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MATERIAL SAFETY DATA SHEET 10148155 PU LLDPE MASTERBATCH

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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 :	10148155 PU LLDPE MASTERBATCH
Product code :	CC10148155
Chemical Name :	Mixture
CAS-No. :	Mixture
Product Use :	Industrial Applications

2. COMPOSITION/INFORMATION ON INGREDIENTS

Components	CAS-No.	Weight percent
Aluminum oxide	1344-28-1	1 - 5
Silica, amorphous	7631-86-9	1 - 5
Calcium carbonate	1317-65-3	5 - 10
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.
Skin	: Experience shows no unusual dermatitis hazard from routine handling.

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Medical Conditions		None known.
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
Flammable Limits Upper explosion limit Lower explosion limit Auto-ignition temperature	: : :	not applicable not applicable not applicable
Suitable extinguishing media	:	Carbon dioxide blanket, Water spray, Dry powder, Foam.
Special Fire Fighting Procedures	:	Fullface self-contained breathing apparatus (SCBA) used in positive pressure mode should be worn to prevent inhalation of airborne contaminants.
Unusual Fire/Explosion Hazards	:	Carbon dioxide (CO2), carbon monoxide (CO), oxides of nitrogen (NOx), other hazardous materials, and smoke are all possible.
	6. A	CCIDENTAL RELEASE MEASURES
Personal precautions	:	Wear appropriate personal protection during cleanup, such as impervious gloves, boots and coveralls.
Environmental precautions	:	Should not be released into the environment. The product should not be allowed to enter drains, water courses or the soil.
Methods for cleaning up	:	Clean up promptly by sweeping or vacuum. Package all material in plastic, cardboard or metal containers for disposal.
		7. HANDLING AND STORAGE



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Handling	:	Take measures to prevent the build up of electrostatic charge. Heat only in areas with appropriate exhaust ventilation.
Storage	:	Keep containers dry and tightly closed to avoid moisture absorption and contamination. Keep in a dry, cool place.
8. EX	POSU	RE CONTROLS/PERSONAL PROTECTION
Respiratory protection	:	No personal respiratory protective equipment normally required.
Eye/Face Protection	:	Safety glasses with side-shields
Hand protection	:	Protective gloves
Skin and body protection	:	Long sleeved clothing
Additional Protective Measures	:	Safety shoes
General Hygiene Considerations	:	Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.
Engineering measures	:	Heat only in areas with appropriate exhaust ventilation. Provide appropriate exhaust ventilation at machinery.
Exposure limit(s)		

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Components	Value	Exposure time	Exposure type	List:
Aluminum oxide	5 mg/m3	PEL:	Respirable fraction.	OSHA Z1
	15 mg/m3	PEL:	Total dust.	OSHA Z1
	5 mg/m3	Time Weighted Average (TWA):	Respirable fraction.	OSHA Z1A
	10 mg/m3	Time Weighted Average (TWA):	Total dust.	OSHA Z1A
	10 mg/m3	Time Weighted Average (TWA):		MX OEL
Calcium carbonate	5 mg/m3	PEL:	Respirable fraction.	OSHA Z1
	15 mg/m3	PEL:	Total dust.	OSHA Z1
	10 mg/m3	Time Weighted Average (TWA):		MX OEL
	20 mg/m3	Short Term Exposure Limit (STEL):		MX OEL
Silica, amorphous	6 mg/m3	Recommended exposure limit (REL):		NIOSH
	0.8 mg/m3	Time Weighted Average (TWA):		Z3
	10 mg/m3	Time Weighted Average (TWA):	Inhalable particulate.	MX OEL
	3 mg/m3	Time Weighted Average (TWA):	Respirable dust.	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
 PURPLE
 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.

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Hazardous Polymerization

: Will not occur.

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|------------------------------------------------|---|--------------------------------------------------------------------------------------------------|
| Conditions to avoid                            | : | Keep away from oxidizing agents and open flame. To avoid thermal decomposition, do not overheat. |
| Incompatible Materials                         | : | Incompatible with strong acids and oxidizing agents.                                             |
| Hazardous decomposition                        | : | Carbon dioxide (CO2), carbon monoxide (CO), oxides of nitrogen                                   |

#### 11. TOXICOLOGICAL INFORMATION

(NOx), other hazardous materials, and smoke are all possible.

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

products

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

| CAS-No.    | Chemical Name     | Effect           | Target Organ              |
|------------|-------------------|------------------|---------------------------|
| 1344-28-1  | Aluminum oxide    | Systemic effects | Eyes, Skin, Respiratory   |
|            |                   |                  | system.                   |
| 7631-86-9  | Silica, amorphous | Irritant         | Eyes, Respiratory system. |
| 1317-65-3  | Calcium carbonate | Irritant         | Eyes, Skin.               |
|            |                   | Systemic effects | Eyes, Skin, Respiratory   |
|            |                   |                  | system.                   |
| 13463-67-7 | Titanium dioxide  | Systemic effects | Respiratory system.       |

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.                                                       |
|-------------------------------|---|----------------------------------------------------------------------------------|
| 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. |

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| Additional advice             | : no data available                                                                                                                                                                                                                                                                                                                   |
|-------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                               | 13. DISPOSAL CONSIDERATIONS                                                                                                                                                                                                                                                                                                           |
| Product                       | : Like most thermoplastic plastics the product can be recycled. Where 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.                                                                                            |
|                               | 14. TRANSPORT INFORMATION                                                                                                                                                                                                                                                                                                             |
| U.S. DOT Classification       | : Not regulated for transportation.                                                                                                                                                                                                                                                                                                   |
| ICAO/IATA                     | : Refer to specific regulation.                                                                                                                                                                                                                                                                                                       |
| IMO/IMDG (maritime)           | : Refer to specific regulation.                                                                                                                                                                                                                                                                                                       |
|                               | 15. 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 Hazardou       | s Substances (40 CFR 302)                                                                                                                                                                                                                                                                                                             |
| not applicable                |                                                                                                                                                                                                                                                                                                                                       |
| California Proposition<br>65  | : Not applicable                                                                                                                                                                                                                                                                                                                      |
| 05                            |                                                                                                                                                                                                                                                                                                                                       |
| SARA Title III Section 302 E  | xtremely Hazardous Substance                                                                                                                                                                                                                                                                                                          |
| Unless specific chemicals are | identified under this section, this product is Not Applicable under this regulat                                                                                                                                                                                                                                                      |
| 1                             |                                                                                                                                                                                                                                                                                                                                       |

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SARA Title III Section 313 Toxic Chemicals:

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

Canadian Regulations:

| Chemical Name                                                     | lease Inventory (NI | CAS-No.                                         | Weight      | NPRI ID#   |
|-------------------------------------------------------------------|---------------------|-------------------------------------------------|-------------|------------|
|                                                                   |                     |                                                 | percent     |            |
| Aluminum oxide                                                    |                     | 1344-28-1                                       | 0.10 - 1.00 |            |
| WHMIS Classificatio<br>WHMIS Ingredient D<br>CAS-No.<br>1344-28-1 |                     |                                                 |             |            |
| 7631-86-9<br>DSL                                                  |                     | onents of this product<br>List (DSL) or are exe |             | n Domestic |
| tional Inventories:                                               |                     |                                                 |             |            |
| Australia AICS                                                    | : Listed            |                                                 |             |            |
| China IECS                                                        | : Listed            |                                                 |             |            |
| Europe EINECS                                                     | : Listed            |                                                 |             |            |
| Japan ENCS                                                        | : Listed            |                                                 |             |            |
| Korea KECI                                                        | : Listed            |                                                 |             |            |
| Philippines PICCS                                                 | : Listed            |                                                 |             |            |
| Philippines PICCS                                                 |                     |                                                 |             |            |

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.