

POLYONE CORPORATION**MATERIAL SAFETY DATA SHEET****RED / UV90Z**Version Number 1.3
Revision Date 03/30/2014Page 1 of 8
Print Date 4/8/2014**1. PRODUCT AND COMPANY IDENTIFICATION****POLYONE CORPORATION**
33587 Walker Road, Avon Lake, OH 44012

Telephone : 1 (440) 930-1000 or 1 (866) POLYONE
Emergency telephone : CHEMTREC 1-800-424-9300 (24hrs for spill, leak, fire, exposure
number or accident).
Product name : RED / UV90Z
Product code : CC10131657
Chemical Name : Mixture
CAS-No. : Mixture
Product Use : Industrial Applications

2. COMPOSITION/INFORMATION ON INGREDIENTS

| Components | CAS-No. | Weight percent |
|------------------|------------|----------------|
| Titanium dioxide | 13463-67-7 | 0.1 - 1 |
| Calcium stearate | 1592-23-0 | 1 - 5 |
| Iron oxide | 1309-37-1 | 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 : Particulates, like other inert materials can be mechanically irritating. If overheated or burnt, the polymer releases formaldehyde.
Ingestion : May be harmful if swallowed.
Eyes : Particulates, like other inert materials can be mechanically irritating.
Skin : Experience shows no unusual dermatitis hazard from routine handling.

POLYONE CORPORATION

MATERIAL SAFETY DATA SHEET

RED / UV90Z

Version Number 1.3
Revision Date 03/30/2014

Page 2 of 8
Print Date 4/8/2014

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
- Flammable Limits
Upper explosion limit : not applicable
Lower explosion limit : not applicable
Auto-ignition 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 (NO_x), other hazardous materials, and smoke are all possible. If overheated or burnt, the polymer releases formaldehyde. May burn with invisible flame.

6. ACCIDENTAL 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

POLYONE CORPORATION

MATERIAL SAFETY DATA SHEET

RED / UV90Z

Version Number 1.3
Revision Date 03/30/2014

Page 3 of 8
Print Date 4/8/2014

- Handling : Take measures to prevent the build up of electrostatic charge. Open container only in a well-ventilated area. 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. EXPOSURE CONTROLS/PERSONAL PROTECTION

- Respiratory protection : No personal respiratory protective equipment normally required. When temperatures exceed 230°C (446°F) and ventilation is inadequate to maintain concentrations below exposure limits, use a positive air supplied respirator. Air purifying respirators may not provide adequate protection.
- Eye/Face Protection : Safety glasses with side-shields. Wear face-shield and protective suit for abnormal processing problems.
- 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)

POLYONE CORPORATION

MATERIAL SAFETY DATA SHEET

RED / UV90Z

Version Number 1.3
Revision Date 03/30/2014

Page 4 of 8
Print Date 4/8/2014

| Components | Value | Exposure time | Exposure type | List: |
|------------------|----------|-----------------------------------|----------------------|----------|
| Calcium stearate | 10 mg/m3 | Time Weighted Average (TWA): | | ACGIH |
| 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 |
| 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 | : solid | Evaporation rate | : Not applicable |
| Appearance | : pellets, Slabs | Specific Gravity | : Not determined |
| Colour | : RED | Bulk density | : Not established |
| Odour | : formaldehyde-like | Vapour pressure | : not applicable |
| Melting point/range | : Not determined | Vapour density | : not applicable |
| Boiling Point: | : not applicable | pH | : not applicable |
| Water solubility | : insoluble | | |

10. STABILITY AND REACTIVITY

| | |
|--------------------------|---|
| Stability | : The product is stable if stored and handled as prescribed. |
| Hazardous Polymerization | : Will not occur. |
| Conditions to avoid | : Maintain polymer temperature below 230°C (446°F). Avoid prolonged exposure at or above recommended processing temperature. |
| Incompatible Materials | : Incompatible with strong oxidizers and with strong acids and bases (decomposes to form formaldehyde). At melt temperatures, acetal resins are incompatible with halogenated polymers such as vinyl (PVC) and any elastomers containing any halogenated polymers. At processing conditions, these materials are mutually destructive and involve rapid degradation. Even small amounts of such contaminants can cause sudden and spontaneous formaldehyde gas formation. Workplace fume well above threshold levels are a likely result. Unsafe pressurization of equipment such as extruder or mold can also result. Thoroughly purge and mechanically clean processing |

POLYONE CORPORATION

MATERIAL SAFETY DATA SHEET

RED / UV90Z

Version Number 1.3
Revision Date 03/30/2014

Page 5 of 8
Print Date 4/8/2014

equipment to avoid even trace quantities of halogenated materials from coming in contact with the acetal. Prevent contamination of virgin or rework resin.

Hazardous decomposition products : Carbon dioxide (CO₂), carbon monoxide (CO), oxides of nitrogen (NO_x), other hazardous materials, and smoke are all possible. If overheated or burnt, the polymer releases formaldehyde. Decomposition of this material depends on the length of time it is exposed to elevated temperatures. At the recommended processing temperature of 210°C-220°C (410°F-428°F), decomposition should not be significant until after 30 minutes. Decomposition may be accelerated by contaminants, pigments and/or other additives.

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. |
| 1309-37-1 | Iron oxide | 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 |
|-----------|------------------|-----------|------------|---------|
| 1592-23-0 | Calcium stearate | Oral LD50 | > 10 gm/kg | rat |

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.

POLYONE CORPORATION

MATERIAL SAFETY DATA SHEET

RED / UV90Z

Version Number 1.3
Revision Date 03/30/2014

Page 6 of 8
Print Date 4/8/2014

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 : not applicable

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 Hazardous Substances (40 CFR 302)

not applicable

California Proposition : Not applicable
65

POLYONE CORPORATION**MATERIAL SAFETY DATA SHEET****RED / UV90Z**Version Number 1.3
Revision Date 03/30/2014Page 7 of 8
Print Date 4/8/2014

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 percent | NPRI ID# |
|--------------------------------|------------|----------------|----------|
| Rutile, antimony chromium buff | 68186-90-3 | 0.10 - 1.00 | |

WHMIS Classification : D2A

WHMIS Ingredient Disclosure List

| CAS-No. |
|-----------|
| 1309-37-1 |

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 : 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.



POLYONE CORPORATION

MATERIAL SAFETY DATA SHEET

RED / UV90Z

Version Number 1.3
Revision Date 03/30/2014

Page 8 of 8
Print Date 4/8/2014