

## SAFETY DATA SHEET

**LTU SANDSTORM 357HP**

Version Number 1.3  
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# SAFETY DATA SHEET

## LTU SANDSTORM 357HP

### Section 1. Identification

GHS product identifier : LTU SANDSTORM 357HP  
Chemical name : Mixture  
CAS number : Mixture  
Other means of identification : CC10157877  
Product type : solid

**Relevant identified uses of the substance or mixture and uses advised against**

Product use : Industrial applications. Plastics.

Supplier's details : **POLYONE CORPORATION**  
33587 Walker Road, Avon Lake, OH 44012  
  
1 (440) 930-1000 or 1 (866) POLYONE

Emergency telephone number (with hours of operation) : CHEMTREC 1-800-424-9300 (24hrs for spill, leak, fire, exposure or accident).

### Section 2. Hazards identification

This mixture has not been evaluated as a whole. Information provided on the health effects of this product is based on individual components. All ingredients are bound and potential for hazardous exposure as shipped is minimal. However, some vapors may be released upon heating and the end-user (fabricator) must take the necessary precautions (mechanical ventilation, respiratory protection, etc.) to protect employees from exposure. After handling, always wash hands thoroughly with soap and water.

OSHA/HCS status : While this material is not considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200), this SDS contains valuable information critical to the safe handling and proper use of the product. This SDS should be retained and available for employees and other users of this product. This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Classification of the substance or mixture : Not classified.

**GHS label elements**

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**Signal word** : No signal word.DANGER!  
**Hazard statements** : No known significant effects or critical hazards.

**Precautionary statements**

**General** : Not applicable.  
**Prevention** : Not applicable.  
**Response** : Not applicable.  
**Storage** : Not applicable.  
**Disposal** : Not applicable.  
**Supplemental label elements** : None known.  
**Hazards not otherwise classified** : None known.

**Section 3. Composition/information on ingredients**

**Substance/mixture** : Mixture  
**Chemical name** : Mixture  
**Other means of identification** : CC10157877

**CAS number/other identifiers**

<b>Ingredient name</b>	<b>%</b>	<b>CAS number</b>
2-Propenenitrile, polymer with Ethenylbenzene	50 - 75	9003-54-7
Titanium dioxide	5 - 10	13463-67-7
Decanedioic acid, bis(2,2,6,6-tetramethyl-4-piperidiny) ester	3 - 5	52829-07-9
Styrene	0.1 - 0.3	100-42-5
Carbon black	0.1 - 0.3	1333-86-4

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

**There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.**

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Occupational exposure limits, if available, are listed in Section 8.

## Section 4. First aid measures

### Description of necessary first aid measures

- |                     |   |  |
|---------------------|---|--|
| <b>Eye contact</b>  | : | Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation occurs. Check for and remove any contact lenses. Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical attention immediately.   |
| <b>Inhalation</b>   | : | Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours. Call medical doctor or poison control center immediately. Move exposed person to fresh air. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention immediately. |
| <b>Skin contact</b> | : | Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur. In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse. Clean shoes thoroughly before reuse. Get medical attention immediately.   |
| <b>Ingestion</b>    | : | Wash out mouth with water. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur. Wash out mouth with water. Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical attention immediately.   |

### Most important symptoms/effects, acute and delayed

#### Potential acute health effects

- |                    |   |  |
|--------------------|---|--|
| <b>Eye contact</b> | : | No known significant effects or critical hazards.No known significant effects or critical hazards.                               |
| <b>Inhalation</b>  | : | No known significant effects or critical hazards.Very toxic by inhalation. Exposure to decomposition products may cause a health |

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- Skin contact** : hazard. Serious effects may be delayed following exposure.  
: No known significant effects or critical hazards.No known significant effects or critical hazards.
- Ingestion** : No known significant effects or critical hazards.No known significant effects or critical hazards.

Over-exposure signs/symptoms

- Eye contact** : No specific data.
- Inhalation** : No specific data.
- Skin contact** : No specific data.
- Ingestion** : No specific data.

Indication of immediate medical attention and special treatment needed, if necessary

- Notes to physician** : In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
- Specific treatments** : No specific treatment.
- Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training. No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

See toxicological information (Section 11)

**Section 5. Fire-fighting measures**
Extinguishing media

- Suitable extinguishing media** : In case of fire, use water spray (fog), foam, dry chemical or CO<sub>2</sub>.In case of fire, use water spray (fog), foam, dry chemical or CO<sub>2</sub>.
- Unsuitable extinguishing media** : None known.None known.
- Specific hazards arising from the chemical** : No specific fire or explosion hazard.No specific fire or explosion hazard.
- Hazardous thermal** : Decomposition products may include the following materials:

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- |   |   |
|---|---|
| <b>decomposition products</b>                         | <ul style="list-style-type: none"> <li>carbon dioxide</li> <li>carbon monoxide</li> <li>nitrogen oxides</li> <li>metal oxide/oxides</li> </ul> <p>Decomposition products may include the following materials:</p> <ul style="list-style-type: none"> <li>carbon dioxide</li> <li>carbon monoxide</li> <li>nitrogen oxides</li> <li>metal oxide/oxides</li> </ul>  |
| <b>Special protective actions for fire-fighters</b>   | <ul style="list-style-type: none"> <li>: Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.</li> </ul> |
| <b>Special protective equipment for fire-fighters</b> | <ul style="list-style-type: none"> <li>: Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.</li> </ul>   |

## Section 6. Accidental release measures

### Personal precautions, protective equipment and emergency procedures

- |                                    |   |
|------------------------------------|---|
| <b>For non-emergency personnel</b> | <ul style="list-style-type: none"> <li>: No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Put on appropriate personal protective equipment.</li> </ul>   |
| <b>For emergency responders</b>    | <ul style="list-style-type: none"> <li>: If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".</li> </ul>   |
| <b>Environmental precautions</b>   | <ul style="list-style-type: none"> <li>: Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air). Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).</li> </ul> |

### Methods and materials for containment and cleaning up

- |                    |  |
|--------------------|--|
| <b>Small spill</b> | <ul style="list-style-type: none"> <li>: Move containers from spill area. Vacuum or sweep up material and</li> </ul> |
|--------------------|--|

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**Large spill**

- place in a designated, labeled waste container. Dispose of via a licensed waste disposal contractor. Move containers from spill area. Avoid dust generation. Do not dry sweep. Vacuum dust with equipment fitted with a HEPA filter and place in a closed, labeled waste container. Dispose of via a licensed waste disposal contractor.
- : Move containers from spill area. Prevent entry into sewers, water courses, basements or confined areas. Vacuum or sweep up material and place in a designated, labeled waste container. Dispose of via a licensed waste disposal contractor. Note: see Section 1 for emergency contact information and Section 13 for waste disposal. Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Avoid dust generation. Do not dry sweep. Vacuum dust with equipment fitted with a HEPA filter and place in a closed, labeled waste container. Dispose of via a licensed waste disposal contractor. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

## Section 7. Handling and storage

### Precautions for safe handling

- Protective measures** : Put on appropriate personal protective equipment (see Section 8).
- Advice on general occupational hygiene** : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.
- Conditions for safe storage, including any incompatibilities** : Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

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**Section 8. Exposure controls/personal protection**
Control parameters
Occupational exposure limits

Ingredient name	Exposure limits
Titanium dioxide	<p><b>OSHA PEL 1989 (1989-03-01)</b> PEL: Permissible Exposure Level 10 mg/m3 Form: Total dust</p> <p><b>OSHA PEL (1993-06-30)</b> PEL: Permissible Exposure Level 15 mg/m3 Form: Total dust</p> <p><b>NIOSH REL (1994-06-01)</b></p> <p><b>ACGIH TLV (1996-05-18)</b> TLV-TWA: Threshold Limit Value - Time weighted average PEL: Permissible Exposure Level 10 mg/m3</p>
2-Propenenitrile, polymer with Ethenylbenzene	
Styrene	<p><b>OSHA PEL 1989 (1989-03-01)</b> PEL: Permissible Exposure Level 215 mg/m3 50 ppm <b>Short Term Exposure Limit value for a 15-minute reference period expressed in parts per million or in mg/m3. 425 mg/m3 100 ppm</b></p> <p><b>OSHA PEL Z2 (1993-06-30)</b> PEL: Permissible Exposure Level 100 ppm <b>Ceiling, is a limit indicating the maximum concentration of a chemical substances in the breathing zone that should not be exceeded. 200 ppm</b> <b>Acceptable Maximum Peak (AMP) 600 ppm</b></p> <p><b>NIOSH REL (1994-06-01)</b> Time Weighted Average (TWA) 215 mg/m3 50 ppm <b>Short Term Exposure Limit value for a 15-minute reference period expressed in parts per million or in mg/m3. 425 mg/m3 100 ppm</b></p> <p><b>ACGIH TLV (1997-05-21)</b> TLV-TWA: Threshold Limit Value - Time weighted average PEL: Permissible Exposure Level 85 mg/m3 20 ppm <b>TLV-STEL: Threshold Limit Value - Short Time Exposure Level 170 mg/m3 40 ppm</b></p>

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Decanedioic acid, bis(2,2,6,6-tetramethyl-4-piperidinyl) ester	
Carbon black	<p><b>OSHA PEL 1989 (1989-03-01)</b> PEL: Permissible Exposure Level 3.5 mg/m<sup>3</sup></p> <p><b>OSHA PEL (1993-06-30)</b> PEL: Permissible Exposure Level 3.5 mg/m<sup>3</sup></p> <p><b>NIOSH REL (1994-06-01)</b> Time Weighted Average (TWA) 3.5 mg/m<sup>3</sup></p> <p><b>Time Weighted Average (TWA)</b> <b>ACGIH TLV (2010-12-06)</b> TLV-TWA: Threshold Limit Value - Time weighted average PEL: Permissible Exposure Level 3 mg/m<sup>3</sup> Form: Inhalable fraction</p>

- Appropriate engineering controls** : Good general ventilation should be sufficient to control worker exposure to airborne contaminants. Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.
- Environmental exposure controls** : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels. Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

**Individual protection measures**

- Hygiene measures** : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location. Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.



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- Eye/face protection** : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with side-shields. Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with side-shields.
- Skin protection**
- Hand protection** : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.
- Body protection** : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
- Other skin protection** : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
- Respiratory protection** : Use a properly fitted, particulate filter respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator. Use a properly fitted, particulate filter respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

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**Section 9. Physical and chemical properties**
**Appearance**

Physical state	:	solid [Pellets.]
Color	:	TAN
Odor	:	Faint odor.
Odor threshold	:	Not available.
pH	:	Not available.
Melting point	:	Not available.
Boiling point	:	Not available.
Flash point	:	Not available.
Burning time	:	Not available.
Burning rate	:	Not available.
Evaporation rate	:	Not available.
Flammability (solid, gas)	:	Not available.
Lower and upper explosive (flammable) limits	:	<b>Lower:</b> Not available. <b>Upper:</b> Not available.
Vapor pressure	:	Not available.
Vapor density	:	Not available.
Relative density	:	Not available.
Solubility	:	Not available.
Solubility in water	:	insoluble in water.
Partition coefficient: n-octanol/water	:	Not available.
Auto-ignition temperature	:	Not available.
Decomposition temperature	:	Not available.
SADT	:	Not available.
Viscosity	:	<b>Dynamic:</b> Not available. <b>Kinematic:</b> Not available.

**Section 10. Stability and reactivity**

Reactivity	:	No specific test data related to reactivity available for this product or its ingredients.
Chemical stability	:	Stable under recommended storage and handling conditions (see Section 7). Stable under recommended storage and handling conditions (see Section 7).
Possibility of hazardous reactions	:	Under normal conditions of storage and use, hazardous reactions will not occur. Under normal conditions of storage and use, hazardous reactions will not occur.
Conditions to avoid	:	Keep away from extreme heat and oxidizing agents. Keep away from extreme heat and oxidizing agents.

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- Incompatible materials** : Keep away from strong acids.  
Oxidizer. Keep away from strong acids.  
Oxidizer.
- Hazardous decomposition products** : Under normal conditions of storage and use, hazardous decomposition products should not be produced. Under normal conditions of storage and use, hazardous decomposition products should not be produced.

## Section 11. Toxicological information

This mixture has not been evaluated as a whole for health effects. Exposure effects listed are based on existing health data for the individual components which comprise the mixture.

### Information on toxicological effects

#### Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
Styrene				
	LD50 Oral	Rat	2,650 mg/kg	-
	LD50 Oral	Rat	5,000 mg/kg	-
	LC50 Inhalation	Rat	2,770 ppm	4 h
	LC50 Inhalation	Rat	11.8 mg/l	4 h
Carbon black				
	LD50 Oral	Rat	15,400 mg/kg	-
Decanedioic acid, bis(2,2,6,6-tetramethyl-4-piperidinyl) ester				
Titanium dioxide				
	LC50 Inhalation	Rat - Male	6.82 Mg/l	4 h
	LD50 Dermal	Rabbit	> 5,000 mg/kg	-
2-Propenenitrile, polymer with Ethenylbenzene				
	LD50 Oral	Rat	1,800 mg/kg	-

**Conclusion/Summary** : Mixture. Not fully tested.

#### Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
Styrene	Eyes - Mild irritant	Human			-
	Skin - Mild irritant	Rabbit			-
	Skin - Moderate irritant	Rabbit			-
	Eyes - Severe irritant	Rabbit			-

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	Eyes - Moderate irritant	Rabbit		24 hrs	-
Titanium dioxide	Skin - Mild irritant	Human		72 hrs	-

**Conclusion/Summary**

**Skin** : Mixture.Not fully tested.  
**Eyes** : Mixture.Not fully tested.  
**Respiratory** : Mixture.Not fully tested.

**Sensitization****Conclusion/Summary**

**Skin** : Mixture.Not fully tested.  
**Respiratory** : Mixture.Not fully tested.

**Mutagenicity****Conclusion/Summary**

: Mixture.Not fully tested.

**Carcinogenicity****Conclusion/Summary**

: Mixture.Not fully tested.

**Classification**

Product/ingredient name	OSHA	IARC	NTP
Styrene		2B	Reasonably anticipated to be a human carcinogen.
Carbon black		2B	
Titanium dioxide		2B	
2-Propenenitrile, polymer with Ethenylbenzene		3	

**Reproductive toxicity****Conclusion/Summary**

: Mixture.Not fully tested.

**Teratogenicity****Conclusion/Summary**

: Mixture.Not fully tested.

**Specific target organ toxicity (single exposure)**

Not available.

**Specific target organ toxicity (repeated exposure)**

Not available.

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**Aspiration hazard**

Not available.

**Information on the likely routes of exposure** : Not available.

**Potential acute health effects**

**Eye contact** : No known significant effects or critical hazards. No known significant effects or critical hazards.

**Inhalation** : No known significant effects or critical hazards. Very toxic by inhalation. Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.

**Skin contact** : No known significant effects or critical hazards. No known significant effects or critical hazards.

**Ingestion** : No known significant effects or critical hazards. No known significant effects or critical hazards.

**Symptoms related to the physical, chemical and toxicological characteristics**

**Eye contact** : No specific data.

**Inhalation** : No specific data.

**Skin contact** : No specific data.

**Ingestion** : No specific data.

**Delayed and immediate effects and also chronic effects from short and long term exposure**
**Short term exposure**

**Potential immediate effects** : Not available.

**Potential delayed effects** : Not available.

**Long term exposure**

**Potential immediate effects** : Not available.

**Potential delayed effects** : Not available.

**Potential chronic health effects**

**Conclusion/Summary** : Mixture. Not fully tested.

**General** : No known significant effects or critical hazards. Contains material that can cause target organ damage.

**Carcinogenicity** : No known significant effects or critical hazards. Contains material which may cause cancer, based on animal data. Risk of cancer

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- depends on duration and level of exposure.
- Mutagenicity** : No known significant effects or critical hazards. No known significant effects or critical hazards.
- Teratogenicity** : No known significant effects or critical hazards. No known significant effects or critical hazards.
- Developmental effects** : No known significant effects or critical hazards. No known significant effects or critical hazards.
- Fertility effects** : No known significant effects or critical hazards. No known significant effects or critical hazards.

Numerical measures of toxicity
Acute toxicity estimates

Not available.

**Section 12. Ecological information**
Toxicity

Product/ingredient name	Result	Species	Exposure
Styrene	Acute LC50 9,900 µg/l Fresh water	Fish - Fish	96 h
	Acute LC50 9.1 mg/l Marine water	Fish - Fish	96 h
	Acute LC50 4,020 µg/l Fresh water	Fish - Fish	96 h
	Acute LC50 4.7 mg/l Fresh water	Fish - Fish	96 h
	Acute LC50 4,080 µg/l Fresh water	Fish - Fish	96 h
	Acute LC50 23,000 µg/l Fresh water	Aquatic invertebrates. Daphnia	48 h
	Acute EC50 4,700 µg/l Fresh water	Aquatic invertebrates. Daphnia	48 h
	Acute LC50 59,000 µg/l Fresh water	Aquatic invertebrates. Daphnia	48 h
	Acute LC50 52,000 µg/l Marine water	Aquatic invertebrates. Crustaceans	48 h
	Acute EC50 33 mg/l Fresh water	Aquatic plants - Algae	96 h
	Acute EC50 720 µg/l Fresh water	Aquatic plants - Algae	96 h
	Acute EC50 1,400 µg/l Fresh water	Aquatic plants - Algae	72 h
	Acute EC50 78,000 µg/l Marine water	Aquatic plants - Algae	96 h
	Acute NOEC 63 µg/l Fresh water	Aquatic plants - Algae	4 d
Carbon black			

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	Acute EC50 37.563 mg/l Fresh water	Aquatic invertebrates. Daphnia	48 h
	Acute LC50 61.547 mg/l Fresh water	Aquatic invertebrates. Daphnia	48 h
Decanedioic acid, bis(2,2,6,6-tetramethyl-4-piperidiny)l ester			
	Acute LC50 4.4 Mg/l	Fish - Bluegill	96 h
	Acute EC50 8.6 Mg/l Fresh water	Aquatic invertebrates. Daphnia	48 h
	Acute EC50 0.705 Mg/l	Aquatic plants - Green algae	72 h
Titanium dioxide			
	Acute LC50 > 1,000,000 µg/l Marine water	Fish - Fish	96 h
	Acute LC50 > 1,000 mg/l Fresh water	Fish - Fish	96 h
	Acute LC50 13 mg/l Fresh water	Aquatic invertebrates. Daphnia	48 h
	Acute LC50 6.5 mg/l Fresh water	Aquatic invertebrates. Daphnia	48 h
	Acute LC50 3 mg/l Fresh water	Aquatic invertebrates. Crustaceans	48 h
	Acute LC50 15.9 mg/l Fresh water	Aquatic invertebrates. Crustaceans	48 h
	Acute LC50 3.6 mg/l Fresh water	Aquatic invertebrates. Crustaceans	48 h
	Acute LC50 11 mg/l Fresh water	Aquatic invertebrates. Crustaceans	48 h
	Acute LC50 13.4 mg/l Fresh water	Aquatic invertebrates. Crustaceans	48 h
	Acute EC50 27.8 mg/l Fresh water	Aquatic invertebrates. Daphnia	48 h
	Acute EC50 19.3 mg/l Fresh water	Aquatic invertebrates. Daphnia	48 h
	Acute EC50 35.306 mg/l Fresh water	Aquatic invertebrates. Daphnia	48 h
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<b>Remarks - Acute - Aquatic invertebrates.:</b>	Chemicals are not readily available as they are bound within the polymer matrix.		

**Conclusion/Summary** : Chemicals are not readily available as they are bound within the polymer matrix.

**Persistence and degradability**

**Conclusion/Summary** : Chemicals are not readily available as they are bound within the polymer matrix.

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**Conclusion/Summary** : Chemicals are not readily available as they are bound within the polymer matrix.

**Bioaccumulative potential**

Product/ingredient name	LogPow	BCF	Potential
Styrene	2.96	13.49	low
Decanedioic acid, bis(2,2,6,6-tetramethyl-4-piperidinyl) ester	0.35	-	low
Titanium dioxide		352.00	low

**Mobility in soil**

**Soil/water partition coefficient (KOC)** : Not available.

**Other adverse effects** : No known significant effects or critical hazards.No known significant effects or critical hazards.

**Section 13. Disposal considerations**

**Disposal methods** : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions 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 non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions 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 non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care



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should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

**United States - RCRA Acute hazardous waste "P" List:** Not listed

**United States - RCRA Toxic hazardous waste "U" List:** Not listed

**Section 14. Transport information**

U.S. DOT Classification : Not regulated for transportation.  
ICAO/IATA : Not classified as dangerous good under transport regulations.  
IMO/IMDG (maritime) : Not classified as dangerous good under transport regulations.

**Section 15. Regulatory information**

**U.S. Federal regulations** :

- United States - TSCA 12(b) - Chemical export notification:** None of the components are listed.
- United States - TSCA 4(a) - Final Test Rules:** Not listed
- United States - TSCA 4(a) - ITC Priority list:** Not listed
- United States - TSCA 4(a) - Proposed test rules:** Not listed
- United States - TSCA 4(f) - Priority risk review:** Not listed
- United States - TSCA 5(a)2 - Final significant new use rules:** Not listed
- United States - TSCA 5(a)2 - Proposed significant new use rules:** Not listed
- United States - TSCA 5(e) - Substances consent order:** Not listed
- United States - TSCA 6 - Final risk management:** Not listed
- United States - TSCA 6 - Proposed risk management:** Not listed
- United States - TSCA 8(a) - Chemical risk rules:** Not listed
- United States - TSCA 8(a) - Dioxin/Furane precursor:** Not listed
- United States - TSCA 8(a) - Chemical Data Reporting (CDR):** Not determined
- United States - TSCA 8(a) - Preliminary assessment report (PAIR):** Not listed
- United States - TSCA 8(c) - Significant adverse reaction (SAR):** Not listed
- United States - TSCA 8(d) - Health and safety studies:** Not listed
- United States - EPA Clean water act (CWA) section 307 - Priority pollutants:** Listed Acrylonitrile

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United States - EPA Clean water act (CWA) section 311 -  
Hazardous substances: Listed  
United States - EPA Clean air act (CAA) section 112 - Accidental  
release prevention - Flammable substances: Not listed  
United States - EPA Clean air act (CAA) section 112 - Accidental  
release prevention - Toxic substances: Not listed  
United States - Department of commerce - Precursor chemical:  
Not listed

Clean Air Act Section 112(b) : Not listed  
Hazardous Air Pollutants (HAPs)  
Clean Air Act Section 602 Class I : Not listed  
Substances  
Clean Air Act Section 602 Class II : Not listed  
Substances  
DEA List I Chemicals (Precursor : Not listed  
Chemicals)  
DEA List II Chemicals (Essential : Not listed  
Chemicals)

**US. EPA CERCLA Hazardous Substances (40 CFR 302)**

not applicable

**SARA 311/312**

Classification : Not applicable.

**Composition/information on ingredients**

Name	%	Classification
Styrene	0.1 - 0.3	F, AH, CH
Carbon black	0.1 - 0.3	CH
Decanedioic acid, bis(2,2,6,6-tetramethyl-4-piperidinyl) ester	3 - 5	AH
2-Propenenitrile, polymer with Ethenylbenzene	50 - 75	AH

**SARA 313**

Form R - Reporting requirements	Product name	CAS number	%
	Styrene	100-42-5	0.1 - 0.3
	Rutile, antimony chromium buff	68186-90-3	5 - 10

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<b>Supplier notification</b>	Rutile, antimony chromium buff	68186-90-3	5 - 10
	Styrene	100-42-5	0.1 - 0.3

SARA 313 notifications must not be detached from the SDS and any copying and redistribution of the SDS shall include copying and redistribution of the notice attached to copies of the SDS subsequently redistributed.

**State regulations**

- Massachusetts** : The following components are listed:  
Iron oxide  
Titanium dioxide
- New York** : The following components are listed:  
Styrene
- New Jersey** : The following components are listed:  
Styrene  
Carbon black  
Iron oxide  
Titanium dioxide  
2-Propenenitrile, polymer with Ethenylbenzene
- Pennsylvania** : The following components are listed:  
Styrene  
  
Titanium dioxide  
  
Iron oxide  
  
Carbon black

**California Prop. 65**

WARNING: This product contains a chemical known to the State of California to cause cancer.

**United States inventory (TSCA 8b)** : All components are listed or exempted.

**Canada inventory** : All components are listed or exempted.

**International regulations**

- International lists** :
- Australia inventory (AICS):** Not determined.
  - Taiwan inventory (CSNN):** Not determined.
  - Malaysia Inventory (EHS Register):** Not determined.
  - EINECS:** All components are listed or exempted.
  - Japan inventory:** Not determined.
  - China inventory (IECSC):** Not determined.
  - Korea inventory:** All components are listed or exempted.

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**New Zealand Inventory of Chemicals (NZIoC):** Not determined.  
**Philippines inventory (PICCS):** Not determined.

**Chemical Weapons Convention  
List Schedule I Chemicals** : Not listed  
**Chemical Weapons Convention  
List Schedule II Chemicals** : Not listed  
**Chemical Weapons Convention  
List Schedule III Chemicals** : Not listed

## Section 16. Other information

### History

**Date of printing** : 11/08/2016  
**Date of issue/Date of revision** : 10/19/2016  
**Date of previous issue** : 10/14/2015  
**Version** : 1.3

**Key to abbreviations** : ATE = Acute Toxicity Estimate  
BCF = Bioconcentration Factor  
GHS = Globally Harmonized System of Classification and Labelling of Chemicals  
IATA = International Air Transport Association  
IBC = Intermediate Bulk Container  
IMDG = International Maritime Dangerous Goods  
LogPow = logarithm of the octanol/water partition coefficient  
MARPOL 73/78 = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)  
UN = United Nations

**References** : Not available.

### Notice to reader

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