked: EU REACH: Present

**12. Ecological Information:**

**General Information:** Based on experience, no adverse effects are to be expected if correct disposal procedures have been followed as indicated in section 13.

**Individual component ecotoxicity listed if known.****Component Ecotoxicity**

Distillates, petroleum, heavy thermal cracked	96 Hr LC50 Brachydanio rerio: 48 mg/L [semi-static]
Toluene Diisocyanate, mixed isomers	96 hr LC50 Danio rerio: >100 mg/l 96 hr LC50 Danio rerio: > 133 mg/l 48 hr EC50 Daphnia magna: 12.5 mg/l 96 hr EC50 Algae: 3,230 - 4,300 mg/l 3 hr EC50 Activated sludged microorganisms: >100 mg/l
Distillates, petroleum, light catalytic cracked	96 Hr LC50 Brachydanio rerio: 7.3 mg/L [semi-static]
Polycyclic aromatic hydrocarbons	48 Hr LC50 Daphnia magna: 0.25 mg/L

**13. Disposal Considerations:**

**Recommendation:** Observe local requirements. Dispose of in accordance with local/state/federal regulations.

**14. Transport Information:****DOT Regulated Components:**

This product is not regarded as dangerous goods according to the national and international regulations on the transport of dangerous goods unless specifically cited below:

2,4-Toluene Diisocyanate  
2,6-Toluene Diisocyanate  
Reportable Quantity: 100 lbs

When in containers of less than the substance RQ, this material ships as follows:

<b>Agency</b>	<b>Proper Shipping Name</b>	<b>UN Number</b>	<b>Packing Group</b>	<b>Hazard Class</b>
IMDG	Environmentally Hazardous Substance, N.O.S. (Contains Aromatic Hydrocarbons)	3082	III	9
ICAO/IATA	Environmentally Hazardous Substance, N.O.S. (Contains Aromatic Hydrocarbons)	3082	III	9

Containers above substance RQ ship as:

DOT	Toluene Diisocyanate	2078	II	6.1
IMDG	Toluene Diisocyanate	2078	II	6.1
ICAO/IATA	Toluene Diisocyanate	2078	II	6.1

## 15. Regulatory Information:

**OSHA HAZARD COMMUNICATION STANDARD:** This material is classified as hazardous in accordance with OSHA 29 CFR 1910.1200.

**SARA 311/312 Hazard Categories:** Acute health hazard, chronic health hazard.

### California Proposition 65 (Safe Drinking Water and Toxic Enforcement Act of 1986)

This product contains no substances known to the State of California to cause cancer, birth defects or other reproductive harm, at levels which would require a warning under the statute unless otherwise listed:

**WARNING:** This product can expose you to chemicals listed below, which are known to the State of California to cause cancer, birth defects, or reproductive harm. For more information, visit [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov)

Polycyclic aromatic hydrocarbons 130498-29-2 0.1 to 1.0 % CARC  
Toluene Diisocyanate, mixed isomers 26471-62-5 10 to 15 % CARC

### Massachusetts Right To Know List:

Polycyclic aromatic hydrocarbons 130498-29-2 0.1 to 1.0 %  
Toluene Diisocyanate, mixed isomers 26471-62-5 10 to 15 %

### New Jersey Right To Know List:

Polycyclic aromatic hydrocarbons 130498-29-2 0.1 to 1.0 %  
Toluene Diisocyanate, mixed isomers 26471-62-5 10 to 15 %

### Pennsylvania Right To Know List:

Polycyclic aromatic hydrocarbons 130498-29-2 0.1 to 1.0 %  
Toluene Diisocyanate, mixed isomers 26471-62-5 10 to 15 %

### Chemicals subject to SARA 313 Reporting:

Polycyclic aromatic hydrocarbons 130498-29-2 0.1 to 1.0 % Emissions, PBT  
Toluene Diisocyanate, mixed isomers 26471-62-5 10 to 15 % Emissions

<u>Country</u>	<u>Regulation</u>	<u>All Components Listed</u>
Canada	Canada DSL	Yes
US	Toxic Substances Control Act	Yes

## 16. Other Information:

Safety Data Sheet issued by Product Safety Department

**THIS PRODUCT CONTAINS TDI AND IS FOR INDUSTRIAL OR COMMERCIAL USE ONLY.  
NOT FOR USE BY CONSUMERS, OR FOR SALE OR RESALE TO CONSUMERS.**

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