



AstroTurf
Great Lakes
TRANSMITTAL

To: _____

Phone: _____
Attn: _____

Date: _____
Project: _____

From: _____

WE TRANSMIT:

- | | | |
|---------------------------------------|--|--|
| <input type="checkbox"/> For Approval | <input type="checkbox"/> Approved As Submitted | <input type="checkbox"/> Approved As Noted |
| <input type="checkbox"/> For Your Use | <input type="checkbox"/> Resubmit for Approval | <input type="checkbox"/> For Signature |
| <input type="checkbox"/> As Requested | <input type="checkbox"/> Other: _____ | |

THE FOLLOWING:

- | | | |
|--|---|---------------------------------------|
| <input type="checkbox"/> Samples / Data / Literature | <input type="checkbox"/> Specifications | <input type="checkbox"/> Change Order |
| <input type="checkbox"/> Contract Documents | <input type="checkbox"/> Prints | <input type="checkbox"/> Plans |
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No. of Copies	Date	Spec No.	Description

REMARKS:

SENT VIA:					
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SAFETY DATA SHEET

Revised: 1-Jun-17

Page: 1 of 4

1. Substance/Preparation and Company Information: Polyethylene Fiber - Yellow 3000	Tradenames Legend, MP, BIONIC, Wearnmaxx
Application:	Artificial Turf Material for Sport and Leisure Surfaces Slit Film, Thatch and Monofilament Turf Fibers
Manufacturer:	SYNTHETIC TURF RESOURCES CORPORATION 421 CALLAHAN RD SE DALTON, GA 30721
Emergency Info:	+1 (706) 272-4214

2. Composition/Details of Components			
Final Product: Chemical characterization: Polyethylene polymer formulation based fiber material.			
This product is not a hazardous chemical according to the OSHA Hazard Communication Standard 29 CFR 1910.1200			
CAS No:	Designation	%	Symbol R Phrases
9002-88-4 68186-90-3	Polyethylene Chrome Rutile Yellow	100	n/a
EINECS No:	Index No.:		
Not Applicable			

3. Possible Dangers	
*Description of Danger:	Not Applicable
*Special Risks for Humans & the environment:	Not Applicable

4. First Aid	
*General Information:	Not relevant
*After Inhalation:	Not relevant
*After Skin Contact:	Not relevant
*After Eye Contact:	Not relevant
*After Ingestion:	Not relevant
*Instructions for the Doctor:	Not Applicable

5. Fire-fighting

*Suitable Fire-fighting agents:	Extinguishing media: Water fog or fine spray. Dry chemical fire extinguishers. Carbon Dioxide fire extinguishers. Foam
*Unsuitable fire fighting agents:	None known
*Special Danger from the substance or preparation itself, its combustion products or resultant gases:	None Known
*Special safety equipment for fire-fighting:	No special action required

6. Precautions after accidental release:

*Personal precautions:	Not necessary
*Environmental protection:	Not Applicable
*Cleaning / Mopping up:	Not relevant

7. Handling and storage

7A: Instructions for safe handling:	No special action required
*Fire/explosion protection:	No special action required
7B: Instructions for Storage:	Keep containers sealed; store in a dry place protected from frost.

8. Exposure limits and personal protection equipment

*Additional information on designing technical equipment:	No special action required
*Components with workplace-related limit values that require monitoring:	None

Personal Safety Equipment

*Breathing Protection:	Not necessary
*Hand Protection:	Not necessary
*Eye Protection:	Not necessary
*Body Protection:	Not necessary
Hygiene measures:	Standard hygiene measures

9. Physical and chemical characteristics:

*Form:	Final Product
*Color:	Various Colors
*Odor:	Odorless
*PH Value:	Not applicable
*Flash point:	Not applicable
*Ignition temperature:	varies/depends on infill material used
*Risk of explosion:	Not applicable
*Density (at 68 degrees F)	Not applicable
*Solubility in/Miscibility with water:	Insoluble
*Viscosity:	Not applicable

10. Stability and reactivity

*Conditions to be avoided:	None known if used correctly
*Substances to be avoided:	None known if used correctly
*Hazardous Decomposition Products	None known if used correctly

11. Toxicology Information

If handled correctly and normal work hygiene practices are observed, no harmful effects caused by this product are known or expected.

12. Ecology Information

Estimated on the basis of the raw materials contained in the product and/or substances with a comparable structure, the following ecological data is anticipated: No bioconcentration is expected because of the relatively high molecular weight (MW greater than 1000) of base polymers. In the terrestrial environment, material is expected to remain in the soil. In the aquatic environment, material is expected to float.

13. Disposal Information

Waste incineration with the approval of the local authority.

14. Transport Instructions

*Land transport ADR/RID and GGVS/GGVE:	Not a hazardous substance
*Ocean-going ship transport IDMF/GGV Sea:	Not a hazardous substance
*Air Transport ICAO-TI and IATA-DGR:	Not a hazardous substance

15. Regulations

*Classification and identification under the Hazardous Substance Directive:	Not a hazardous substance under the directive
*Hazard symbols:	Not applicable
*R phrases:	Not applicable
*S phrases:	Not applicable
*VbF:	Not a flammable liquid
*Potential water polluting class:	Not applicable

16. Other information

The information in this safety data sheet is based on our current knowledge and is designed to describe the product in terms of the appropriate safety precautions. It does not constitute any assurance of the properties of the product described herein. This safety data sheet replaces all previous versions.



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SAFETY DATA SHEET

Revised: 1-Jun-17

Page: 1 of 4

1. Substance/Preparation and Company Information: Polyethylene Fiber - Field Green 8380	Tradenames Legend, MP, BIONIC, Wearnmaxx
Application:	Artificial Turf Material for Sport and Leisure Surfaces Slit Film, Thatch and Monofilament Turf Fibers
Manufacturer:	SYNTHETIC TURF RESOURCES CORPORATION 421 CALLAHAN RD SE DALTON, GA 30721
Emergency Info:	+1 (706) 272-4214

2. Composition/Details of Components			
Final Product: Chemical characterization: Polyethylene polymer formulation based fiber material.			
This product is not a hazardous chemical according to the OSHA Hazard Communication Standard 29 CFR 1910.1200			
CAS No:	Designation	%	Symbol R Phrases
9002-88-4	Polyethylene	100	n/a
5141-20-8	Light Green SF Yellowish		
EINECS No:	Index No.:		
Not Applicable			

3. Possible Dangers	
*Description of Danger:	Not Applicable
*Special Risks for Humans & the environment:	Not Applicable

4. First Aid	
*General Information:	Not relevant
*After Inhalation:	Not relevant
*After Skin Contact:	Not relevant
*After Eye Contact:	Not relevant
*After Ingestion:	Not relevant
*Instructions for the Doctor:	Not Applicable

5. Fire-fighting

*Suitable Fire-fighting agents:	Extinguishing media: Water fog or fine spray. Dry chemical fire extinguishers. Carbon Dioxide fire extinguishers. Foam
*Unsuitable fire fighting agents:	None known
*Special Danger from the substance or preparation itself, its combustion products or resultant gases:	None Known
*Special safety equipment for fire-fighting:	No special action required

6. Precautions after accidental release:

*Personal precautions:	Not necessary
*Environmental protection:	Not Applicable
*Cleaning / Mopping up:	Not relevant

7. Handling and storage

7A: Instructions for safe handling:	No special action required
*Fire/explosion protection:	No special action required
7B: Instructions for Storage:	Keep containers sealed; store in a dry place protected from frost.

8. Exposure limits and personal protection equipment

*Additional information on designing technical equipment:	No special action required
*Components with workplace-related limit values that require monitoring:	None

Personal Safety Equipment

*Breathing Protection:	Not necessary
*Hand Protection:	Not necessary
*Eye Protection:	Not necessary
*Body Protection:	Not necessary
Hygiene measures:	Standard hygiene measures

9. Physical and chemical characteristics:

*Form:	Final Product
*Color:	Various Colors
*Odor:	Odorless
*PH Value:	Not applicable
*Flash point:	Not applicable
*Ignition temperature:	varies/depends on infill material used
*Risk of explosion:	Not applicable
*Density (at 68 degrees F)	Not applicable
*Solubility in/Miscibility with water:	Insoluble
*Viscosity:	Not applicable

10. Stability and reactivity

*Conditions to be avoided:	None known if used correctly
*Substances to be avoided:	None known if used correctly
*Hazardous Decomposition Products	None known if used correctly

11. Toxicology Information

If handled correctly and normal work hygiene practices are observed, no harmful effects caused by this product are known or expected.

12. Ecology Information

Estimated on the basis of the raw materials contained in the product and/or substances with a comparable structure, the following ecological data is anticipated: No bioconcentration is expected because of the relatively high molecular weight (MW greater than 1000) of base polymers. In the terrestrial environment, material is expected to remain in the soil. In the aquatic environment, material is expected to float.

13. Disposal Information

Waste incineration with the approval of the local authority.

14. Transport Instructions

*Land transport ADR/RID and GGVS/GGVE:	Not a hazardous substance
*Ocean-going ship transport IDMF/GGV Sea:	Not a hazardous substance
*Air Transport ICAO-TI and IATA-DGR:	Not a hazardous substance

15. Regulations

*Classification and identification under the Hazardous Substance Directive:	Not a hazardous substance under the directive
*Hazard symbols:	Not applicable
*R phrases:	Not applicable
*S phrases:	Not applicable
*VbF:	Not a flammable liquid
*Potential water polluting class:	Not applicable

16. Other information

The information in this safety data sheet is based on our current knowledge and is designed to describe the product in terms of the appropriate safety precautions. It does not constitute any assurance of the properties of the product described herein. This safety data sheet replaces all previous versions.



SAFETY DATA SHEET

Revised: 1-Jun-17

Page: 1 of 4

1. Substance/Preparation and Company Information: Polyethylene Fiber - Lime Green 8370	Tradenames Legend, MP, BIONIC, Wearnmaxx
Application:	Artificial Turf Material for Sport and Leisure Surfaces Slit Film, Thatch and Monofilament Turf Fibers
Manufacturer:	SYNTHETIC TURF RESOURCES CORPORATION 421 CALLAHAN RD SE DALTON, GA 30721
Emergency Info:	+1 (706) 272-4214

2. Composition/Details of Components			
Final Product: Chemical characterization: Polyethylene polymer formulation based fiber material.			
This product is not a hazardous chemical according to the OSHA Hazard Communication Standard 29 CFR 1910.1200			
CAS No:	Designation	%	Symbol R Phrases
9002-88-4	Polyethylene	100	n/a
14302-13-7	HELIOGEN® Green K 8730		
EINECS No:	Index No.:		
Not Applicable			

3. Possible Dangers	
*Description of Danger:	Not Applicable
*Special Risks for Humans & the environment:	Not Applicable

4. First Aid	
*General Information:	Not relevant
*After Inhalation:	Not relevant
*After Skin Contact:	Not relevant
*After Eye Contact:	Not relevant
*After Ingestion:	Not relevant
*Instructions for the Doctor:	Not Applicable

5. Fire-fighting

*Suitable Fire-fighting agents:	Extinguishing media: Water fog or fine spray. Dry chemical fire extinguishers. Carbon Dioxide fire extinguishers. Foam
*Unsuitable fire fighting agents:	None known
*Special Danger from the substance or preparation itself, its combustion products or resultant gases:	None Known
*Special safety equipment for fire-fighting:	No special action required

6. Precautions after accidental release:

*Personal precautions:	Not necessary
*Environmental protection:	Not Applicable
*Cleaning / Mopping up:	Not relevant

7. Handling and storage

7A: Instructions for safe handling:	No special action required
*Fire/explosion protection:	No special action required
7B: Instructions for Storage:	Keep containers sealed; store in a dry place protected from frost.

8. Exposure limits and personal protection equipment

*Additional information on designing technical equipment:	No special action required
*Components with workplace-related limit values that require monitoring:	None

Personal Safety Equipment

*Breathing Protection:	Not necessary
*Hand Protection:	Not necessary
*Eye Protection:	Not necessary
*Body Protection:	Not necessary
Hygiene measures:	Standard hygiene measures

9. Physical and chemical characteristics:

*Form:	Final Product
*Color:	Various Colors
*Odor:	Odorless
*PH Value:	Not applicable
*Flash point:	Not applicable
*Ignition temperature:	varies/depends on infill material used
*Risk of explosion:	Not applicable
*Density (at 68 degrees F)	Not applicable
*Solubility in/Miscibility with water:	Insoluble
*Viscosity:	Not applicable

10. Stability and reactivity

*Conditions to be avoided:	None known if used correctly
*Substances to be avoided:	None known if used correctly
*Hazardous Decomposition Products	None known if used correctly

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13. Disposal Information

Waste incineration with the approval of the local authority.

14. Transport Instructions

*Land transport ADR/RID and GGVS/GGVE:	Not a hazardous substance
*Ocean-going ship transport IDMF/GGV Sea:	Not a hazardous substance
*Air Transport ICAO-TI and IATA-DGR:	Not a hazardous substance

15. Regulations

*Classification and identification under the Hazardous Substance Directive:	Not a hazardous substance under the directive
*Hazard symbols:	Not applicable
*R phrases:	Not applicable
*S phrases:	Not applicable
*VbF:	Not a flammable liquid
*Potential water polluting class:	Not applicable

16. Other information

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SAFETY DATA SHEET

Revised: 1-Jun-17

Page: 1 of 4

1. Substance/Preparation and Company Information:	Tradenames
Polyethylene Fiber - White 1000	Legend, MP, BIONIC, Wearnmaxx
Application:	Artificial Turf Material for Sport and Leisure Surfaces Slit Film, Thatch and Monofilament Turf Fibers
Manufacturer:	SYNTHETIC TURF RESOURCES CORPORATION 421 CALLAHAN RD SE DALTON, GA 30721
Emergency Info:	+1 (706) 272-4214

2. Composition/Details of Components			
Final Product:			
Chemical characterization: Polyethylene polymer formulation based fiber material.			
This product is not a hazardous chemical according to the OSHA Hazard Communication Standard 29 CFR 1910.1200			
CAS No:	Designation	%	Symbol R Phrases
9002-88-4	Polyethylene	100	n/a
13463-67-7	Titanium Dioxide		
EINECS No:	Index No.:		
Not Applicable			

3. Possible Dangers	
*Description of Danger:	Not Applicable
*Special Risks for Humans & the environment:	Not Applicable

4. First Aid	
*General Information:	Not relevant
*After Inhalation:	Not relevant
*After Skin Contact:	Not relevant
*After Eye Contact:	Not relevant
*After Ingestion:	Not relevant
*Instructions for the Doctor:	Not Applicable

5. Fire-fighting

*Suitable Fire-fighting agents:	Extinguishing media: Water fog or fine spray. Dry chemical fire extinguishers. Carbon Dioxide fire extinguishers. Foam
*Unsuitable fire fighting agents:	None known
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6. Precautions after accidental release:

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*Color:	Various Colors
*Odor:	Odorless
*PH Value:	Not applicable
*Flash point:	Not applicable
*Ignition temperature:	varies/depends on infill material used
*Risk of explosion:	Not applicable
*Density (at 68 degrees F)	Not applicable
*Solubility in/Miscibility with water:	Insoluble
*Viscosity:	Not applicable

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14. Transport Instructions

*Land transport ADR/RID and GGVS/GGVE:	Not a hazardous substance
*Ocean-going ship transport IDMF/GGV Sea:	Not a hazardous substance
*Air Transport ICAO-TI and IATA-DGR:	Not a hazardous substance

15. Regulations

*Classification and identification under the Hazardous Substance Directive:	Not a hazardous substance under the directive
*Hazard symbols:	Not applicable
*R phrases:	Not applicable
*S phrases:	Not applicable
*VbF:	Not a flammable liquid
*Potential water polluting class:	Not applicable

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CARPET & RUG

BACKING AND SUPPLIES

MATERIAL SAFETY DATA SHEET

SECTION 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Identifier Primary Carpet Backing (polypropylene/polyester yarns)		[WHMIS Classification] Polyolefin/Poly(ethylene terephthalate)	
Product Use Textiles - woven and nonwoven applications			
Manufacturer's Name (CRB) Carpet and Rug Backing - Birmingham			
Street Address 6076 Southern Industrial Drive			
City Birmingham		State Alabama	
Postal Code 35235	Emergency Telephone 205-655-6360		
Date MSDS Prepared May 19, 2014	MSDS Prepared By Mark C. Claybrook		Phone Number 205-655-6360

SECTION 2 - COMPOSITION/INFORMATION ON INGREDIENTS

Ingredients (specific)	%	CAS Number	LD ₅₀ of ingredients (specify species and route)	LD ₅₀ of ingredients (specify species)
Polypropylene	53%	9003-07-0	N/A	N/A
Polyester	45%	25038-59-9	N/A	N/A
SSC Spinflex 1240	2%	25322-68-3	N/A	N/A

SECTION 3 - HAZARDS IDENTIFICATION

Route of Entry	Skin Contact	Skin Absorption	Eye Contact	Inhalation	Ingestion	Other
	X	X	X	X	X	
[Emergency Overviews] Irritating vapors to respiratory system and eyes may form when polymer is processed at high temperatures. Molten or heated material in skin contact can cause severe burns						
[WHMIS Symbols]						
[Potential Health Effects] Swallowing may cause some nausea;						
Finish was not an irritant at a 1% concentration in water.						
No reports of carcinogenicity from NTP, none from OSH, Teratogenic effects not available						

SECTION 4 - FIRST AID MEASURES

Skin Contact Wash affected area with soap and water
Eye Contact Rinse eyes with water for few minutes. Seek medical attention if necessary
Inhalation Remove to fresh air
Ingestion Seek medical attention if necessary.

Product Identifier	Primary Carpet Backing (polypropylene/polyester yarns)
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SECTION 5 - FIRE FIGHTING MEASURES

Flammable		If yes, under which conditions?
yes X	no	May be combustible at high temperatures greater than 230 °C
Means of Extinction Use dry chemicals; CO ₂ ; water spray; halon; or foam		
Flashpoint (°C) and method Not available	Upper Flammable Limit (% by volume) Not available	Lower Flammable Limit (% by volume) Not available
Autoignition Temperature (°C) Not available	Explosion Data - Sensitivity to Impact Not available	Explosion Data - Sensitivity to Static Discharge Possible static discharge
Hazardous Combustion Products Not available		
[NFPA] Not available		

SECTION 6 - ACCIDENTAL RELEASE MEASURES

Leak and Spill Procedures Fibers on floor could present a slipping problem. Good housekeeping must be maintained at all times
to avoid this hazard. Sweep, shovel, or vacuum material into clean containers.

SECTION 7 - HANDLING AND STORAGE

Handling Procedures and Equipment Rolls of Carpet Backing are very heavy. Use correct equipment to handle rolls.
Possible static discharge
Storage Requirements Store in a cool dry location.
Keep away from strong oxidizing agents

SECTION 8 - EXPOSURE CONTROL / PERSONAL PROTECTION

Exposure Limits Not available	ACGIH TLV Not available	OSHA PEL Not available	Other (specify)			
Specific Engineering Controls (such as ventilation, enclosed process) Not available						
Personal Protective Equipment	Gloves	Respirator	Eye X	Footwear	Clothing	Other
If checked, please specify type Safety glasses						

Product Identifier	Primary Carpet Backing (polypropylene/polyester yarns)
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SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

Physical State Solid	Odor and Appearance Natural or black	Odor Threshold (ppm) Not available
Specific Gravity 0.91 to 0.97	Vapor Density (air = 1) Not available	Vapor Pressure (mmHg) Not available
Evaporation Rate Not available	Boiling Point (°C) Not available	Melting Point (°C) 120 to 170 °C
pH Not available	Coefficient of water / Distribution Not available	[Solubility in water] Not available

SECTION 10 - STABILITY AND REACTIVITY

Chemical Stability yes <input checked="" type="checkbox"/> no	If no, under which conditions?
Incompatibility with other Substances yes <input checked="" type="checkbox"/> no	If yes, which ones? fluorine gas, nitric acid, perchloric acid; free halogens, benzene, petroleum ethers
gasoline and lubricating oils and aromatic and chlorinated hydrocarbons	
Reactivity, and under what conditions? Not available	
Hazardous Decomposition Products CO; oxides of nitrogen; oxides of phosphorous; CO ₂	

SECTION 11 - TOXICOLOGICAL INFORMATION

effects of Acute Exposure LD50 and LC50: not available	
Effects of Chronic Exposure Classified None by NTP, None by OSHA.	
Irritancy of Product	
Skin Sensitization Some	Respiratory Sensitization none
Carcinogenicity - IARC none	Carcinogenicity - ACGIH none
Reproductive Toxicity none	Teratogenicity none
Embryotoxicity none	Mutagenicity none
Name of Synergistic Products/Effects	

Product Identifier	Primary Carpet Backing (polypropylene/polyester yarns)
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SECTION 12 - ECOLOGICAL INFORMATION

[Aquatic Toxicity] Not available

SECTION 13 - DISPOSAL CONSIDERATIONS

Waste Disposal Transfer to an approved disposal area in accordance with federal, state; and local regulations.

SECTION 14 - TRANSPORT INFORMATION

Special Shipping Information Not a DOT controlled material (United States)	
	PIN Not available
TDG Not controlled under TDG (Canada)	[DOT] Not a DOT controlled material (United States)
[IMO] Not controlled under IMDG	[ICAO] Not controlled under IATA

SECTION 15 - REGULATORY INFORMATION

[WHMIS Classification] Not controlled under WHMIS (Canada) -	[OSHA] Not a HCS controlled material in the United States
[SERA] No products found	[TSCA] Polypropylene/Polyester
This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR	

SECTION 16 - OTHER INFORMATION

Health - 0; Fire - 1; Reactivity - 0; Personal Protection - 0
This product is made for industrial purposes only.
Verified by : Mark C. Claybrook printed: May 27, 2014
<u>Notice to Reader</u> To the best of our knowledge, the information contained in this MSDS is accurate. However neither CRB or any of its subsidiaries assume any liability whatsoever for the accuracy or completeness of the information contained within this MSDS. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described within, CRB cannot guarantee that these are that these are the only hazards that exists.



CARPET & RUG

BACKING AND SUPPLIES

MATERIAL SAFETY DATA SHEET

SECTION 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Identifier Primary Carpet Backing (polypropylene yarns)		[WHMIS Classification] Polyolefin/hydrocarbon with Ethoxylated Monomer Acid Ester	
Product Use Textiles - woven and nonwoven applications			
Manufacturer's Name (CRB) Carpet and Rug Backing - Brimingham			
Street Address 6076 Southern Industrial Drive			
City Birmingham		State Alabama	
Postal Code 35235	Emergency Telephone 205-655-6360		
Date MSDS Prepared March 19, 2007		MSDS Prepared By Mark C. Claybrook	Phone Number 205-655-6360

SECTION 2 - COMPOSITION/INFORMATION ON INGREDIENTS

Ingredients (specific)	%	CAS Number	LD ₅₀ of ingredients (specify species and route)	LD ₅₀ of ingredients (specify species)
Polypropylene	97%	9003-07-0	N/A	N/A
SCC 1062	2%	96349-73-4	N/A	N/A
SSC Spinflex 1240	1%		N/A	N/A

SECTION 3 - HAZARDS IDENTIFICATION

Route of Entry	Skin Contact X	Skin Absorption X	Eye Contact X	Inhalation X	Ingestion X	Other
[Emergency Overviews] Irritating vapors to respiratory system and eyes may form when polymer is processed at high temperatures. Molten or heated material in skin contact can cause severe burns						
[WHMIS Symbols]						
[Potential Health Effects] Swallowing may cause some nausea; Finish was not an irritant at a 1% concentration in water. No reports of carcinogenicity from NTP, none from OSH, Teratogenic effects not available						

SECTION 4 - FIRST AID MEASURES

Skin Contact Wash affected area with soap and water
Eye Contact Rinse eyes with water for few minutes. Seek medical attention if necessary
Inhalation Remove to fresh air
Ingestion Seek medical attention if necessary.

Product Identifier	Primary Carpet Backing (polypropylene yarns)
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SECTION 5 - FIRE FIGHTING MEASURES

Flammable	If yes, under which conditions?	
yes X no	May be combustible at high temperatures greater than 230 °C	
Means of Extinction Use dry chemicals; CO ₂ ; water spray; halon; or foam		
Flashpoint (°C) and method Not available	Upper Flammable Limit (% by volume) Not available	Lower Flammable Limit (% by volume) Not available
Autoignition Temperature (°C) Not available	Explosion Data - Sensitivity to Impact Not available	Explosion Data - Sensitivity to Static Discharge Possible static discharge
Hazardous Combustion Products Not available		
[NFPA] Not available		

SECTION 6 - ACCIDENTAL RELEASE MEASURES

Leak and Spill Procedures Fibers on floor could present a slipping problem. Good housekeeping must be maintained at all times
to avoid this hazard. Sweep, shovel, or vacuum material into clean containers.

SECTION 7 - HANDLING AND STORAGE

Handling Procedures and Equipment Rolls of Carpet Backing are very heavy. Use correct equipment to handle rolls.
Possible static discharge
Storage Requirements Store in a cool dry location.
Keep away from strong oxidizing agents

SECTION 8 - EXPOSURE CONTROL / PERSONAL PROTECTION

Exposure Limits Not available	ACGIH TLV Not available	OSHA PEL Not available	Other (specify)			
Specific Engineering Controls (such as ventilation, enclosed process) Not available						
Personal Protective Equipment	Gloves	Respirator	Eye X	Footwear	Clothing	Other
If checked, please specify type Safety glasses						

Product Identifier	Primary Carpet Backing (polypropylene yarns)
---------------------------	---

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

Physical State Solid	Odor and Appearance Natural or black	Odor Threshold (ppm) Not available
Specific Gravity 0.91 to 0.97	Vapor Density (air = 1) Not available	Vapor Pressure (mmHg) Not available
Evaporation Rate Not available	Boiling Point (°C) Not available	Melting Point (°C) 120 to 170 °C
pH Not available	Coefficient of water / Distribution Not available	[Solubility in water] Not available

SECTION 10 - STABILITY AND REACTIVITY

Chemical Stability	If no, under which conditions?	
yes X no		
Incompatibility with other Substances	If yes, which ones?	
yes X no	fluorine gas, nitric acid, perchloric acid; free halogens, benzene, petroleum ethers	
gasoline and lubricating oils and aromatic and chlorinated hydrocarbons		
Reactivity, and under what conditions? Not available		
Hazardous Decomposition Products CO; oxides of nitrogen; oxides of phosphorous; CO ₂		

SECTION 11 - TOXICOLOGICAL INFORMATION

effects of Acute Exposure LD50 and LC50: not available	
Effects of Chronic Exposure Classified None by NTP, None by OSHA.	
Irritancy of Product	
Skin Sensitization Some	Respiratory Sensitization none
Carcinogenicity - IARC none	Carcinogenicity - ACGIH none
Reproductive Toxicity none	Teratogenicity none
Embryotoxicity none	Mutagenicity none
Name of Synergistic Products/Effects	

Product Identifier	Primary Carpet Backing (polypropylene yarns)
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SECTION 12 - ECOLOGICAL INFORMATION

[Aquatic Toxicity] Not available

SECTION 13 - DISPOSAL CONSIDERATIONS

Waste Disposal Transfer to an approved disposal area in accordance with federal, state, and local regulations.

SECTION 14 - TRANSPORT INFORMATION

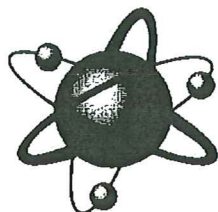
Special Shipping Information Not a DOT controlled material (United States)	
	PIN Not available
TDG Not controlled under TDG (Canada)	[DOT] Not a DOT controlled material (United States)
[IMO] Not controlled under IMDG	[ICAO] Not controlled under IATA

SECTION 15 - REGULATORY INFORMATION

[WHMIS Classification] Not controlled under WHMIS (Canada) -	[OSHA] Not a HCS controlled material in the United States
[SERA] No products found	[TSCA] Polypropylene
This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR	

SECTION 16 - OTHER INFORMATION

Health - 0; Fire - 1; Reactivity - 0; Personal Protection - 0
This product is made for industrial purposes only.
Verified by : Mark C. Claybrook printed: February 27, 2009
Notice to Reader To the best of our knowledge, the information contained in this MSDS is accurate. However neither CRB or any of its subsidiaries assume any liability whatsoever for the accuracy or completeness of the information contained within this MSDS. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described within, CRB cannot guarantee that these are that these are the only hazards that exists.



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TEXTILE TECHNOLOGIES

18904

NOTICE-THIS INFORMATION PROVIDED HEREIN FOR A RESEARCH SAMPLE AND PRESENTS THE RESULTS OF PRELIMINARY INVESTIGATIONS. IT IS OFFERED IN GOOD FAITH, CONSISTENT WITH 29 CFR 1910.1200, RECOGNIZING THAT ADDITIONAL INFORMATION, INCLUDING DATA ON HAZARDOUS PROPERTIES MAY BE DEVELOPED AT A LATER TIME. EXERCISE DUE CARE AND CONTACT UNIVERSAL TEXTILE TECHNOLOGIES FOR ADDITIONAL INFORMATION IN THE FUTURE.

RESEARCH SAMPLE SAFETY DATA SHEET

UNIVERSAL TEXTILE TECHNOLOGIES, DALTON, GA 30720

PAGE 1

EMERGENCY PHONE 706-277-3778

SAMPLE NAME: MECHANICALLY-FROTHED ELASTOMERIC POLYURETHANE
POLYMER

PRODUCT CODE: NOT APPLICABLE

INGREDIENTS

POLYURETHANE POLYMER CONTAINING INORGANIC COMPONENTS.

SUBSTANCES LISTED IN THE INGREDIENTS SECTION ARE THOSE IDENTIFIED AS BEING PRESENT AT A CONCENTRATION OF 1 PERCENT OR GREATER, OR 0.1 PERCENT IF THE SUBSTANCE IS ON THE LIST OF POTENTIAL CARCINOGENS CITED IN OSHA HAZARD COMMUNICATION STANDARD. WHERE PROPRIETARY INGREDIENT SHOWS, THE IDENTITY OF THIS SUBSTANCE MAY BE MADE AVAILABLE AS PROVIDED IN 29 CFR 1910.1200.

PHYSICAL DATA

BOILING POINT: NOT APPLICABLE
VAP. PRESS: NOT APPLICABLE
VAP. DENSITY: NOT APPLICABLE
SOL. IN WATER: 0. INORGANIC FILLERS SOLUBLE IN STRONG
ACIDS AND ALKALIES
SP. GRAVITY: APPROX. 0.3G/CC - 1.0G/CC
FREEZING POINT: NOT APPLICABLE
APPEARANCE: UNCOLORED POLYMER WILL BE OFF-WHITE TO
GREYISH-TAN TO BROWNISH-BLACKISH TONES.
POLYMER CAN BE MANY COLORS IF A COLORANT WAS
ADDED DURING ITS MANUFACTURING.
ODOR: NOTAVAILABLE

RESEARCH SAMPLE DATA SAFETY SHEET

UNIVERSAL TEXTILE TECHNOLOGIES, DALTON, GA 30720

PAGE 2

EMERGENCY PHONE 706-277-3778

SAMPLE NAME: POLYURETHANE POLYMER

PRODUCT CODE: NOT APPLICABLE

FIRE AND EXPLOSION HAZARD DATA

FLASH POINT: NOT APPLICABLE

METHOD USED: NOT APPLICABLE

FLAMMABLE LIMITS

LFL: NOT APPLICABLE

UFL: NOT APPLICABLE

EXTINGUISHING MEDIA: WATER FOG, FOAM, CO₂ OR DRY CHEMICAL

FIRE AND EXPLOSION HAZARDS: HAZARDOUS DECOMPOSITION PRODUCTS MAY BE GENERATED UNDER FIRE CONDITIONS.

FIRE FIGHTING EQUIPMENT: WEAR POSITIVE PRESSURE, SELF-CONTAINED BREATHING APPARATUS TO PROTECT AGAINST POSSIBLE DECOMPOSITION PRODUCTS IF PRODUCTS ARE EXPOSED TO FIRE CONDITIONS.

REACTIVITY DATA

STABILITY: (CONDITIONS TO AVOID) POLYMER MAY DECOMPOSE UNDER FIRE CONDITIONS TO GIVE OFF HAZARDOUS PRODUCTS.

INCOMPATIBILITY (SPECIFIC MATERIALS TO AVOID): NO DATA AVAILABLE.

HAZARDOUS DECOMPOSITION PRODUCTS: CARBON DIOXIDE, CARBON MONOXIDE, NITROGEN OXIDES AND TRACES OF HYDROGEN CYANIDE.

HAZARDOUS POLYMERIZATION: WILL NOT OCCUR.

ENVIRONMENTAL AND DISPOSAL INFORMATION

ACTION TO TAKE FOR SPILLS/LEAKS: SWEEP UP AND DISPOSE OF IN ACCORDANCE WITH APPLICABLE LOCAL, STATE AND FEDERAL REGULATIONS.

DISPOSAL METHOD: BURY IN AN APPROVED LANDFILL IN ACCORDANCE WITH LOCAL, STATE AND FEDERAL REGULATIONS.

RESEARCH SAMPLE SAFETY DATA SHEET

UNIVERSAL TEXTILE TECHNOLOGIES, DALTON, GA 30720
EMERGENCY PHONE 706-277-3778
SAMPLE NAME: POLYURETHANE POLYMER
PRODUCT CODE: NOT APPLICABLE

PAGE 4

HANDLING PRECAUTIONS

THESE PRECAUTIONS ARE SUGGESTED FOR CONDITIONS WITH A HIGH POTENTIAL FOR EXPOSURE. IF HANDLING PROCEDURES ARE SUCH THAT THERE IS ONLY A LOW POTENTIAL FOR EXPOSURE, LESS PROTECTION MAY BE NEEDED. EMERGENCY CONDITIONS MAY REQUIRE ADDITIONAL PRECAUTIONS.

EXPOSURE GUIDELINES(S): FOR PARTICULATES WHICH HAVE NO SPECIFIC GUIDELINES, THE ACGIH TLV IS 10 MG/M³ AND THE OSHA PEL IS 15 MG/M³ TOTAL, 5 MG/M³ RESPIRABLE.

VENTILATION: PROVIDE GENERAL AND/OR LOCAL EXHAUST VENTILATION TO CONTROL AIRBORNE LEVELS BELOW THE EXPOSURE GUIDELINES.

RESPIRATORY PROTECTION: FOR MOST CONDITIONS, NO RESPIRATORY PROTECTION SHOULD BE NEEDED. IN DUSTY ATMOSPHERES, USE AN APPROVED DUST RESPIRATOR.

SKIN PROTECTION: NO PRECAUTIONS OTHER THAN CLEAN BODY COVERING SHOULD BE NEEDED.

EYE PROTECTION: SAFETY GLASSES SHOULD BE SUFFICIENT FOR MOST OPERATIONS; HOWEVER, FOR DUSTY OPERATIONS WEAR CHEMICAL GOGGLES.

ADDITIONAL INFORMATION: PRACTICE REASONABLE CARE AND CAUTION IN HANDLING.

AN ACCUMULATION OF FINE DUST PARTICLES COULD POSE AN EXPLOSION HAZARD. DUST CAN PRODUCE FLAMMABLE OR EXPLOSIVE MIXTURE IF DISPERSED IN AIR. KEEP DUST CLOUDS AWAY FROM IGNITION SOURCES.

THE INFORMATION HEREIN IS GIVEN IN GOOD FAITH, BUT NO WARRANTY, EXPRESS OR IMPLIED, IS MADE. CONSULT UNIVERSAL TEXTILE TECHNOLOGIES FOR FURTHER INFORMATION.



SAFETY DATA SHEET

Revised: 1-Jun-17

Page: 1 of 4

1. Substance/Preparation and Company Information: Polyethylene Fiber - Black 9999	Tradenames Legend, MP, BIONIC, Wearnmaxx
Application:	Artificial Turf Material for Sport and Leisure Surfaces Slit Film, Thatch and Monofilament Turf Fibers
Manufacturer:	SYNTHETIC TURF RESOURCES CORPORATION 421 CALLAHAN RD SE DALTON, GA 30721
Emergency Info:	+1 (706) 272-4214

2. Composition/Details of Components			
Final Product: Chemical characterization: Polyethylene polymer formulation based fiber material.			
This product is not a hazardous chemical according to the OSHA Hazard Communication Standard 29 CFR 1910.1200			
CAS No:	Designation	%	Symbol R Phrases
9002-88-4 1333-86-4	Polyethylene Raven Black	100	n/a
EINECS No:	Index No.:		
Not Applicable			

3. Possible Dangers	
*Description of Danger:	Not Applicable
*Special Risks for Humans & the environment:	Not Applicable

4. First Aid	
*General Information:	Not relevant
*After Inhalation:	Not relevant
*After Skin Contact:	Not relevant
*After Eye Contact:	Not relevant
*After Ingestion:	Not relevant
*Instructions for the Doctor:	Not Applicable

5. Fire-fighting

*Suitable Fire-fighting agents:	Extinguishing media: Water fog or fine spray. Dry chemical fire extinguishers. Carbon Dioxide fire extinguishers. Foam
*Unsuitable fire fighting agents:	None known
*Special Danger from the substance or preparation itself, its combustion products or resultant gases:	None Known
*Special safety equipment for fire-fighting:	No special action required

6. Precautions after accidental release:

*Personal precautions:	Not necessary
*Environmental protection:	Not Applicable
*Cleaning / Mopping up:	Not relevant

7. Handling and storage

7A: Instructions for safe handling:	No special action required
*Fire/explosion protection:	No special action required
7B: Instructions for Storage:	Keep containers sealed; store in a dry place protected from frost.

8. Exposure limits and personal protection equipment

*Additional information on designing technical equipment:	No special action required
*Components with workplace-related limit values that require monitoring:	None

Personal Safety Equipment

*Breathing Protection:	Not necessary
*Hand Protection:	Not necessary
*Eye Protection:	Not necessary
*Body Protection:	Not necessary
Hygiene measures:	Standard hygiene measures

9. Physical and chemical characteristics:

*Form:	Final Product
*Color:	Various Colors
*Odor:	Odorless
*PH Value:	Not applicable
*Flash point:	Not applicable
*Ignition temperature:	varies/depends on infill material used
*Risk of explosion:	Not applicable
*Density (at 68 degrees F)	Not applicable
*Solubility in/Miscibility with water:	Insoluble
*Viscosity:	Not applicable

10. Stability and reactivity

*Conditions to be avoided:	None known if used correctly
*Substances to be avoided:	None known if used correctly
*Hazardous Decomposition Products	None known if used correctly

11. Toxicology Information

If handled correctly and normal work hygiene practices are observed, no harmful effects caused by this product are known or expected.

12. Ecology Information

Estimated on the basis of the raw materials contained in the product and/or substances with a comparable structure, the following ecological data is anticipated: No bioconcentration is expected because of the relatively high molecular weight (MW greater than 1000) of base polymers. In the terrestrial environment, material is expected to remain in the soil. In the aquatic environment, material is expected to float.

13. Disposal Information

Waste incineration with the approval of the local authority.

14. Transport Instructions

*Land transport ADR/RID and GGVS/GGVE:	Not a hazardous substance
*Ocean-going ship transport IDMF/GGV Sea:	Not a hazardous substance
*Air Transport ICAO-TI and IATA-DGR:	Not a hazardous substance

15. Regulations

*Classification and identification under the Hazardous Substance Directive:	Not a hazardous substance under the directive
*Hazard symbols:	Not applicable
*R phrases:	Not applicable
*S phrases:	Not applicable
*VbF:	Not a flammable liquid
*Potential water polluting class:	Not applicable

16. Other information

The information in this safety data sheet is based on our current knowledge and is designed to describe the product in terms of the appropriate safety precautions. It does not constitute any assurance of the properties of the product described herein. This safety data sheet replaces all previous versions.



AstroTurf
Great Lakes
TRANSMITTAL

To: _____

Phone: _____
Attn: _____

Date: _____
Project: _____

From: _____

WE TRANSMIT:

- | | | |
|---------------------------------------|--|--|
| <input type="checkbox"/> For Approval | <input type="checkbox"/> Approved As Submitted | <input type="checkbox"/> Approved As Noted |
| <input type="checkbox"/> For Your Use | <input type="checkbox"/> Resubmit for Approval | <input type="checkbox"/> For Signature |
| <input type="checkbox"/> As Requested | <input type="checkbox"/> Other: _____ | |

THE FOLLOWING:

- | | | |
|--|---|---------------------------------------|
| <input type="checkbox"/> Samples / Data / Literature | <input type="checkbox"/> Specifications | <input type="checkbox"/> Change Order |
| <input type="checkbox"/> Contract Documents | <input type="checkbox"/> Prints | <input type="checkbox"/> Plans |
| <input type="checkbox"/> Preliminary Drawings | <input type="checkbox"/> Other: _____ | |

No. of Copies	Date	Spec No.	Description

REMARKS:

SENT VIA:					
<input type="checkbox"/> E-Mail	<input type="checkbox"/> USPS	<input type="checkbox"/> UPS	<input type="checkbox"/> Fed Ex	<input type="checkbox"/> Fax	

Safety Data Sheet

ULTRABOND TURF PU 1K GREEN

Safety Data Sheet dated: 06/16/2021 - version 6

Date of first edition: 04/16/2018



1. IDENTIFICATION

Product identifier

Mixture identification:

Trade name: ULTRABOND TURF PU 1K GREEN

Trade code: 902335

Recommended use of the chemical and restrictions on use

Recommended use: Polyurethane-based adhesive

Restrictions on use: Not available

Name, address, and telephone number of the chemical manufacturer, importer, or other responsible party

Company: MAPEI CORP. (USA and Puerto Rico)

1144 East Newport Center Drive - 33442 - Deerfield Beach - FL - USA

Responsible: RDProductSafety@mapei.com

Emergency 24 hour numbers:

Emergency Number (USA/Canada) CHEMTREC 1(800) 424-9300 / 1(703) 527-3887

Emergency Transport CANUTEC (Canada) 1-613-996-6666

2. HAZARD(S) IDENTIFICATION



Classification of the chemical

Resp. Sens. 1	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
Skin Sens. 1	May cause an allergic skin reaction.
Carc. 2	Suspected of causing cancer if inhaled, in contact with skin and if swallowed.
STOT RE 2	May cause damage to organs through prolonged or repeated exposure if inhaled, in contact with skin and if swallowed.
Aquatic Acute 3	Harmful to aquatic life.

Label elements

Hazard pictograms and Signal Word



Danger

Hazard statements

H317	May cause an allergic skin reaction.
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H351	Suspected of causing cancer if inhaled, in contact with skin and if swallowed.
H373	May cause damage to organs through prolonged or repeated exposure if inhaled, in contact with skin and if swallowed.
H402	Harmful to aquatic life.

Precautionary statements

P201	Obtain special instructions before use.
P202	Do not handle until all safety precautions have been read and understood.
P260	Do not breathe mist/vapours/spray.
P272	Contaminated work clothing should not be allowed out of the workplace.
P273	Avoid release to the environment.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P284	[In case of inadequate ventilation] wear respiratory protection.
P302+P352	IF ON SKIN: Wash with plenty of water.
P304+P341	IF INHALED: If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable

for breathing.

P308+P313	IF exposed or concerned: Get medical advice/attention.
P314	Get medical advice/attention if you feel unwell.
P321	Specific treatment (see supplementary instructions on this label).
P333+P313	If skin irritation or rash occurs: Get medical advice/attention.
P342+P311	If experiencing respiratory symptoms: Call a doctor.
P362+P364	Take off contaminated clothing and wash it before reuse.
P405	Store locked up.
P501	Dispose of contents/container in accordance with applicable regulations.

Ingredient(s) with unknown acute toxicity:

None

Hazards not otherwise classified identified during the classification process:

None

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substances

Not available

Mixtures

Hazardous components within the meaning of 29 CFR 1910.1200 and related classification:

List of components

Concentration (%) w/w)	Name	Ident. Numb.	Classification	Registration Number
1-2.5 %	diphenylmethane-2,4-diisocyanate; o-(p-Isocyanatobenzyl)phenyl isocyanate	CAS:5873-54-1	Eye Irrit. 2A, H319; Skin Irrit. 2, H315; STOT SE 3, H335; Resp. Sens. 1, H334; Acute Tox. 4, H332; STOT RE 2, H373; Skin Sens. 1, H317	
1-2.5 %	2,2-dimorpholinodiethylether; Bis(2-morpholinoethyl) Ether	CAS:6425-39-4	Eye Irrit. 2B, H320	
0.49-1 %	4-methylbenzenesulfonyl isocyanate; 4-isocyanatosulphonyltoluene	CAS:4083-64-1	Eye Irrit. 2A, H319; STOT SE 3, H335; Skin Irrit. 2, H315; Resp. Sens. 1, H334	
0.49-1 %	4,4'-methylenediphenyl diisocyanate; benzene, 1,1'-methylenebis[4-isocyanato-	CAS:101-68-8	Acute Tox. 4, H332; Skin Irrit. 2, H315; Eye Irrit. 2A, H319; STOT SE 3, H335; STOT RE 2, H373; Carc. 2, H351; Resp. Sens. 1, H334; Skin Sens. 1, H317	
0.49-1 %	2-mercaptoethanol; Thioglycol	CAS:60-24-2	Flam. Liq. 4, H227; Acute Tox. 2, H310; Acute Tox. 3, H301; Acute Tox. 3, H331; Skin Irrit. 2, H315; Eye Dam. 1, H318; Skin Sens. 1, H317; STOT RE 2, H373; Aquatic Acute 1, H400	

4. FIRST AID MEASURES

Description of first aid measures

In case of skin contact:

- Immediately take off all contaminated clothing.
- OBTAIN IMMEDIATE MEDICAL ATTENTION.
- Obtain medical attention if skin related symptoms persist.
- Remove contaminated clothing immediately and dispose of safely.

In case of eyes contact:

- Wash immediately with water.

In case of Ingestion:

- Do not induce vomiting, get medical attention showing the SDS and the hazard label.

In case of Inhalation:

- If breathing is irregular or stopped, administer artificial respiration.
- In case of inhalation, consult a doctor immediately and show him packing or label.

Most important symptoms/effects, acute and delayed

Not available

Indication of any immediate medical attention and special treatment needed

In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible).

Treatment:

(see paragraph 4.1)

5. FIRE-FIGHTING MEASURES

Extinguishing media

Suitable extinguishing media:

Water.

Carbon dioxide (CO₂).

Unsuitable extinguishing media:

None in particular.

Specific hazards arising from the chemical

Do not inhale explosion and combustion gases.

Burning produces heavy smoke.

Hazardous combustion products: Not available

Explosive properties: Not available

Oxidizing properties: Not available

Special protective equipment and precautions for fire-fighters

Use suitable breathing apparatus.

Collect contaminated fire extinguishing water separately. This must not be discharged into drains.

Move undamaged containers from immediate hazard area if it can be done safely.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Wear personal protection equipment.

Wear breathing apparatus if exposed to vapours/dusts/aerosols.

Provide adequate ventilation.

Use appropriate respiratory protection.

Do not allow to enter into soil/subsoil. Do not allow to enter into surface water or drains.

Limit leakages with earth or sand.

Methods and material for containment and cleaning up

Suitable material for taking up: absorbing material, organic, sand

Retain contaminated washing water and dispose it.

7. HANDLING AND STORAGE

Precautions for safe handling

Avoid contact with skin and eyes, inhalation of vapours and mists.

Exercise the greatest care when handling or opening the container.

Use localized ventilation system.

Don't use empty container before they have been cleaned.

Before making transfer operations, assure that there aren't any incompatible material residuals in the containers.

Contaminated clothing should be changed before entering eating areas.

Do not eat or drink while working.

See also section 8 for recommended protective equipment.

Conditions for safe storage, including any incompatibilities

Storage temperature: Not available

Keep away from food, drink and feed.

Incompatible materials:

None in particular.

Instructions as regards storage premises:

Adequately ventilated premises.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

List of components with OEL value

Component	OEL Type	Country	Ceiling	Long Term mg/m3	Long Term ppm	Short Term mg/m3	Short Term ppm	Behaviour Note
diphenylmethane-2,4-diisocyanate; o-(p-Isocyanatobenzyl)phenyl isocyanate	MAK	AUSTRIA		0,05	0,005	0,1	0,01	
4,4'-methylenediphenyl diisocyanate; benzene, 1,1'-methylenebis[4-isocyanato-	ACGIH				0,005			respiratory sensitization (listed under Methylene bisphenyl isocyanate (MDI));
	OSHA		C			0,2	0,02	
	MAK	GERMANY		0,05				
	ACGIH				0,005			respiratory sensitization (listed under Methylene bisphenyl isocyanate (MDI))
	MAK	AUSTRIA		0,05	0,005	0,1	0,01	

Appropriate engineering controls: Not available

Individual protection measures

Eye protection:

Use close fitting safety goggles, don't use eye lens.

Protection for skin:

Use clothing that provides comprehensive protection to the skin, e.g. cotton, rubber, PVC or viton.

Protection for hands:

Suitable materials for safety gloves; 29 CFR 1910.138 - ANSI/ISEA 105:

Polychloroprene - CR: thickness $\geq 0,5\text{mm}$; breakthrough time $\geq 480\text{min}$.

Nitrile rubber - NBR: thickness $\geq 0,35\text{mm}$; breakthrough time $\geq 480\text{min}$.

Butyl rubber - IIR: thickness $\geq 0,5\text{mm}$; breakthrough time $\geq 480\text{min}$.

Fluorinated rubber - FKM: thickness $\geq 0,4\text{mm}$; breakthrough time $\geq 480\text{min}$.

Use impervious gloves that provides comprehensive protection, e.g. P.V.C., neoprene or rubber.

Respiratory protection:

Respiratory protection must be used where exposure levels exceed workplace exposure limits. Refer to 29 CFR 1910.134 - CSA Z94.4 for information on selection and use of appropriate respiratory protection equipment.

Use adequate protective respiratory equipment.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical state: Liquid

Appearance and colour: paste Green

Odour: Odourless

Odour threshold: No data available

pH: 7.00

Melting point / freezing point: No data available

Initial boiling point and boiling range: No data available

Flash point: 100 °C (212 °F)

Evaporation rate: No data available

Upper/lower flammability or explosive limits: No data available

Vapour density: No data available

Vapour pressure: No data available

Relative density: 1.20 g/cm³

Solubility in water: No data available

Solubility in oil: No data available

Partition coefficient (n-octanol/water): No data available

Auto-ignition temperature: No data available

Decomposition temperature: No data available

Viscosity: No data available

Explosive properties: No data available

Oxidizing properties: No data available

Solid/gas flammability: No data available

Other information

Substance Groups relevant properties No data available

Miscibility: No data available
Fat Solubility: No data available
Conductivity: No data available

10. STABILITY AND REACTIVITY

Reactivity

Stable under normal conditions

Chemical stability

Data not available.

Possibility of hazardous reactions

None.

Conditions to avoid

Stable under normal conditions.

Incompatible materials

None in particular.

Hazardous decomposition products

None.

11. TOXICOLOGICAL INFORMATION

Information on toxicological effects

Toxicological information of the product:

There is no toxicological data available on the mixture. Consider the individual concentration of each component to assess toxicological effects resulting from exposure to the mixture.

Toxicological information of the main substances found in the product:

2,2-dimorpholinodiethylether; Bis(2-morpholinoethyl) Ether a) acute toxicity LD50 Oral Rat 300 mg/kg

4-methylbenzenesulfonyl isocyanate; 4-isocyanatosulphonyltoluene a) acute toxicity LC50 Inhalation Rat > 640 ppm 1h

LD50 Oral Rat = 2234 mg/kg

4,4'-methylenediphenyl diisocyanate; benzene, 1,1'-methylenebis[4-isocyanato-

LD50 Oral Rat = 31600 mg/kg

2-mercaptoethanol; Thioglycol a) acute toxicity LD50 Skin Rabbit 112 mg/kg

LD50 Oral Mouse = 190 mg/kg

LD50 Oral Rat = 244 mg/kg

If not differently specified, the information required in the regulation and listed below must be considered as N.A.

- a) acute toxicity
- b) skin corrosion/irritation
- c) serious eye damage/irritation
- d) respiratory or skin sensitisation
- e) germ cell mutagenicity
- f) carcinogenicity
- g) reproductive toxicity
- h) STOT-single exposure

Toxicological kinetics, metabolism and distribution information

- i) STOT-repeated exposure
- j) aspiration hazard

Substance(s) listed on the IARC Monographs:

4,4'-methylenediphenyl diisocyanate; benzene, 1,1'-methylenebis[4-isocyanato- Group 3

Substance(s) listed as OSHA Carcinogen(s):

None

Substance(s) listed as NIOSH Carcinogen(s):

None

Substance(s) listed on the NTP report on Carcinogens:

None

12. ECOLOGICAL INFORMATION

Toxicity

Adopt good working practices, so that the product is not released into the environment.

Eco-Toxicological Information:

List of components with eco-toxicological properties

Component	Ident. Numb.	Ecotox Infos
2,2-dimorpholinodiethylether; Bis(2-morpholinoethyl) Ether	CAS: 6425-39-4	a) Aquatic acute toxicity : LC50 Fish Danio rerio > 2150 mg/L 96h ECHA
2-mercaptoethanol; Thioglycol	CAS: 60-24-2	a) Aquatic acute toxicity : EC50 Algae Desmodesmus subspicatus = 12 mg/L 72h IUCLID a) Aquatic acute toxicity : EC50 Daphnia Daphnia magna = 1,52 mg/L 48h IUCLID

Persistence and degradability

Not available

Bioaccumulative potential

Not available

Mobility in soil

Not available

Other adverse effects

Not available

13. DISPOSAL CONSIDERATIONS

Waste treatment methods

The generation of waste should be avoided or minimized wherever possible. Recover if possible.

Methods of disposal:

Disposal of this product, solutions, packaging and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements.

Dispose of surplus and nonrecyclable products via a licensed waste disposal contractor.

Do not dispose of waste into sewers.

Disposal considerations:

Do not allow to enter drains or watercourses.

Dispose of product according to all federal, state and local applicable regulations.

If this product is mixed with other wastes, the original waste product code may no longer apply and the appropriate code should be assigned.

Dispose of containers contaminated by the product in accordance with local or national legal provisions. For further information, contact your local waste authority.

Special precautions:

This material and its container must be disposed of in a safe way. Care should be taken when handling untreated empty containers.

Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Empty containers or liners may retain some product residues. Do not re-use empty containers.

14. TRANSPORT INFORMATION

Not classified as dangerous in the meaning of transport regulations.

UN number

ADR-UN number: Not available
DOT-UN Number: Not available
IATA-Un number: Not available
IMDG-Un number: Not available

UN proper shipping name

ADR-Shipping Name: Not available
DOT-Proper Shipping Name: Not available
IATA-Technical name: Not available
IMDG-Technical name: Not available

Transport hazard class(es)

ADR-Class: Not available
DOT-Hazard Class: Not available
IATA-Class: Not available
IMDG-Class: Not available

Packing group

ADR-Packing Group: Not available
DOT-Packing group: Not available
IATA-Packing group: Not available
IMDG-Packing group: Not available

Environmental hazards

Marine pollutant: No
Environmental Pollutant: Not available

Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code

Not available

Special precautions

Department of Transportation (DOT):

Not available

Road and Rail (ADR-RID) :

Not available

Air (IATA) :

Not available

Sea (IMDG) :

Not available

15. REGULATORY INFORMATION

USA - Federal regulations

TSCA - Toxic Substances Control Act

TSCA inventory:

All the components are listed on the TSCA inventory

TSCA listed substances:

diphenylmethane-2,4-diisocyanate; o-(p-Isocyanatobenzyl)phenyl isocyanate is listed in TSCA Section 8b Section 8a - PAIR

2,2-dimorpholinodiethylether; Bis(2-morpholinoethyl) Ether is listed in TSCA Section 8b

4-methylbenzenesulfonyl isocyanate; 4-isocyanatosulphonyltoluene is listed in TSCA Section 8b

4,4'-methylenediphenyl diisocyanate; benzene, 1,1'-methylenebis[4-isocyanato-

2-mercaptoethanol; Thioglycol is listed in TSCA Section 8b

SARA - Superfund Amendments and Reauthorization Act

Section 302 - Extremely Hazardous Substances:

No substances listed

Section 304 - Hazardous substances:

4,4'-methylenediphenyl diisocyanate; benzene, 1,1'-methylenebis[4-isocyanato-

Section 313 - Toxic chemical list:

4,4'-methylenediphenyl diisocyanate; benzene, 1,1'-methylenebis[4-isocyanato-

CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act

Substance(s) listed under CERCLA:

4,4'-methylenediphenyl diisocyanate; benzene, 1,1'-methylenebis[4-isocyanato-
Reportable quantity: 5000 pounds

CAA - Clean Air Act

CAA listed substances:

4,4'-methylenediphenyl diisocyanate; benzene, 1,1'-methylenebis[4-isocyanato-
is listed in CAA Section 112(b) - HAP Section 112(b) - HON

CWA - Clean Water Act

CWA listed substances:

No substances listed

USA - State specific regulations

California Proposition 65

Substance(s) listed under California Proposition 65:

No substances listed

Massachusetts Right to know

Substance(s) listed under Massachusetts Right to know:

4,4'-methylenediphenyl diisocyanate; benzene, 1,1'-methylenebis[4-isocyanato-
2-mercaptoethanol; Thioglycol

Pennsylvania Right to know

Substance(s) listed under Pennsylvania Right to know:

4,4'-methylenediphenyl diisocyanate; benzene, 1,1'-methylenebis[4-isocyanato-
2-mercaptoethanol; Thioglycol

New Jersey Right to know

Substance(s) listed under New Jersey Right to know:

4,4'-methylenediphenyl diisocyanate; benzene, 1,1'-methylenebis[4-isocyanato-
2-mercaptoethanol; Thioglycol

Canada - Federal regulations

DSL - Domestic Substances List

DSL (Domestic Substances List)

All the substances are listed in the DSL.

NDSL - Non Domestic Substances List

NDSL (Non Domestic Substances List)

No substances listed

NPRI - National Pollutant Release Inventory

NPRI (National Pollutant Release Inventory) - List of substances listed.

No substances listed

16. OTHER INFORMATION

Safety Data Sheet dated: 6/16/2021 - version 6

Additional classification information

NFPA Health: 1 = Slight

NFPA Flammability: 1 = Combustible if heated

NFPA Reactivity: 0 = Minimal

NFPA Special Risk: Not available

Reasonable care has been taken in the preparation of this information, but the manufacturer makes no warranty of merchantability or any other warranty, expressed or implied, with respect to this information. The manufacturer makes no representations and assumes no liability for any direct, incidental or consequential damages resulting from its use. The information herein is presented in good faith and believed to be accurate as of the effective date given. It is the buyer's responsibility to ensure that its activities comply with Federal, State or provincial, and local laws.

This document was prepared by a competent person who has received appropriate training.

It is the duty of the user to ensure that this information is appropriate and complete with respect to the specific use intended.



NFPA

This SDS cancels and replaces any preceding release.

Code	Description
H227	Combustible liquid.
H301	Toxic if swallowed.
H310	Fatal in contact with skin.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H320	Causes eye irritation.
H331	Toxic if inhaled.
H332	Harmful if inhaled.
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H335	May cause respiratory irritation.
H351	Suspected of causing cancer.
H351	Suspected of causing cancer if inhaled, in contact with skin and if swallowed.
H373	May cause damage to organs through prolonged or repeated exposure.
H373	May cause damage to organs through prolonged or repeated exposure if inhaled, in contact with skin and if swallowed.
H400	Very toxic to aquatic life.
H402	Harmful to aquatic life.

Legend to abbreviations and acronyms used in the safety data sheet:

- ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road.
- RID: Regulation Concerning the International Transport of Dangerous Goods by Rail.
- IMDG: International Maritime Code for Dangerous Goods.
- IATA: International Air Transport Association.
- IATA-DGR: Dangerous Goods Regulation by the "International Air Transport Association" (IATA).
- ICAO: International Civil Aviation Organization.
- ICAO-TI: Technical Instructions by the "International Civil Aviation Organization" (ICAO).
- GHS: Globally Harmonized System of Classification and Labeling of Chemicals.
- CLP: Classification, Labeling, Packaging.
- EINECS: European Inventory of Existing Commercial Chemical Substances.
- INCI: International Nomenclature of Cosmetic Ingredients.
- CAS: Chemical Abstracts Service (division of the American Chemical Society).
- GefStoffVO: Ordinance on Hazardous Substances, Germany.
- LC50: Lethal concentration, for 50 percent of test population.
- LD50: Lethal dose, for 50 percent of test population.
- DNEL: Derived No Effect Level.
- PNEC: Predicted No Effect Concentration.
- TLV: Threshold Limiting Value.
- TWATLV: Threshold Limit Value for the Time Weighted Average 8 hour day. (ACGIH Standard).
- STEL: Short Term Exposure limit.
- STOT: Specific Target Organ Toxicity.
- WGK: German Water Hazard Class.
- KSt: Explosion coefficient.

Paragraphs modified from the previous revision:

- 2. HAZARDS IDENTIFICATION
- 8. EXPOSURE CONTROLS/PERSONAL PROTECTION
- 12. ECOLOGICAL INFORMATION



AstroTurf
Great Lakes
TRANSMITTAL

To: _____

Phone: _____
Attn: _____

Date: _____
Project: _____

From: _____

WE TRANSMIT:

- | | | |
|---------------------------------------|--|--|
| <input type="checkbox"/> For Approval | <input type="checkbox"/> Approved As Submitted | <input type="checkbox"/> Approved As Noted |
| <input type="checkbox"/> For Your Use | <input type="checkbox"/> Resubmit for Approval | <input type="checkbox"/> For Signature |
| <input type="checkbox"/> As Requested | <input type="checkbox"/> Other: _____ | |

THE FOLLOWING:

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|--|---|---------------------------------------|
| <input type="checkbox"/> Samples / Data / Literature | <input type="checkbox"/> Specifications | <input type="checkbox"/> Change Order |
| <input type="checkbox"/> Contract Documents | <input type="checkbox"/> Prints | <input type="checkbox"/> Plans |
| <input type="checkbox"/> Preliminary Drawings | <input type="checkbox"/> Other: _____ | |

No. of Copies	Date	Spec No.	Description

REMARKS:

SENT VIA:					
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SAND INFILL

SAFETY DATA SHEET

SECTION 1 - PRODUCT AND COMPANY IDENTIFICATION

Product Name: Crystalline silica in the form of Quartz (Including but not limited to): Albany Sand, All Purpose Sand, Asphalt Sand, Bank Run Gravel, Bar Sand, Infield Mix-Series, Brick Sands, Concrete Sand-Series, Filter Sand-Series, Foundry Sands, Golf Sand, Headlap Sand, Ice Control Sand, K-Series Septic Sand, Mason Sand, McConn Sand, Mortar Sand, NJ DOT I-1 through I-13, Play Sand, Port Sand, DSS-Series Sand, Screened Fill, Sewage Sand, Washed Gravels, 35 through 110 Sand, Thermal Sand, GC-Series Sand, Reactor Sand, Top Soil, Runway Sand, Sand & Gravel

Synonyms/Common Names: Sand, Silica Sand, Industrial Sand, Quartz, Crystalline Silica, Silicon Dioxide, Flint, Gravel.

Relevant Identified Uses of the Substance or Mixture and Uses Advised Against:

Product Use: Various commercial and industrial uses

SECTION 2 - HAZARD IDENTIFICATION

GHS/ Hazcom 2012 Classification:

Physical:	Health:	Environmental
Not Hazardous	Carcinogen Category 1A Specific Target Organ Toxicity (Repeated Exposure) Category 1	Not Hazardous

GHS/Hazcom 2012 Label:



DANGER

Statements of Hazard

May cause cancer by inhalation.
Causes damage to lungs through prolonged or repeated exposure by inhalation

Response:

If exposed or concerned: Get medical advice.

Prevention

Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
Do not breathe dust.
Do not eat, drink or smoke when using this product.
Wear protective gloves and safety glasses or goggles.

Storage:

Store locked up.

In case of inadequate ventilation wear respiratory protection.

Disposal:

Dispose of contents/containers in accordance with local regulation

SECTION 3 - COMPOSITION/INFORMATION ON INGREDIENTS

CAS#	Component	Percentage
14808-60-7	Crystalline Silica (Quartz)	75 – 99.7%

SECTION 4 - FIRST AID MEASURES

Gross Inhalation: Remove victim to fresh air. If breathing has stopped, perform artificial respiration. If breathing is difficult have qualified personnel administer oxygen. Get prompt medical attention.

Skin Contact: No first aid should be needed since dermal contact with this product does not affect the skin. Wash exposed skin with soap and water before breaks and at the end of the shift.

Eye Contact: Flush the eyes immediately with large amounts of running water, lifting the upper and lower lids occasionally. If irritation persists or for imbedded foreign body, get immediate medical attention.

Ingestion: If large amounts are swallowed, get immediate medical attention.

Most Important Symptoms and Effects, Both Acute and Delayed: May cause eye irritation with redness and tearing. Exposure to dust may cause mucous membrane and respiratory irritation, cough, sore throat, nasal congestion, sneezing and shortness of breath. However, there may be no immediate signs or symptoms of exposure to hazardous concentrations of respirable crystalline silica (quartz).

Indication of immediate medical attention and Special Treatment Needed: None required.

SECTION 5 - FIRE FIGHTING MEASURES

Suitable Extinguishing Media: This product will not burn but is compatible with all extinguishing media. Use any media that is appropriate for the surrounding fire.

Specific Hazards Arising from the Chemical:

Unusual Fire and Explosion Hazards: Not flammable or combustible. Dry powders may accumulate static charge in handling which can be a source of ignition for flammable atmospheres.

Hazardous Combustion Products: None.

Special Protective Equipment and Precautions for Fire-Fighters: None required with respect to this product. Firefighters should always wear self-contained breathing apparatus for fires indoors or in confined areas.

SECTION 6 - ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment and Emergency Procedures: Wear appropriate protective equipment.

Environmental Precautions: Report spills and releases as required to appropriate authorities.

Methods and Material for Containment/Cleanup: If uncontaminated, collect using dustless method (HEPA vacuum or wet method) and place in appropriate container for use. If contaminated: a) use appropriate method for

the nature of contamination, and b) consider possible toxic or fire hazards associated with the contaminating substances. Collect for appropriate disposal.

SECTION 7 - HANDLING AND STORAGE

Precautions for Safe Handling: Do not breathe dust. Do not rely on your sight to determine if dust is in the air. Silica may be in the air without a visible dust cloud. Use normal precautions against bag breakage or spills of bulk material. Avoid creation of respirable dust. Do not use as a dry abrasive blasting agent. Use good housekeeping in storage and use areas to prevent accumulation of dust in work area.

OSHA's standard on respirable crystalline silica includes requirements for controlling worker exposure, medical surveillance and worker training. Refer to the OSHA website (www.osha.gov) for more information.

To reduce the risk of developing silicosis, lung cancer and other adverse health effects, the ACGIH recommends that the industrial hygienist use every means available to keep exposures below the recommended TLV. NIOSH recommends reducing airborne exposure levels as low as possible below NIOSH's recommended exposure limit, substituting less hazardous materials when feasible, using appropriate respiratory protection when source controls cannot keep exposures below the recommended limit and making medical examinations available to exposed workers.

Use adequate ventilation and dust collection. To minimize exposure, wear a respirator approved for silica dust when using, handling, storing or disposing of this product or bag. Refer to the most recent government and local regulations when selecting a respirator. Maintain, clean and fit test respirators in accordance with the most recent government and local regulations. Maintain and test ventilation and dust collection equipment. Launder clothing that has become dusty. Empty containers (bags, bulk containers, storage tanks, etc.) retain silica residue and must be handled in accordance with the provisions of this Safety Data Sheet. WARN and TRAIN employees in accordance with state and federal regulations.

Refer to the OSHA Respirable Crystalline Silica standards; 29CFR1910.1053, 1915.1053 and 1926.1053 for specific requirements for use and handling.

WARN YOUR EMPLOYEES (AND YOUR CUSTOMERS AND USERS IN CASE OF RESALE) BY POSTING, AND OTHER MEANS, OF THE HAZARDS AND OSHA AND ANY OTHER APPLICABLE REGULATORY PRECAUTIONS TO BE USED. PROVIDE TRAINING FOR YOUR EMPLOYEES ABOUT OSHA PRECAUTIONS.

Dust can accumulate electrostatic charges due to friction from transfer and mixing operations and cause an electrical spark (ignition source) which can ignite flammable liquids and atmospheres. Provide adequate precautions when adding this product to flammable and combustible mixtures like paints and coating, such as electrical grounding and bonding, inert atmosphere or non-sparking tools. However, bonding and grounds may not eliminate the hazard for static accumulation.

See also American Society for Testing and Materials (ASTM) Standard Practice E1132-99a, "Standard Practice for Health Requirements Relating to Occupational Exposure to Respirable Crystalline Silica".

Additional information on silica hazards and precautionary measures can be found on the following websites:

NIOSH Joint campaign on Silicosis Prevention: <http://www.cdc.gov/niosh/topics/silica/>

OSHA Crystalline Silica: <https://www.osha.gov/dsg/topics/silicacrystalline/index.html>

MSHA Silicosis Prevention: <http://www.msha.gov/S&HINFO/SILICO/SILICO.HTM>

NIOSH Hazard Review – Health Effects of Occupational Exposure to Respirable Crystalline Silica:

<http://www.cdc.gov/niosh/docs/2002-129/pdfs/2002-129.pdf>

Conditions for Safe Storage, Including any Incompatibilities: Store in a dry location.

SECTION 8 - EXPOSURE CONTROLS/PERSONAL PROTECTION**Exposure Guidelines:**Definitions:

NIOSH means National Institute for Occupational Safety and Health.

REL means the NIOSH Recommended Exposure Limit.

TLV means American Conference of Governmental Industrial Hygienists (ACGIH) Threshold Limit Value.

TWA means time-weighted average.

Component	OSHA PEL	ACGIH TLV	NIOSH REL	MSHA
Crystalline Silica, quartz	0.05 mg/m ³ TWA (respirable fraction) *	0.025 mg/m ³ TWA (respirable fraction)	0.05 mg/m ³ TWA (respirable dust)	<u>10 mg/m³</u> % Silica + 2 (Respirable measured as an 8-hour TWA)

* 2016 OSHA PEL effective as follows:

Construction June 23, 2017 29CFR 1926.1153

General Industry and Maritime June 23, 2018 29CFR 1910.1053 / 1915.1053

Oil and Gas including Hydraulic Fracturing June 23, 2018 29CFR 1910.1053

General Industry and Maritime

The OSHA PEL until June 23, 2018 for
Quartz

10 mg/m³ TWA (respirable fraction)
%SiO₂ + 2

30 mg/m³ TWA (total dust)
%SiO₂ + 2

Construction

The OSHA PEL until June 23, 2017 for
Quartz

10 mg/m³ TWA (respirable fraction)
%SiO₂ + 2

30 mg/m³ TWA (total dust)
%SiO₂ + 2

The Action Level is 0.025 mg/m³, averaged over an 8-hour day. The OSHA standard for general industry and maritime requires medical surveillance to be made available to employees exposed at or above the action level for 30 or more days per year, and the construction standard requires medical surveillance to be made available to employees required to use a respirator for 30 or more days per year.

In 2006 the ACGIH lowered the TLV for Silica, Crystalline: α -Quartz and Cristobalite to 0.025 mg/m³ stating in the *Documentation of the TLV* "Because the time between exposure and signs of fibrosis is characteristically very long, as much as 30 to 40 years, the margin of safety for exposure to crystalline silica at the proposed TLV-TWA is not known precisely. Given the observed association between silicosis and lung cancer, it is recommended that air concentrations be maintained as far below the proposed TLV as prudent practices permit. The recommended TLV-TWA of 0.025 mg/m³, respirable particulate mass, is intended to prevent pulmonary fibrosis that may be a risk factor for lung cancer. An A2, Suspected Human Carcinogen, notation is based on the demonstrated association between lung cancer and the presence of silicosis." The documentation further states "A lack of toxicological and industrial hygiene data does not permit the recommendation of a TLV-STEL. However, it should be noted that high exposures of short duration to freshly fragmented crystalline particles do produce an acute and rapidly progressive form of silicosis. The reader is encouraged to review the section on *Excursion Limits* in the "Introduction to the Chemical Substances" of the current TLVs[®] and BEIs[®] book for guidance and control of excursions above the TLV-TWA, even when the 8-hour TWA is within the recommended limits"

NIOSH has issued its REL of 50 micrograms respirable free silica per cubic meter of air (0.05 mg/m³) as determined by a full shift sample up to 10-hour working day, 40 hours per week. NIOSH has recommended that OSHA and MSHA adopt the NIOSH REL as the OSHA PEL and the MSHA Exposure Limit. The 1974 NIOSH Criteria for a Recommended Standard for Occupational Exposure to Crystalline Silica should be consulted for more detailed information. Additionally, NIOSH, In a publication entitled NIOSH Hazard Review Health Effects of Occupational Exposure to Respirable Silica (April 2002), NIOSH stated "...that workers have a significant risk of developing chronic silicosis when they are exposed

to respirable crystalline silica over a working lifetime at the current Occupational Safety and Health Administration (OSHA) permissible exposure limit (PEL), the Mine Safety and Health Administration (MSHA) PEL, or the National Institute for Occupational Safety and Health (NIOSH) recommended exposure limit (REL). ...Current sampling and analytical methods used to evaluate occupational exposure to respirable crystalline silica do not meet the accuracy criterion needed to quantify exposures at concentrations below the NIOSH REL of 0.05 mg/m³ as a time-weighted average (TWA) for up to a 10-hr workday during a 40-hr workweek. Until improved sampling and analytical methods are developed for respirable crystalline silica, NIOSH will continue to recommend an exposure limit of 0.05 mg/m³ to reduce the risk of developing silicosis, lung cancer, and other adverse health effects. NIOSH also recommends minimizing the risk of illness that remains for workers exposed at the REL by substituting less hazardous materials for crystalline silica when feasible, by using appropriate respiratory protection when source controls cannot keep exposures below the NIOSH REL, and by making medical examinations available to exposed workers.”

Crystalline silica exists in several forms, the most common of which are quartz (i.e. this product), trydimite and cristobalite, with quartz being the most common form found in nature. If quartz is heated to more than 870°C, it can change form to trydimite and if quartz is heated to more than 1450°C, it can change form to cristobalite.

Appropriate Engineering Controls: Use local exhaust as required to maintain exposures as far as possible below applicable occupational exposure limits. See also ACGIH "Industrial Ventilation - A Manual for Recommended Practice" (current edition). Control of exposure to dust must be accomplished as far as feasible by accepted engineering control measures (for example, enclosure or confinement of the operation, general or local exhaust ventilation and substitution of less toxic materials). Refer to the OSHA Respirable Crystalline Silica standards; 29CFR1910.1053, 1915.1053 and 1926.1053 for specific requirements for engineering controls.

Personal Protective Equipment:

Respiratory Protection: When effective engineering controls are not feasible, or while they are being implemented, appropriate respiratory protection must be used. Use appropriate respiratory protection for respirable particulates based on consideration of airborne workplace concentrations and duration of exposure arising from intended end use. Refer to the OSHA Respirable Crystalline Silica standards; 29CFR1910.1053, 1915.1053 and 1926.1053 for specific requirements for respiratory protection. Always refer to the most recent government and local standards.

Gloves: Protective gloves recommended.

Eye Protection: Safety glasses or goggles recommended.

Other Protective Equipment/Clothing: As appropriate for the work environment. Dusty clothing should be laundered before reuse.

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

Form:	Solid	Appearance:	White or tan sand or gravel; granular.
Viscosity:	Not applicable	Odor:	None
pH:	Not applicable	Odor Threshold:	Not applicable
Boiling Point/Range:	4046°F / 2230°C	Vapor Density:	Not applicable
Melting point/freezing point:	2930°F / 1610°C	Evaporation Rate:	Not applicable
Flammability (solid, gas):	Fully oxidized, will not burn	Partition coefficient (n-octanol/water):	Not applicable
Decomposition Temperature:	Not applicable	Vapor Pressure:	Not applicable
Flash Point:	Not applicable	Relative Density:	2.65
Lower Explosion Limit:	Not applicable	Solubilities:	Insoluble in water
Upper Explosion Limit:	Not applicable	Autoignition Temperature:	Will not burn

SECTION 10 - STABILITY AND REACTIVITY

Reactivity: This product is not reactive under normal conditions of storage and use.

Chemical Stability: This product is stable at normal temperatures.

Possibility of Hazardous Reactions: None known

Conditions to Avoid: None known.

Incompatible Materials: Powerful oxidizing agents such as fluorine, chlorine trifluoride, manganese trioxide, etc.

Hazardous Decomposition Products: Silica will dissolve in hydrofluoric acid producing a corrosive gas, silicon tetrafluoride.

SECTION 11 – TOXICOLOGICAL INFORMATION

Information on Toxicological Effects

Potential Health Effects:

Inhalation: Breathing silica dust may not cause noticeable injury or illness even though permanent lung damage may be occurring. Inhalation of dust may have serious chronic health effects (see below Repeat Dose Toxicity.)

Skin Contact: No adverse effects expected.

Eye Contact: Contact may cause mechanical irritation and possible injury.

Ingestion: No adverse effects expected for normal, incidental ingestion.

Chronic Health Effects: See Repeat Dose Toxicity below with respect to silicosis, cancer status and other data with possible relevance to human health.

Signs and Symptoms of Exposure: Exposure to dust may cause mucous membrane and respiratory irritation, cough, sore throat, nasal congestion, sneezing and shortness of breath. However, there may be no immediate signs or symptoms of exposure to hazardous concentrations of respirable crystalline silica (quartz). See Repeat Dose Toxicity below for symptoms of silicosis. The absence of symptoms is not necessarily indicative of safe conditions.

Acute Toxicity Values: Silica: LD50 oral rat >22,500 mg/kg.

Skin Sensitization: Not a skin sensitizer in animals or humans.

Repeated Dose Toxicity:

Silicosis: Excessive inhalation of respirable crystalline silica dust may cause a progressive, disabling and sometimes fatal lung disease called silicosis. Symptoms include cough, shortness of breath, wheezing, non-specific chest illness and reduced pulmonary function. This disease is exacerbated by smoking. Individuals with silicosis are predisposed to develop mycobacterial infections (tuberculous and non-tuberculous) and fungal infections. Inhalation of air with a very high concentration of respirable silica dust can cause the most serious forms of silicosis in a matter of months or a few years. Some epidemiologic studies have concluded that there is significant risk of developing silicosis even at airborne exposure levels that are equal to the recommended NIOSH REL, and ACGIH TLV.

Other Data with Possible Relevance to Human Health:

There is some evidence that breathing respirable crystalline silica or the disease silicosis is associated with an increased incidence of significant disease endpoints such as scleroderma (an immune system disorder manifested by fibrosis of the lungs, skin and other internal organs) rheumatoid arthritis, systemic lupus, erythematosus, sarcoidosis, chronic bronchitis, chronic obstructive pulmonary disease (COPD), emphysema, chronic kidney disease and end-stage renal disease.

For further information consult "Adverse Effects of Crystalline Silica Exposure" published by the American Thoracic Society Medical Section of the American Lung Association, American Journal of Respiratory and Critical Care Medicine, Volume 155, pages 761-768, 1997, and see also NIOSH Hazard Review – Health Effects of Occupational Exposure to Respirable Crystalline Silica, April 2002 (see Section 7 for NIOSH Hazard Review Website).

Carcinogenicity: The International Agency for Research on Cancer has determined that crystalline silica is carcinogenic to humans (Group 1 - carcinogenic to humans). Refer to IARC Monograph 100C, A Review of Human Carcinogens: Arsenic, Fibres, and Dusts (published in 2011) in conjunction with the use of these materials. The National Toxicology Program classifies respirable crystalline silica as "known to be a human carcinogen". Refer to the Twelfth Report on Carcinogens (2011). The American Conference of Governmental Industrial Hygienists (ACGIH) classifies crystalline silica, quartz, as a suspected human carcinogen (A2).

Developmental / Reproductive Toxicity: No specific data is available, however, there is no evidence that silica exposure has any effect on reproduction.

Genetic Toxicity: No specific data is available, however, there is no evidence that silica is a germ cell mutagen.

SECTION 12 – ECOLOGICAL INFORMATION

Toxicity: Practically non-toxic to aquatic organisms. Silica: LC50 carp >10,000 mg/L/72 hr.

Persistence and Degradability: Silica is not degradable.

Bioaccumulative Potential: Not expected to bioaccumulate.

Mobility in Soil: Not applicable.

Results of PBT and vPvB Assessment: None required.

Other Adverse Effects: None known

SECTION 13 – DISPOSAL CONSIDERATIONS

Waste Treatment Methods:

If uncontaminated, dispose as an inert, non-metallic mineral. If contaminated, dispose in accordance with all applicable local, state/provincial and national/ federal regulations in light of the contamination present. Local regulations may be more stringent than regional and national requirements. It is the responsibility of the waste generator to determine the toxicity and physical characteristics of the material to determine the proper waste identification and disposal in compliance with applicable regulations.

SECTION 14 – TRANSPORT INFORMATION

Crystalline silica (quartz) is not a hazardous material for purposes of transportation under the U.S. Department of Transportation Table of Hazardous Materials, 49 CFR §172.101.

U.S. DOT HAZARD CLASSIFICATION

Proper Shipping Name: Not Regulated

Technical Name: N/A

UN Number: N/A

Hazard Class/Packing Group: N/A

Labels Required: None

DOT Packaging Requirements: N/A

Exceptions: N/A

SECTION 15 - REGULATORY INFORMATION

TSCA No.: Crystalline silica (quartz) appears on the EPA TSCA inventory under the CAS No. 14808-60-7.

RCRA: Crystalline silica (quartz) is not classified as a hazardous waste under the Resource Conservation and Recovery Act, or its regulations, 40 CFR §261 et seq.

CERCLA Section 103 Reportable Quantity: None

Emergency Planning and Community Right to Know Act: Crystalline silica (quartz) is not an extremely hazardous substance under Section 302 and is not a toxic chemical subject to the requirements of Section 313.

Clean Air Act: Crystalline silica (quartz) mined and processed was not processed with or does not contain any Class I or Class II ozone depleting substances.

FDA: Silica is included in the list of substances that may be included in coatings used in food contact surfaces, 21 CFR §175.300 (b)(3)(xxvi).

NTP: Respirable crystalline silica (quartz) is classified as known to be a Human Carcinogen.

OSHA Hazard Communication Evaluation: Crystalline silica (quartz) meets criteria for hazardous material, as defined by 29 CFR 1910.1200.

California Proposition 65: Crystalline silica (respirable) is classified as a substance known to the state of California to be a carcinogen.

SARA 311/312: Hazard Categories for SARA Section 311/312 Reporting: Chronic Health

SARA 313: This Product Contains the Following Chemicals Subject to Annual Release Reporting Requirements under the SARA Section 313 (40 CFR 372): None

Toxic Substances Control Act: All of the components of this product are listed on the EPA TSCA Inventory or exempt from premanufacture notification requirements.

California Inhalation Reference Exposure Level (REL): California established a chronic REL 3 ug for silica (crystalline, respirable). A Chronic REL is an airborne level of a substance at or below which no adverse health effects are anticipated in individuals indefinitely exposed to the substance at that level.

Massachusetts Toxic Use Reduction Act: Silica, crystalline (respirable size, <10 microns) is "toxic" for purposes of the Massachusetts Toxic Use Reduction Act.

Pennsylvania Worker and Community Right to Know Act: Quartz is a hazardous substance under the Act, but it is not a special hazardous substance or an environmental hazardous substance.

Canadian Domestic Substances List: All the components of this product are listed on the Canadian Domestic Substances List or exempt from notification requirements.

National, state, provincial or local emergency planning, community right to know or other laws, regulations or ordinances may be applicable-consult applicable national, state, provincial or local laws. Consult all changes and applicable laws since the day of this SDS.

SECTION 16 - OTHER INFORMATION

NFPA Hazard Rating: Health: 1 Fire: 0 Reactivity: 0

HMIS Hazard Rating: Health: * Fire: 0 Reactivity: 0

* Warning - Chronic health effect possible - inhalation of silica dust may cause lung injury/disease (silicosis). Take appropriate measures to avoid breathing dust. See Section 3.

References:

- Registry for Toxic Effects of Chemical Substances (RTECS), 2014
- NIOSH Hazard Review – Health Effects of Occupational Exposure to Respirable Crystalline Silica, April 2002
- NTP Twelfth Report on Carcinogens, 2011
- IARC Monograph Volume100C, A Review of Human Carcinogens: Arsenic, Fibres, and Dusts (2012)
- Hazardous Substances Data Bank (HSDB), 2016
- Documentation of the TLV – Silica, Crystalline: α -Quartz and Cristobalite, American Conference of Governmental Industrial Hygienists, 2006
- OSHA Respirable Crystalline Silica standards; 29CFR1910.1053, 1915.1053 and 1926.1053



AstroTurf
Great Lakes
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Attn: _____

Date: _____
Project: _____

From: _____

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SAFETY DATA SHEET

Manufacturer/ Supplier: Liberty Tire Recycling, LLC
1251 Waterfront Place, 4th Floor
Pittsburgh, PA
15222-4261

Emergency Telephone Number:
(412) 562-1700

SECTION 1 – IDENTIFICATION

Product name	Recycled Tire Rubber - White		
Brand	Liberty Tire Recycling		
Product uses	Various Uses		
Supplier	Liberty Tire Recycling, LLC 1251 Waterfront Place, 4 th Floor Pittsburgh, PA 15222-4261	Manufacturer	Liberty Tire Recycling, LLC 1251 Waterfront Place, 4 th Floor Pittsburgh, PA 15222-4261
Telephone	412-926-1746		
Fax	412-697-2411		
Emergency phone #	412-562-1700		

SECTION 2 – HAZARD(S) IDENTIFICATION

Emergency Overview	
WHMIS Classification	Not a WHMIS controlled substance
OSHA Hazards	No known OSHA hazards
GHS label elements, including precautionary statements	
Signal Word	None
Hazard statement(s)	None
Precautionary statement(s)	P281: Use personal protective equipment as required (see Section 8)
HMIS Classification	
Health hazard	1
Flammability	1
Physical hazards	1
Potential health effects	
Inhalation	Odor/vapors may be a nuisance in some individuals. In some individuals, short term exposure of material may produce mild and temporary discomfort to the respiratory tract resulting in wheezing, tightness in the chest, shortness of breath and coughing. Although they may be present in low amounts, dust and small pieces of material may aggravate bronchitis, asthma, and emphysema if inhaled.
Skin	Although fine material, particulate matter and dust may be present in low quantities, contact with such items may result in irritation (redness/itching) or other effects.
Eyes	Material is abrasive if it enters the eye, which can cause irritation to sever damage if left untreated.
Ingestion	Irritation of mucus membranes of mouth, throat, esophagus and stomach along with nausea may occur. Abrasion to the mouth, esophagus, stomach and intestinal tract may occur.
Repeated exposure	Repeated exposure to material may result in sensitization in susceptible individuals.

SECTION 3 – COMPOSITION/INFORMATION ON INGREDIENTS

Material	CAS-No.	EC-No.	Index-No.	Concentration (%wt)
Natural rubber	9006-04-6	232-689-0	N/AV	15 – 40
Synthetic rubber	9003-55-8	N/AV	N/AV	15 – 40
Carbon black	1333-86-4	215-609-9	N/AV	20 – 35
Zinc oxide	1314-13-2	215-222-5	030-013-00-7	0.1 – 1
Sulfur	7704-34-9	231-722-6	016-094-00-1	0.1 – 0.5
Synthetic fibers, fillers, accelerators, anti-ozonants	N/AP	N/AP	N/AP	5 – 10

*Note: The amount of free synthetic fibers is below 1% by weight of the material.

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SECTION 4 – FIRST-AID MEASURES

General advice

If negative symptoms develop while handling the product, move out of the area to prevent further exposure. Consult a physician as a precautionary measure if symptoms develop after being subjected to unprotected exposure of the material. Show this safety data sheet to the doctor in attendance.

If inhaled

In emergency situations, use proper respiratory protection and immediately remove the affected person from exposure. Keep at rest. Administer artificial respiration if breathing has stopped. Seek medical attention.

In case of skin contact

Wash exposed skin thoroughly with soap and water. If irritation develops and is prolonged and/or sore, consult a physician.

In case of eye contact

Flush eyes with plenty of water for at least 15 minutes. Avoid rubbing the eye. If experiencing prolonged irritation or soreness, seek medical attention.

If swallowed

Do not induce vomiting. Rinse mouth well with water. Never give anything by mouth to an unconscious person. Seek medical attention.

SECTION 5 – FIRE-FIGHTING MEASURES

Conditions of flammability

Non-flammable under standard use conditions. Material must be heated above 392°F (200°C) and an ignition source introduced before burning will occur.

Suitable extinguishing media

Fire extinguishing substances: dirt, sand, dry chemical, CO₂, alcohol-resistant foam, or F500 encapsulating agent.

If safe to do so, smothering the fire with large quantities of dirt or sand is usually the best option for extinguishing fires.

The material will be extremely hot if in liquid form. Be sure to keep distance between personnel and the fire.

If the fire is small and localized, CO₂ or foam are acceptable extinguishing substances. Due to the potential of pyrolytic oil being produced during uncontrolled burning, use of water may result in highly contaminated run-off that will require containment.

For large fires, trained firefighting personnel should be placed in charge of firefighting measures.

Special protective equipment for firefighters

Respiratory and eye protection are required for firefighting personnel.

A self-contained breathing apparatus (SCBA) meeting NFPA standards should be used for any significant indoor or outdoor fires.

For small outdoor fires, which may easily be extinguished with a portable fire extinguisher, use of a SCBA may not be required.

Contact with the smoke and fumes should be avoided. With burning or high heating, the material may melt, resulting in a sticky, molten material.

Hazardous combustion products

Thick, black, acrid smoke. Oxides of carbon, nitrogen and sulfur.

Uncontrolled burning may result in products of incomplete combustion including polynuclear aromatic hydrocarbons (naphthalene, anthracene, etc); aromatic hydrocarbons including benzene, toluene, xylene, styrene, etc; paraffinic oils; particulate and ash residues.

Explosion data – sensitivity to mechanical

Not explosive on impact

Explosion data – sensitivity to static discharge

Not explosive when subject to static discharge

SECTION 6 – ACCIDENTAL RELEASE MEASURES

Personal precautions

Ensure adequate ventilation to keep material component levels below workplace exposure limits. Avoid excessive dust formation and accumulation. Avoid prolonged exposure to vapors/odors and dusts created by material.

Environmental precautions

Precautionary measures to prevent large quantities of the product from entering and/or accumulating in drains should be implemented. In case of emergency, prevent further leakage or spillage if safe to do so.

Methods and material for containment and cleaning up

LAND SPILL : Sweep or vacuum material to prevent slip hazard. Try not to create dust. Collect for reuse if possible.

WATER SPILL : Material floats initially. Attempt to contain floating material and remove it from the surface by skimming first. Contain area and, if material sinks, try to recover material as best possible without disturbing surroundings.

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SECTION 7 – HANDLING AND STORAGE

Precautions for safe handling

For any application, use in a well-ventilated area or set engineering controls (ventilation) to keep airborne concentrations below the workplace exposure limits and prevent the build up of dust. Do not handle or store near an open flame or sources of heat.

Conditions for safe storage

Keep material away from incompatible materials or conditions. Material can be safely stored outdoors in a contained or sectioned off area. If material is stored inside, it should be kept in a well-ventilated location to keep airborne concentrations below the workplace exposure limits.

SECTION 8 – EXPOSURE CONTROLS/PERSONAL PROTECTION

Component	CAS #	Value	Control Parameters	Basis
Natural rubber	9006-04-6	TWA	0.0001 mg/m ³ 35 mg/m ³	USA. ACGIH (inhalable proteins) USA. ACGIH Threshold Limit Values (TLV)
Synthetic rubber	9003-55-8	N/AV	N/AV	No occupational exposure limits set for material
Carbon black	1333-86-4	TWA	3.5 mg/m ³ 3.5 mg/m ³	Canada. British Columbia OEL USA. ACGIH Threshold Limit Values (TLV)
Zinc oxide	1314-13-2	TWA	2 mg/m ³ 10 mg/m ³ 2 mg/m ³	Canada. British Columbia OEL Canada. Alberta OEL USA. ACGIH Threshold Limit Values (TLV)
Sulfur	7704-34-9	TWA	10 mg/m ³	Canada. Alberta OEL
Synthetic fibers, fillers, accelerators, anti-ozonants	N/AP	N/AP	N/AP	No occupational exposure limits set for material

Remarks: If multiple exposure limits exist for a substance, the limits from the State(s), Province(s) or Territory with the highest and lowest values in the country are reported.

Personal Protection Equipment

Respiratory protection

Respiratory protection is typically not required. Where protection from nuisance levels of dust are desired, use of a dust mask is recommended. Typical certified dusts masks types are N95 (US) or P1 (EN 143).

Hand protection

Short term exposure does not require gloves. Gloves are recommended for continuous or prolonged exposure of material. Any type of protective gloves are recommended to avoid prolonged or repeated skin contact. If gloves are disposable, dispose of contaminated gloves after use in accordance with applicable laws and work place practices. If gloves are re-usable, wash periodically to avoid build up of material matter. Wash and dry hands.

Eye protection

Although they may be present in low concentration, if dust or fines are likely to become airborne, safety glasses with side shields or goggles should be worn. When using eye protection, equipment should be tested and approved under appropriate government standards such as NIOSH (US) or EN 166 (EU).

Skin and body protection

Long sleeved clothing and full length pants should be worn if repeated or prolonged direct contact is likely to occur.

Hygiene measures

Handle in accordance with good industrial and commercial hygiene and safety practices. Wash hands before breaks and at the end of the work day.

Specific engineering controls

Use in a well-ventilated area or set engineering controls to keep airborne concentrations below the exposure limits.

SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES

Appearance

Form: Solid - small (less than ~15 mm diameter) irregularly shaped granules of rubber based material containing small portions of synthetic fibers

Color: Black with small white pieces of fiber material and uncolored rubber

Safety data

pH: Not applicable

Melting/freezing point: No data available

Boiling point: No data available

Flash point: > 212°F; > 100°C (ASTM D3828)

Ignition temperature: No data available

Autoignition temperature: No data available

Lower explosion limit: No data available

Upper explosion limit: No data available

Vapor pressure: No data available

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Density	1.06 g/mL
Water solubility	Not soluble
Partition coefficient	Not applicable
Relative vapour density	No data available
Odor	Rubber or hydrocarbon-like odor
Odor threshold	No data available
Evaporation rate	Does not evaporate

SECTION 10 – STABILITY AND REACTIVITY

Chemical stability

Stable under recommended storage conditions.

Possibility of hazardous reactions

No data available

Conditions to avoid

Material may slowly degrade on storage, especially in the presence of iron particles and combined with heat or pressure, subsequently releasing carbon monoxide and carbon dioxide. Heat, ignition sources, and oxidizing agents should be avoided. Although typically present in small amounts, dust may be explosive under certain conditions (i.e. high airborne concentrations) in the presence of an ignition source.

Materials to avoid

Acids, oxidizing agents, iron particles, excess moisture

Hazardous decomposition products

Oxides of carbon, nitrogen and metals under fire or oxidative conditions

SECTION 11 – TOXICOLOGICAL INFORMATION

Acute toxicity

Oral LD50

No data available

Inhalation LC50

No data available

Dermal LD50

No data available

Other information on acute toxicity

No data available

Skin corrosion/irritation

No data available

Serious eye damage/eye irritation

No data available

Respiratory or skin sensitization

No data available

Germ cell mutagenicity

No data available

Carcinogenicity

This product contains a component (when isolated) that has been reported to be possibly carcinogenic (specifically when inhaled) based on its IARC, ACGIH, NTP or EPA classification. Limited evidence to carcinogenicity in animal studies. IARC: 2B – Group 2B: Possibly carcinogenic to humans (Carbon black)

Reproductive toxicity

No data available

Specific target organ toxicity – single exposure (Globally Harmonized System)

No data available

Specific target organ toxicity – repeated exposure (Globally Harmonized System)

No data available

Aspiration hazard

No data available

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Potential health effects

- Inhalation** Odor/vapors may be a nuisance in some individuals. In some individuals, short term exposure of material may produce mild and temporary discomfort to the respiratory tract resulting in wheezing, tightness in the chest, shortness of breath and coughing. Although they may be present in low amounts, dust and small pieces of material may aggravate bronchitis, asthma, and emphysema if inhaled. Small cuts to the airway may result if pieces of metal are inhaled.
- Skin** Although fine material, particulate matter and dust may be present in low quantities, contact with such items may result in irritation (redness/itching) or other effects.
- Eyes** Material is abrasive if it enters the eye, which can cause irritation to severe damage if left untreated.
- Ingestion** Irritation of mucus membranes of mouth, throat, esophagus and stomach along with nausea may occur. Abrasion to the mouth, esophagus, stomach and intestinal tract may occur.

Signs and Symptoms of Exposure

To the best of our knowledge, the chemical, physical and toxicological properties have not been thoroughly investigated.

Synergistic effects

No data available

Additional information

None

SECTION 12 – ECOLOGICAL INFORMATION (non-mandatory)

Toxicity

No data available

Persistence and degradability

No data available

Bioaccumulative potential

No data available

Mobility in soil

No data available

PBT and vPvB assessment

No data available

Other adverse effects

Extensive ecological testing has not been performed on the product. Standard good environmental workplace practices should be implemented when handling material in a workplace or external setting.

SECTION 13 – DISPOSAL CONSIDERATIONS (non-mandatory)

Product

The product is not a characteristic nor is listed as hazardous waste. Product materials that are no longer usable or that may have become contaminated should be placed in disposable containers and such materials should be managed and disposed in compliance with applicable federal, state, provincial, and local regulations.

Contaminated packaging

Packaging that is no longer usable or may have become contaminated should be placed in disposable containers and managed, recycled, or disposed of in compliance with applicable federal, state, provincial, and local regulations.

SECTION 14 – TRANSPORT INFORMATION (non-mandatory)

DOT (US)

Not dangerous goods

IMDG

Not dangerous goods

IATA

Not dangerous goods

SECTION 15 – REGULATORY INFORMATION (non-mandatory)

WHMIS Classification

Not WHMIS controlled

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the SDS contains all the information required by the Controlled Products Regulations.

OSHA Hazards

No known OSHA hazards

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SECTION 16 – OTHER INFORMATION

Further information

Prepared November 18, 2015. The information, recommendations and suggestions in the Safety Data Sheet have been compiled from tests and data believed to be reliable. The above information is believed to be correct, but is not under guarantee or warranty to be all inclusive and shall be used only as a guide. The information contained herein is based on the present state of our knowledge and is only applicable to the product or material set forth in Section 1. The information provided may not be applicable or complete if such product or material is used in combination with any other product or material, or in any process. The information provided on the product or material is with regard to appropriate safety precautions and does not represent any guarantee of the properties of the product. It is the user's obligation to determine the safety, toxicity and suitability for their own use of the product described herein and to comply with all applicable laws and regulations. Liberty Tire, LLC and its affiliates shall not be held liable for any damage resulting from handling or from contact with the above product.