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MATERIAL SAFETY DATA SHEET LTU SANDSTORM IAC001.1

Version Number 1.0 Revision Date 11/29/2012

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1. PRODUCT AND COMPANY IDENTIFICATION

POLYONE CORPORATION 33587 Walker Road, Avon Lake, OH 44012

Telephone Emergency telephone number	:	1 (440) 930-1000 or 1 (866) POLYONE CHEMTREC 1-800-424-9300 (24hrs for spill, leak, fire, exposure or accident).
Product name	:	LTU SANDSTORM IAC001.1
Product code	:	CC10173362
Chemical Name	:	Mixture
CAS-No.	:	Mixture
Product Use	:	Industrial Applications

2. COMPOSITION/INFORMATION ON INGREDIENTS

Components	CAS-No.	Weight percent
Decanedioic acid, bis(2,2,6,6-tetramethyl-4-	52829-07-9	1 - 5
piperidinyl) ester		
Iron oxide	1309-37-1	1 - 5
Rutile, antimony chromium buff	68186-90-3	10 - 30
Titanium dioxide	13463-67-7	10 - 30

3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

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.

POTENTIAL HEALTH EFFECTS

Routes of Exposure:	: Inhalation, Ingestion, Skin contact
Acute exposure	
Inhalation	: Resin particles, like other inert materials, can be mechanically irritating.
Ingestion	: May be harmful if swallowed.
Eyes	: Resin particles, like other inert materials, are mechanically irritating to eyes.

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	: Experience shows no unusual dermatitis hazard from routine handling
Chronic exposure	: Refer to Section 11 for Toxicological Information.
Medical Conditions Aggravated by Exposure:	: None known.
	4. FIRST AID MEASURES
Inhalation	: Move to fresh air in case of accidental inhalation of fumes from overheating or combustion. When symptoms persist or in all cases of doubt seek medical advice.
Ingestion	: Do not induce vomiting without medical advice. When symptoms persist or in all cases of doubt seek medical advice.
Eyes	: Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. If eye irritation persists, seek medical attention.
Skin	: Wash off with soap and plenty of water. If skin irritation persists seek medical attention.
	5. FIREFIGHTING MEASURES
Flash point	: not applicable
Flash point Flammable Limits Upper explosion limit Lower explosion limit Auto-ignition temperature Suitable extinguishing media	 not applicable not applicable not applicable not applicable Carbon dioxide blanket, Water spray, Dry powder, Foam.
Flammable Limits Upper explosion limit Lower explosion limit Auto-ignition temperature	 not applicable not applicable not applicable carbon dioxide blanket, Water spray, Dry powder, Foam. Fullface self-contained breathing apparatus (SCBA) used in positive pressure mode should be worn to prevent inhalation of airborne
Flammable Limits Upper explosion limit Lower explosion limit Auto-ignition temperature Suitable extinguishing media Special Fire Fighting	 not applicable not applicable not applicable Carbon dioxide blanket, Water spray, Dry powder, Foam. Fullface self-contained breathing apparatus (SCBA) used in positive
Flammable Limits Upper explosion limit Lower explosion limit Auto-ignition temperature Suitable extinguishing media Special Fire Fighting Procedures Unusual Fire/Explosion Hazards	 not applicable not applicable not applicable carbon dioxide blanket, Water spray, Dry powder, Foam. Fullface self-contained breathing apparatus (SCBA) used in positive pressure mode should be worn to prevent inhalation of airborne contaminants. Carbon dioxide (CO2), carbon monoxide (CO), oxides of nitrogen
Flammable Limits Upper explosion limit Lower explosion limit Auto-ignition temperature Suitable extinguishing media Special Fire Fighting Procedures Unusual Fire/Explosion Hazards	 not applicable not applicable not applicable Carbon dioxide blanket, Water spray, Dry powder, Foam. Fullface self-contained breathing apparatus (SCBA) used in positive pressure mode should be worn to prevent inhalation of airborne contaminants. Carbon dioxide (CO2), carbon monoxide (CO), oxides of nitrogen (NOx), other hazardous materials, and smoke are all possible.
Flammable Limits Upper explosion limit Lower explosion limit Auto-ignition temperature Suitable extinguishing media Special Fire Fighting Procedures Unusual Fire/Explosion Hazards	 not applicable not applicable not applicable Carbon dioxide blanket, Water spray, Dry powder, Foam. Fullface self-contained breathing apparatus (SCBA) used in positive pressure mode should be worn to prevent inhalation of airborne contaminants. Carbon dioxide (CO2), carbon monoxide (CO), oxides of nitrogen (NOx), other hazardous materials, and smoke are all possible. 6. ACCIDENTAL RELEASE MEASURES Wear appropriate personal protection during cleanup, such as

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and 8. EXPOSURE C	o containers dry and tightly closed to avoid moisture absorption contamination. Keep in a dry, cool place.
Respiratory protection : No p	
	personal respiratory protective equipment normally required.
Eye/Face Protection : Safe	ty glasses with side-shields
Hand protection : Prot	ective gloves
Skin and body protection : Lon	g sleeved clothing
Additional Protective : Safe Measures	ty shoes
	lle in accordance with good industrial hygiene and safety tice. Wash hands before breaks and at the end of workday.
Engineering measures : Hea	only in areas with appropriate exhaust ventilation. Provide opriate exhaust ventilation at machinery.

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Components	Value	Exposure time	Exposure type	List:
Iron oxide	10 mg/m3	PEL:	Fume.	OSHA Z1
	5 mg/m3	Time Weighted Average (TWA):	as Fe	MX OEL
	10 mg/m3	Short Term Exposure Limit (STEL):	as Fe	MX OEL
	5 mg/m3	Time Weighted Average (TWA):	Respirable fraction.	ACGIH
Rutile, antimony chromium buff	0.5 mg/m3	Recommended exposure limit (REL):	as Cr	NIOSH
	0.5 mg/m3	PEL:	as Cr	OSHA Z1
	0.5 mg/m3	Time Weighted Average (TWA):	as Sb	ACGIH
	0.5 mg/m3	Recommended exposure limit (REL):	as Sb	NIOSH
	0.5 mg/m3	PEL:	as Sb	OSHA Z1
	0.5 mg/m3	Time Weighted Average (TWA):	as Sb	OSHA Z1A
	0.5 mg/m3	Time Weighted Average (TWA):	as Sb	MX OEL
Titanium dioxide	10 mg/m3	Time Weighted Average (TWA):		ACGIH
	15 mg/m3	PEL:	Total dust.	OSHA Z1
	10 mg/m3	Time Weighted Average (TWA):	Total dust.	OSHA Z1A
	10 mg/m3	Time Weighted Average (TWA):	as Ti	MX OEL
	20 mg/m3	Short Term Exposure Limit (STEL):	as Ti	MX OEL

9. PHYSICAL AND CHEMICAL PROPERTIES

Form
Appearance
Colour
Odour
Melting point/range
Boiling Point:
Water solubility

solid pellets TAN very faint Not determined not applicable insoluble

Evaporation rate Specific Gravity Bulk density Vapour pressure Vapour density pH

Not applicable Not determined Not established not applicable not applicable not applicable

10. STABILITY AND REACTIVITY

Stability	:	The product is stable if stored and handled as prescribed.
Hazardous Polymerization	:	Will not occur.
Conditions to avoid	:	Keep away from oxidizing agents and open flame. To avoid thermal decomposition, do not overheat.

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Incompatible Materials	:	Incompatible with strong acids and oxidizing agents.
Hazardous decomposition products	:	Carbon dioxide (CO2), carbon monoxide (CO), oxides of nitrogen (NOx), other hazardous materials, and smoke are all possible.

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.

Toxicity Overview

This product contains the following components which in their pure form have the following characteristics:

CAS-No.	Chemical Name	Effect	Target Organ
52829-07-9	Decanedioic acid,	Irritant	Eyes.
	bis(2,2,6,6-tetramethyl-4-		
	piperidinyl) ester		
1309-37-1	Iron oxide	Systemic effects	Respiratory system.
68186-90-3	Rutile, antimony	Irritant	Eyes, Skin, Respiratory
	chromium buff		system.
13463-67-7	Titanium dioxide	Systemic effects	Respiratory system.

LC50 / LD50

This product contains the following components which, in their pure form, have the following toxicity data:

CAS-No.	Chemical Name	Route	Value	Species
52829-07-9	Decanedioic acid, bis(2,2,6,6-tetramethyl-4- piperidinyl) ester	Oral LD50 Dermal LD50	3,700 mg/kg > 3,100 mg/kg	rat rabbit

Carcinogenicity

This product contains the following components which, in their pure form, have the following carcinogenicity data:

CAS-No.	Chemical Name	OSHA	IARC	NTP
13463-67-7	Titanium dioxide	no	2B	no

IARC Carcinogen Classifications:

1 - The component is carcinogenic to humans.

2A - The component is probably carcinogenic to humans.

2B - The component is possibly carcinogenic to humans.

NTP Carcinogen Classifications:

1 - The component is known to be a human carcinogen.

2 - The component is reasonably anticipated to be a human carcinogen.

12. ECOLOGICAL INFORMATION

Persistence and degradability

: Not readily biodegradable.

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Environmental Toxicity : Chemicals are not readily available as they are bound within the polymer matrix. Bioaccumulation Potential : Chemicals are not readily available as they are bound within the polymer matrix. Additional advice : no data available Isomer and available Isomer advantable Product : Like most thermoplastic plastics the product can be recycled. Whe possible recycling is preferred to disposal or incineration. The generator of waste material has the responsibility for proper waste classification, transportation and disposal in accordance with applicable federal, state/provincial and local regulations. Contaminated packaging : Recycling is preferred when possible. The generator of waste material has the responsibility for proper waste classification, transportation and disposal in accordance with applicable federal, state/provincial and local regulations. U.S. DOT Classification : Not regulated for transportation. ICAO/IATA : Refer to specific regulation. IMO/IMDG (maritime) : Refer to specific regulation. US Regulations: : All components of this product are listed on or exempt from the TSCA Inventory. US. EPA CERCLA Hazardous Substances (40 CFR 302) not applicable not applicable : Not applicable 65 : Not applicable	sion Number 1.0 vision Date 11/29/2012	Page 6 o Print Date 11/29/20
polymer matrix. Bioaccumulation Potential : Chemicals are not readily available as they are bound within the polymer matrix. Additional advice : no data available Image: Product : Like most thermoplastic plastics the product can be recycled. Whe possible recycling is preferred to disposal or incineration. The generator of waste material has the responsibility for proper waste classification ransportation and disposal in accordance with applicable federal, state/provincial and local regulations. Contaminated packaging : Recycling is preferred when possible. The generator of waste material has the responsibility for proper waste classification, transportation and disposal in accordance with applicable federal, state/provincial and local regulations. U.S. DOT Classification : Not regulated for transportation. ICAO/IATA : Refer to specific regulation. IMO/IMDG (maritime) : Refer to specific regulation. US Regulations: : OSHA Status : Classified as hazardous based on components. TSCA Status : All components of this product are listed on or exempt from the TSCA Inventory. US. EPA CERCLA Hazardous Substances (40 CFR 302) not applicable California Proposition : Not applicable		
polymer matrix. Additional advice : no data available Image: Construct the product of the product can be recycled. Whe possible recycling is preferred to disposal or incineration. The generator of waste material has the responsibility for proper waste classification, transportation and disposal in accordance with applicable federal, state/provincial and local regulations. Contaminated packaging : Recycling is preferred when possible. The generator of waste material has the responsibility for proper waste classification, transportation and disposal in accordance with applicable federal, state/provincial and local regulations. Contaminated packaging : Recycling is preferred when possible. The generator of waste material has the responsibility for proper waste classification, transportation and disposal in accordance with applicable federal, state/provincial and local regulations. U.S. DOT Classification : Not regulated for transportation. ICAO/TATA : Refer to specific regulation. IMO/IMDG (maritime) : Refer to specific regulation. US Regulations: : Classified as hazardous based on components. TSCA Status : All components of this product are listed on or exempt from the TSCA Inventory. US. EPA CERCLA Hazardous Substances (40 CFR 302) not applicable . Not applicable California Proposition : Not applicable	Environmental Toxicity	
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possible recycling is preferred to disposal or incineration. The generator of waste material has the responsibility for proper waste classification, transportation and disposal in accordance with applicable federal, state/provincial and local regulations. Contaminated packaging : Recycling is preferred when possible. The generator of waste material has the responsibility for proper waste classification, transportation and disposal in accordance with applicable federal, state/provincial and local regulations. Letter in the second of the seco		13. DISPOSAL CONSIDERATIONS
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ICAO/IATA : Refer to specific regulation. IMO/IMDG (maritime) : Refer to specific regulation. IMO/IMDG (maritime) : Refer to specific regulation. IS. REGULATORY INFORMATION US Regulations: OSHA Status : Classified as hazardous based on components. TSCA Status : All components of this product are listed on or exempt from the TSCA Inventory. US. EPA CERCLA Hazardous Substances (40 CFR 302) not applicable California Proposition : Not applicable 65		14. TRANSPORT INFORMATION
IMO/IMDG (maritime) : Refer to specific regulation. IMO/IMDG (maritime) IS REGULATORY INFORMATION US Regulations: OSHA Status OSHA Status Classified as hazardous based on components. TSCA Status : All components of this product are listed on or exempt from the TSCA Inventory. US. EPA CERCLA Hazardous Substances (40 CFR 302) not applicable California Proposition : Not applicable	U.S. DOT Classification	: Not regulated for transportation.
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US Regulations: OSHA Status : Classified as hazardous based on components. TSCA Status : All components of this product are listed on or exempt from the TSCA Inventory. US. EPA CERCLA Hazardous Substances (40 CFR 302) not applicable California Proposition : Not applicable 65	IMO/IMDG (maritime)	: Refer to specific regulation.
OSHA Status: Classified as hazardous based on components.TSCA Status: All components of this product are listed on or exempt from the TSCA Inventory.US. EPA CERCLA Hazardous Substances (40 CFR 302) not applicableCalifornia Proposition: Not applicable65		15. REGULATORY INFORMATION
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not applicable California Proposition : Not applicable 65	TSCA Status	
California Proposition : Not applicable 65	US. EPA CERCLA Hazardou	us Substances (40 CFR 302)
California Proposition : Not applicable 65	not applicable	
65		
SARA Title III Section 302 Extremely Hazardous Substance	-	1 : Not applicable
-	SARA Title III Section 302 E	Extremely Hazardous Substance

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Unless specific chemicals are identified under this section, this product is Not Applicable under this regulation

SARA Title III Section 313 Toxic Chemicals:

Unless specific chemicals are identified under this section, this product is Not Applicable under this regulation

Chemical Name	CAS-No.	Weight percent	
CHROMIUM III COMPOUNDSCHROMIUM III	68186-90-3	10.00 - 30.00	
COMPOUNDSANTIMONY			
COMPOUNDSCHROMIUM COMPOUNDS			

Canadian Regulations:

National Pollutant Release Inventory (NPRI)			
Chemical Name	CAS-No.	Weight	NPRI ID#
		percent	
Rutile, antimony chromium buff	68186-90-3	10.00 - 30.00	

WHMIS Classification : D2A

WHMIS Ingredient Disclosure List

CAS-No.	
1309-37-1	
68186-90-3	

:

DSL

All components of this product are on the Canadian Domestic Substances List (DSL) or are exempt.

National Inventories:

Australia AICS	:	Listed
China IECS	:	Listed
Europe EINECS	:	Listed
Japan ENCS	:	Listed
Korea KECI	:	Listed

Philippines PICCS : Listed

16. OTHER INFORMATION

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The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.