MATERIAL SAFETY DATA SHEET **GREEN TPE 334-146 LQ**

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1. PRODUCT AND COMPANY IDENTIFICATION

POLYONE CORPORATION 33587 Walker Road, Avon Lake, OH 44012

| Telephone:Emergency telephone: | Product Stewardship (770) 271-5902 CHEMTREC 1-800-424-9300 (24hrs for spill, leak, fire, exposure or accident). |
|--------------------------------|---|
| Product name : | GREEN TPE 334-146 LQ |
| Product code : | CC10110859 |
| Chemical Name : | Mixture |
| CAS-No. : | Mixture |
| Product Use : | Industrial Applications |

2. COMPOSITION/INFORMATION ON REGULATED INGREDIENTS

| Components | CAS-No. | Weight % |
|-------------------|------------|----------|
| Silica, amorphous | 7631-86-9 | 0.1 - 1 |
| Titanium dioxide | 13463-67-7 | 1 - 5 |

3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

This mixture has not been evaluated as a whole for health effects. Information provided on health effects of this product is based on the individual components. However, some vapors or contaminants 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. See sections 8 and 11 for special precautions.

POTENTIAL HEALTH EFFECTS

| Routes of Exposure: | : Inhalation, Skin contact, Ingestion |
|---|--|
| Acute exposure | |
| Inhalation | : Inhalation of airborne droplets may cause irritation of the respiratory tract. |
| Ingestion | : May be harmful if swallowed. |
| Eyes | : Irritating to eyes and respiratory system. |
| Skin | : 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. |

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| | 4. FIRST AID MEASURES |
|--|--|
| Inhalation | : Move to fresh air in case of accidental inhalation of fumes from overheating or combustion. Seek medical attention after significant exposure. |
| Ingestion | : Do not induce vomiting without medical advice. Seek medical attention if necessary. |
| Eyes | : Rinse immediately with plenty of water 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. FIRE-FIGHTING MEASURES |
| Flash point | : Greater than 200 °F (93 °C) |
| Flammable Limits Upper explosion limit Lower explosion limit Autoignition temperature Suitable extinguishing media | Not applicable Not applicable Not applicable Carbon dioxide blanket, Dry powder, Foam. |
| Special Fire Fighting Procedures Unusual Fire/Explosion Hazards | 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. |
| | 5. ACCIDENTAL RELEASE MEASURES |
| Personal precautions | : Wear appropriate personal protection during cleanup, such as impervious gloves, boots and coveralls. |
| Environmental precautions | : The product should not be allowed to enter drains, water courses or the soil. Should not be released into the environment. |
| Methods for cleaning up | : Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Package all material in appropriate container for disposal. Refer to Section 13 of this MSDS for proper disposal methods. |
| | 7. HANDLING AND STORAGE |
| Handling | : Heat only in areas with appropriate exhaust ventilation. |
| Storage | : Keep containers dry and tightly closed to avoid moisture absorption |

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| | aı | nd contamination. Store in a c | ool dry place. | | |
|---|--|--|---|---|--|
| 8.1 | EXPOSURE | CONTROLS/PERSONAL | PROTECTION | | |
| Respiratory protection | : U | nder normal handling condition | ons a respirator may not b | be required. | |
| Eye/Face Protection : Safety glasses with side-shields | | | | | |
| Hand protection | : P | rotective gloves | | | |
| Skin and body protection | : L | ong sleeved clothing | | | |
| Additional Protective Measures | : S | afety shoes | | | |
| General Hygiene Considerations | | andle in accordance with good ractice. Wash hands before br | | | |
| Engineering measures | | eat only in areas with appropri ppropriate exhaust ventilation | | Provide | |
| Exposure limit(s) | | | | | |
| | | | | | |
| Components | Value | Exposure time | Exposure type | List: | |
| Components Silica, amorphous | Value 0.8 mg/m3 | Exposure time Time Weighted Average (TWA): | Exposure type | List: Z3 | |
| | | Time Weighted Average (TWA): Time Weighted Average | Exposure type Inhalable particulate. | | |
| | 0.8 mg/m3 | Time Weighted Average (TWA): Time Weighted Average (TWA): Time Weighted Average | | Z3 | |
| | 0.8 mg/m3 10 mg/m3 | Time Weighted Average (TWA): Time Weighted Average (TWA): Time Weighted Average (TWA): Time Weighted Average | Inhalable particulate. | Z3 MX OEL | |
| Silica, amorphous | 0.8 mg/m3 10 mg/m3 3 mg/m3 10 mg/m3 | Time Weighted Average (TWA): Time Weighted Average (TWA): Time Weighted Average (TWA): Time Weighted Average (TWA): | Inhalable particulate. Respirable dust. | Z3 MX OEL MX OEL ACGIH | |
| Silica, amorphous | 0.8 mg/m3 10 mg/m3 3 mg/m3 | Time Weighted Average (TWA): Time Weighted Average (TWA): Time Weighted Average (TWA): Time Weighted Average (TWA): PEL: Time Weighted Average | Inhalable particulate. | Z3 MX OEL MX OEL | |
| Silica, amorphous | 0.8 mg/m3 10 mg/m3 3 mg/m3 10 mg/m3 15 mg/m3 | Time Weighted Average (TWA): Time Weighted Average (TWA): Time Weighted Average (TWA): Time Weighted Average (TWA): PEL: | Inhalable particulate. Respirable dust. Total dust. | Z3 MX OEL MX OEL ACGIH OSHA Z1 | |
| Silica, amorphous | 0.8 mg/m3 10 mg/m3 3 mg/m3 10 mg/m3 10 mg/m3 20 mg/m3 | Time Weighted Average (TWA): Time Weighted Average (TWA): Time Weighted Average (TWA): Time Weighted Average (TWA): PEL: Time Weighted Average (TWA): Short Term Exposure Limit | Inhalable particulate. Respirable dust. Total dust. as Ti as Ti | Z3 MX OEL MX OEL ACGIH OSHA Z1 MX OEL | |
| Silica, amorphous Titanium dioxide | 0.8 mg/m3 10 mg/m3 3 mg/m3 10 mg/m3 10 mg/m3 20 mg/m3 9. PHYSIC | Time Weighted Average (TWA): Time Weighted Average (TWA): Time Weighted Average (TWA): Time Weighted Average (TWA): PEL: Time Weighted Average (TWA): Short Term Exposure Limit (STEL): | Inhalable particulate. Respirable dust. Total dust. as Ti as Ti PERTIES | Z3 MX OEL MX OEL ACGIH OSHA Z1 MX OEL MX OEL | |
| Silica, amorphous Titanium dioxide Form | 0.8 mg/m3 10 mg/m3 3 mg/m3 10 mg/m3 10 mg/m3 20 mg/m3 9. PHYSIC : liquid | Time Weighted Average (TWA): Time Weighted Average (TWA): Time Weighted Average (TWA): Time Weighted Average (TWA): PEL: Time Weighted Average (TWA): Short Term Exposure Limit (STEL): CAL AND CHEMICAL PRO | Inhalable particulate. Respirable dust. Total dust. as Ti as Ti PERTIES ration rate : Not | Z3 MX OEL MX OEL ACGIH OSHA Z1 MX OEL MX OEL | |
| Silica, amorphous Titanium dioxide Form Appearance | 0.8 mg/m3 10 mg/m3 3 mg/m3 10 mg/m3 10 mg/m3 20 mg/m3 20 mg/m3 9. PHYSIC : liquid : Visco | Time Weighted Average (TWA): Time Weighted Average (TWA): Time Weighted Average (TWA): Time Weighted Average (TWA): PEL: Time Weighted Average (TWA): Short Term Exposure Limit (STEL): CAL AND CHEMICAL PRODuct bus, liquid | Inhalable particulate. Respirable dust. Total dust. as Ti as Ti PERTIES ration rate : Not ic Gravity : Not | Z3 MX OEL MX OEL ACGIH OSHA Z1 MX OEL MX OEL established determined | |
| Silica, amorphous Titanium dioxide Form Appearance Color | 0.8 mg/m3 10 mg/m3 3 mg/m3 10 mg/m3 10 mg/m3 20 mg/m3 20 mg/m3 9. PHYSIC : liquid : Visco : GRE | Time Weighted Average (TWA): Time Weighted Average (TWA): Time Weighted Average (TWA): Time Weighted Average (TWA): PEL: Time Weighted Average (TWA): Short Term Exposure Limit (STEL): CAL AND CHEMICAL PRODUCTIONS, liquid EN | Inhalable particulate. Respirable dust. Total dust. as Ti as Ti PERTIES ration rate : Not ic Gravity : Not ensity : Not | Z3 MX OEL MX OEL ACGIH OSHA Z1 MX OEL MX OEL established determined applicable | |
| Silica, amorphous Titanium dioxide Form Appearance Color Odour | 0.8 mg/m3 10 mg/m3 3 mg/m3 10 mg/m3 10 mg/m3 20 mg/m3 20 mg/m3 9. PHYSIC : liquid : Visco : GRE : Very | Time Weighted Average (TWA): Short Term Exposure Limit (STEL): CAL AND CHEMICAL PRODUS, liquid Specifier EN Bulk d faint Vapou | Inhalable particulate. Respirable dust. Total dust. as Ti as Ti DPERTIES ration rate : Not c Gravity : Not ensity : Not r pressure : Not | Z3 MX OEL MX OEL ACGIH OSHA Z1 MX OEL MX OEL MX OEL | |
| Silica, amorphous Titanium dioxide Form Appearance Color | 0.8 mg/m3 10 mg/m3 3 mg/m3 10 mg/m3 15 mg/m3 10 mg/m3 20 mg/m3 20 mg/m3 9. PHYSIC : liquid : Visco : GRE : Very : Not a | Time Weighted Average (TWA): Short Term Exposure Limit (STEL): CAL AND CHEMICAL PRODUCTION, liquid EN Bulk d faint | Inhalable particulate. Respirable dust. Total dust. as Ti as Ti PPERTIES PERTIES ration rate : Not ration rate : Not ensity : Not r pressure : Not r density : Not | Z3 MX OEL MX OEL ACGIH OSHA Z1 MX OEL MX OEL established determined applicable | |

10. STABILITY AND REACTIVITY

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| Stability | : | Stable. |
|----------------------------------|---|--|
| Hazardous Polymerization | : | Will not occur. |
| Conditions to avoid | : | Keep away from oxidizing agents and open flame. |
| 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 |
|------------|-------------------|------------------|---------------------------|
| 7631-86-9 | Silica, amorphous | Irritant | Eyes, Respiratory 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 |
|-----------|-------------------|------------------|-----------------------|----------|
| 7631-86-9 | Silica, amorphous | Oral LD50Oral | 15,000 mg/kg22,500 | mouserat |
| | | LD50 | mg/kg | |

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

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| : Not readily biodegradable. |
|---|
| : Adverse ecological impact is not known or expected under normal use. |
| : Does not bioaccumulate. |
| : No data available |
| 13. DISPOSAL CONSIDERATIONS |
| : 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. |
| : 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 |
| |
| : Not regulated for transportation. |
| : Not regulated for transportation. |
| : Not regulated for transportation. |
| 15. REGULATORY INFORMATION |
| |
| : Classified as hazardous based on components. |
| : All components of this product are listed on or exempt from the TSCA Inventory. |
| Substances (40 CFR 302) |
| |
| : Not applicable |
| |

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SARA Title III Section 302 Extremely Hazardous Substance

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

Canadian Regulations:

National Pollutant Release Inventory (NPRI)

| Chemical Name | CAS-No. | Weight % | NPRI ID# |
|---------------------------------|------------|-------------|----------|
| Phenol, nonyl-, phosphite (3:1) | 26523-78-4 | 1.00 - 5.00 | |

WHMIS Classification : D2A

WHMIS Ingredient Disclosure List

| CAS-No. | |
|-----------|--|
| 1328-53-6 | |

DSL

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

National Inventories:

| Australia AICS | : | Listed |
|-------------------|---|----------------|
| China IECS | : | Not determined |
| Europe EINECS | : | Not determined |
| Japan ENCS | : | Not determined |
| Korea KECI | : | Listed |
| Philippines PICCS | : | Listed |

:

16. OTHER INFORMATION

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.