

MATERIAL SAFETY DATA SHEET

RED

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1. PRODUCT AND COMPANY IDENTIFICATION

POLYONE CORPORATION 33587 Walker Road, Avon Lake, OH 44012

| NON-EMERGENCY TELEPHONE | : | Product Stewardship (770) 271-5902 |
|-------------------------------|---|--|
| Emergency telephone number | : | CHEMTREC 1-800-424-9300 (24hrs for spill, leak, fire, exposure or accident). |
| Product name | : | RED |
| Product code | : | CC10050709 |
| Chemical Name | : | Mixture |
| CAS-No. | : | Mixture |
| Product Use | : | Industrial Applications |

2. COMPOSITION/INFORMATION ON INGREDIENTS

| Components | CAS-No. | Weight % |
|------------------|------------|----------|
| Titanium dioxide | 13463-67-7 | 1 - 5 |

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 Eyes | Resin particles, like other inert materials, can be mechanically irritating. May be harmful if swallowed. 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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| | | 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. 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, foamnone. |
| 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 | • | Carbon dioxide (CO2), carbon monoxide (CO), oxides of nitrogen |
| Hazards | | (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. E | EXPOSURE | CONTROLS / PERSO | NAL | PROTECTION | |
|--|----------|---|--------|-----------------------|---|
| Respiratory protection | : N | : No personal respiratory protective equipment normally required. | | | |
| Eye/Face Protection | : S | afety glasses with side-s | hields | | |
| Hand protection | : P | : Protective gloves. | | | |
| Skin and body protection | : L | ong sleeved clothing. | | | |
| Additional Protective Measures | : S | : 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 | | Ieat only in areas with appropriate exhaust venti | | | Provide |
| Exposure limit(s) | | | | | |
| Components | Value | Exposure time | | Exposure type | List: |
| Titanium dioxide | 10 mg/m3 | Time Weighted Aver (TWA): | age | | ACGIH |
| | 15 mg/m3 | PEL: | | | OSHA Z1 |
| | 9. PHYSI | CAL AND CHEMICA | L PRC | PERTIES | |
| Form Appearance Color Odor Melting point/range Boiling Point: Water solubility | : Not | llets Specific Gravity: : Not determined | | | t determined t established t applicable t applicable |
| | 10. \$ | STABILITY AND REA | CTIV | ITY | |
| Stability | : S | table. | | | |
| Hazardous Polymerization | n : V | Vill not occur. | | | |
| Conditions to avoid | | Keep away from oxidizin ecomposition, do not ov | | | avoid thermal |
| | | | | and oxidizing agents. | |



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Hazardous decomposition:Carbon dioxide (CO2), carbon monoxide (CO), oxides of nitrogenproducts(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 | | | |
|----------------------------------|---|---|---------------------|--|--|--|
| 13463-67-7 | Titanium dioxide | Systemic effects | Respiratory system. | | | |
| | 12. ECOLOGIO | CAL INFORMATION | I | | | |
| Persistence and degrada | ability : Not readily bi | iodegradable. | | | | |
| Environmental Toxicity | | : Chemicals are not readily available as they are bound within the matrix of the polymer. | | | | |
| Bioaccumulation Poten | | : Chemicals are not readily available as they are bound within the matrix of the polymer. | | | | |
| Additional advice | : No data avail | able | | | | |
| | 13. DISPOSAL | CONSIDERATIONS | | | | |
| Product Contaminated packagin | possible recyc generator of v classification, applicable fec g : Recycling is p has the respon and disposal i | 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. 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. TRANSPO | RT INFORMATION | | | | |
| U.S. DOT Classificatio | n : Not regulated | for transportation. | | | | |
| ICAO/IATA (air) | : Refer to speci | : Refer to specific regulation. | | | | |
| IMO / IMDG (maritime | e) : Refer to speci | ific regulation. | | | | |
| | 15. REGULATO | DRY INFORMATION | V | | | |
| | | | | | | |



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| Revision Date 03/05/2004 Print Date 11/14/2 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 | RED | | |
|--|----------------------------------|------|---|
| 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 : This product does not contain a substance listed by California Prop 65 65 SARA Title III Section 302 Extremely Hazardous Substance Not applicable SARA Title III Section 313 Toxic Chemicals: Not applicable Not applicable SARA Title III Section 313 Toxic Chemicals: Not applicable SARA Title III Section 313 Toxic Chemicals: Not applicable WHMIS Classification Viational Pollutant Release Inventory (NPRI) Not applicable Not applicable All components of this product are on the Canadian Domestic Substances List (DSL) or are exempt. National Inventories: All components of this product are on the Canadian Domestic Substances List (DSL) or are exempt. National Inventories: Isted Australia AICS : Listed Europe EINECS : Isted Australia AICS : Listed Philippines PICCS : Listed | | | Page 5 of 6 Print Date 11/14/2011 |
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| Inventory. Inventories: Inventory. Inventories: Inventory. Inventories: Inventory. Inventories: Inventory. Inventories: Inventories | OSHA Status | : | Classified as hazardous based on components. |
| Not applicable California Proposition : This product does not contain a substance listed by California Prop 65 SARA Title III Section 302 Extreme Hazardous Substance Not applicable SARA Title III Section 313 Toxic Chemicals: Not applicable SARA Title III Section 313 Toxic Chemicals: Not applicable Satoral an Regulations: National Pollutant Release Invertory (NPRI) Not applicable SARA Title III Section 313 Toxic (NPRI) National Pollutant Release Invertory (NPRI) Not applicable Quarkative Applicable MHMIS Classification : Not applicable : Saturatia AlCS : Australia AlCS : Inventories: : Australia AlCS : Saturalia AlCS : Saturalia AlCS : Australia AlCS : Saturalia AlCS : Australia AlCS </td <td>TSCA Status</td> <td>:</td> <td>All components of this product are listed on or exempt from the TSCA Inventory.</td> | TSCA Status | : | All components of this product are listed on or exempt from the TSCA Inventory. |
| California Proposition : This product does not contain a substance listed by California Prop 65 SARA Title III Section 302 Extremely Hazardous Substance Not applicable SARA Title III Section 313 Toxic Chemicals: Not applicable Saradian Regulations: National Pollutant Release Inventory (NPRI) Not applicable WHMIS Classification : DSL : Australia AICS : Australia AICS : Listed Europe EINECS : Japan ENCS : Korea KECI : Listed Horippines PICCS : Listed | US. EPA CERCLA Hazardous S | ubs | stances (40 CFR 302) |
| 65 SARA Title III Section 302 Extremely Hazardous Substance Not applicable SARA Title III Section 313 Toxic Chemicals: Not applicable Canadian Regulations: National Pollutant Release Inventory (NPRI) Not applicable WHMIS Classification if Not controlled. DSL if Not controlled. DSL if All components of this product are on the Canadian Domestic Bustances List (DSL) or are exempt. National Inventories: National Inventories: Australia AICS if Listed China IECS if Disted Europe EINECS if Disted Listed Lapan ENCS if Listed Korea KECI if Listed | Not applicable | | |
| Not applicable SARA Title III Section 313 Tox:::::::::::::::::::::::::::::::::::: | | : | This product does not contain a substance listed by California Prop 65. |
| SARA Title III Section 313 Toxic Ulemicals: Not applicable Canadian Regulations: National Pollutant Release Unemtory (NPRI) Not applicable WHMIS Classification i Mot controlled. DSL Mitocontrolled. DSL All components of this product are on the Canadian Domestic Substances List (DSL) or are exempt. National Inventories: Australia AICS i Listed China IECS i Listed Liorope EINECS i Listed Liorope AINCS i Listed Augan ENCS i Listed Korea KECI i Listed Not determined Listed | SARA Title III Section 302 Extre | eme | ely Hazardous Substance |
| Not applicable canadian Regulations: National Pollutant Release National Pollutant Release National Pollutant Release Nutraplicable Nutraplicable Nutrafica Alcossification f Not controlled. National Inventories: Australia AlCS f Not controlled. National Inventories: Australia AlCS f Not controlled. National Inventories: Australia AlCS f Not controlled. National Inventories: Nutrafica AlCS f Not controlled. Nutrafica AlCS f Not c | Not applicable | | |
| Canadian Regulations: National Pollutant Release Invertory (NPRI) Not applicable WHMIS Classification i DSL Not controlled. DSL All components of this product are on the Canadian Domestic Substances List (DSL) or are exempt. National FECS i Australia AICS i Listed China IECS i Japan ENCS i Isted Korea KECI i Philippines PICCS i Listed | SARA Title III Section 313 Toxic | c C | Chemicals: |
| Not applicable WHMIS Classification i Not controlled. DSL China Components of this product are on the Canadian Domestic Substances List (DSL) or are exempt. Nativatia AICS I Sited China IECS I Sited Augre EINECS I Sited Agan ENCS I Sited Korea KECI I Sited Philippines PICCS I Sited | | | |
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| National Inventories: Australia AICS : Listed China IECS : Listed Europe EINECS : Not determined Japan ENCS : Listed Korea KECI : Listed Philippines PICCS : Listed | WHMIS Classification | : | Not controlled. |
| Australia AICS:ListedChina IECS:ListedEurope EINECS:Not determinedJapan ENCS:ListedKorea KECI:ListedPhilippines PICCS:Listed | DSL | : | |
| China IECS:ListedEurope EINECS:Not determinedJapan ENCS:ListedKorea KECI:ListedPhilippines PICCS:Listed | National Inventories: | | |
| Europe EINECS:Not determinedJapan ENCS:ListedKorea KECI:ListedPhilippines PICCS:Listed | Australia AICS | : | Listed |
| Japan ENCS : Listed Korea KECI : Listed Philippines PICCS : Listed | China IECS | : | Listed |
| Korea KECI : Listed Philippines PICCS : Listed | Europe EINECS | : | Not determined |
| Philippines PICCS : Listed | Japan ENCS | : | Listed |
| | Korea KECI | : | Listed |
| 16. OTHER INFORMATION | Philippines PICCS | : | Listed |
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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 when used in combination with any other materials and/or in any particular process or processing conditions.