MATERIAL SAFETY DATA SHEET RALPH PERIWINKLE

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1. PRODUCT AND COMPANY IDENTIFICATION

POLYONE CORPORATION 33587 Walker Road, Avon Lake, OH 44012

| Telephone Emergency telephone Emergency telephone | : | Product Stewardship (770) 271-5902 CHEMTREC 1-800-424-9300 (24hrs for spill, leak, fire, exposure or accident). |
|---|---|---|
| Product name | : | RALPH PERIWINKLE |
| Product code | : | CC10026877 |
| Chemical Name | : | Mixture |
| CAS-No. | : | Mixture |
| Product Use | : | Industrial Applications |

2. COMPOSITION/INFORMATION ON REGULATED INGREDIENTS

| Components | CAS-No. | Weight % | | |
|------------------|------------|----------|--|--|
| 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 Ingestion | Resin particles, like other inert materials, can be mechanically irritating.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. |
| Chronic exposure | : Refer to Section 11 for Toxicological Information. |
| Medical Conditions Aggravated by Exposure: | : None known. |

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| 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. FIRE-FIGHTING MEASURES |
| Flash point | : | Not applicable |
| Flammable Limits | | |
| Upper explosion limit | | Not applicable |
| Lower explosion limit | ÷ | Not applicable |
| Autoignition temperature | ÷ | 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. Refer to Section 13 of this MSDS for proper disposal methods. |
| | | 7. HANDLING AND STORAGE |
| 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 |

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| 8. F | EXPOSURE | CONTROLS / PERSONA | AL PROTECTION | |
|-----------------------------------|-----------|--|-----------------------|------------------|
| Respiratory protection | : N | o personal respiratory prote | ective equipment norm | ally required. |
| Eye/Face Protection | : S | afety glasses with side-shie | lds | |
| Hand protection | : P | rotective gloves | | |
| Skin and body protection | : L | ong sleeved clothing | | |
| Additional Protective Measures | : S | afety shoes | | |
| General Hygiene Considerations | | landle in accordance with g Vash hands before breaks ar | | |
| Engineering measures | | leat only in areas with appropriate exhaust ventilation | | ion. Provide |
| Exposure limit(s) | | | | |
| Components | Value | Exposure time | Exposure type | List: |
| Titanium dioxide | 10 mg/m3 | Time Weighted Average (TWA): | 2 | ACGIH |
| | 15 mg/m3 | PEL: | Total dust. | OSHA Z1 |
| | 10 mg/m3 | Time Weighted Average (TWA): | e as Ti | MX OEL |
| | 20 mg/m3 | Short Term Exposure Lim (STEL): | nit as Ti | MX OEL |
| | | | | |
| | 9. PHYSIC | CAL AND CHEMICAL P | ROPERTIES | |
| Form | : Solic | l Fv | poration rate : | Not applicable |
| Appearance | : pelle | | cific Gravity : | Not determined |
| Color | : PUR | 1 | k density : | Not established |
| Odour | : Very | faint Var | pour pressure : | Not applicable |
| Melting point/range | | | oour density : | Not applicable |
| Boiling Point: | | applicable pH | : | Not applicable |
| Water solubility | : Insol | uble | | |
| | 10. 5 | STABILITY AND REACT | ΓΙVITY | |
| Stability | : S | table. | | |
| Hazardous Polymerization | n : V | Vill not occur. | | |
| Conditions to avoid | · K | leep away from oxidizing a | gents and open flame | To avoid thermal |

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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. |

decomposition, do not overheat.

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 |
|------------|------------------|------------------|---------------------|
| 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. | |
| Additional advice | No data available | |
| | 3. DISPOSAL CONSIDERATIONS | |
| Product | Like most thermoplastic plastics the product can be recycled. Whe possible recycling is preferred to disposal or incineration. The | ere |

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|--|--|
| | 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 (air) | : 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 | us Substances (40 CFR 302) |
| Not applicable | |
| | |
| California Propositior 65 | : Not applicable |
| SARA Title III Section 302 E | xtremely Hazardous Substance |
| Unless specific chemicals are | identified under this section, this product is Not Applicable under this regulation |
| SARA Title III Section 313 T | oxic Chemicals: |
| Unless specific chemicals are | identified under this section, this product is Not Applicable under this regulation |
| - | rechance under uns section, uns product is not Applicable under uns regulation |
| Canadian Regulations: | |
| | |
| | |



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|--|-------|------------------------------------|---|-------------------------------------|------------------------------|---------------------------|
| National Pollutant Releas Chemical Name Aluminum oxide | se Iı | nventory (NPRI) | CAS-No. 1344-28-1 | Weight % 0.10 - 1.00 | NPRI 13 | ID# |
| WHMIS Classification | : | D2A | | | | |
| DSL | : | Inventories or a product is on the | ponents of this pr re exempt. Howe e Canadian Non- Canada is restric | ever, at least one Domestic Subs | e component tances List (| t of this |
| National Inventories: | | | | | | |
| Australia AICS | : | Listed | | | | |
| China IECS | : | Listed | | | | |
| Europe EINECS | : | Listed | | | | |
| Japan ENCS | : | Listed | | | | |
| Korea KECI | : | Listed | | | | |
| Philippines PICCS | : | Listed | | | | |
| | | 16. OTHER I | NFORMATION | | | |

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.