# POLYONE CORPORATION

## MATERIAL SAFETY DATA SHEET

## *TITANIUM*



### 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 number** | : | **CHEMTREC 1-800-424-9300 (24hrs for spill, leak, fire, exposure or accident).** |
| Product name | : | TITANIUM |
| Product code | : | CC10184821 |
| Chemical Name | : | Mixture |
| CAS-No. | : | Mixture |
| Product Use | : | Industrial Applications |

### 2. COMPOSITION/INFORMATION ON INGREDIENTS

| Components | CAS-No. | Weight percent |
|---|---|---|
| Phenol, 2-(2H-benzotriazol-2-yl)-4,6-bis(1,1-dimethylpropyl)- | 25973-55-1 | 1 - 5 |
| Mica | 12001-26-2 | 5 - 10 |
| Titanium dioxide | 13463-67-7 | 5 - 10 |
| Aluminum | 7429-90-5 | 10 - 30 |

### 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 | : | Resin particles, like other inert materials, can be mechanically irritating. |
| 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. |

**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 : Class D special powder against metal fire, Dry chemical.

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 : Dust containing aluminum powder can be explosive. Do not use a solid water stream as it may scatter and spread fire. Carbon dioxide (CO2), carbon monoxide (CO), oxides of nitrogen (NOx), other hazardous materials, and smoke are all possible.

## 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

| | | |
|---|---|---|
| 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. EXPOSURE CONTROLS/PERSONAL PROTECTION

| | | |
|---|---|---|
| Respiratory protection | : | No personal respiratory protective equipment normally required. If dusty conditions occur wear appropriate respiratory protection. |
| Eye/Face Protection | : | Safety glasses with side-shields |
| Hand protection | : | Protective gloves. Refer to equipment supplier to ensure protection. |
| 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)

| Components | Value | Exposure time | Exposure type | List: |
|---|---|---|---|---|
| Aluminum | 1 mg/m3 | Time Weighted Average (TWA): | Respirable fraction. | ACGIH |
| | 10 mg/m3 | Recommended exposure limit (REL): | Total | NIOSH |
| | 5 mg/m3 | Recommended exposure limit (REL): | Respirable. | NIOSH |
| | 5 mg/m3 | Recommended exposure limit (REL): | Welding fume or pyrophoric powder. as Al | NIOSH |
| | 15 mg/m3 | PEL: | Total dust. as Al | OSHA Z1 |
| | 5 mg/m3 | PEL: | Respirable dust. as Al | OSHA Z1 |
| | 15 mg/m3 | Time Weighted Average (TWA): | Total dust. as Al | OSHA Z1A |
| | 5 mg/m3 | Time Weighted Average (TWA): | Respirable dust. as Al | OSHA Z1A |
| | 5 mg/m3 | Time Weighted Average (TWA): | Pyrophoric powder. as Al | OSHA Z1A |
| | 5 mg/m3 | Time Weighted Average (TWA): | Fume. as Al | OSHA Z1A |
| | 5 mg/m3 | Time Weighted Average (TWA): | Welding fume. | MX OEL |
| | 10 mg/m3 | Time Weighted Average (TWA): | Dust. | MX OEL |
| | 5 mg/m3 | Time Weighted Average (TWA): | Pyrophoric powder. | MX OEL |
| Mica | 3 mg/m3 | Time Weighted Average (TWA): | Respirable fraction. | ACGIH |
| | 3 mg/m3 | Recommended exposure limit (REL): | Respirable. | NIOSH |
| | 3 mg/m3 | Time Weighted Average (TWA): | Respirable dust. | OSHA Z1A |
| | 3 mg/m3 | Time Weighted Average (TWA): | | 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 | : solid | Evapouration rate | : Not applicable |
| Appearance | : powder, granular | Specific Gravity | : Not determined |
| Colour | : GREY | Bulk density | : Not determined |

| | | | | | |
|---|---|---|---|---|---|
| Odour | : | very faint | 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 : To avoid thermal decomposition, do not overheat. Keep away from oxidizing agents and open flame.

Incompatible Materials : Incompatible with acids and bases., Oxidizing agents, Halogenated compounds

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 |
|---|---|---|---|
| 25973-55-1 | Phenol, 2-(2H-benzotriazol-2-yl)-4,6-bis(1,1-dimethylpropyl)- | Systemic effects | Kidney, Liver, reproductive system. |
| 12001-26-2 | Mica | Systemic effects | Respiratory system. |
| 13463-67-7 | Titanium dioxide | Systemic effects | Respiratory system. |
| 7429-90-5 | Aluminum | Irritant | Skin, Respiratory system. |
| | | Systemic effects | Eyes, Skin, 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 |

## 13. DISPOSAL CONSIDERATIONS

| | | |
|---|---|---|
| Product | : | 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 65 : Not applicable

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

| Chemical Name | CAS-No. | Weight percent |
|---|---|---|
| ALUMINUM (FUME OR DUST)ALUMINUM (FUME OR DUST) | 7429-90-5 | 10.00 - 30.00 |

Canadian Regulations:

National Pollutant Release Inventory (NPRI)

| Chemical Name | CAS-No. | Weight percent | NPRI ID# |
|---|---|---|---|
| Aluminum | 7429-90-5 | 10.00 - 30.00 | |
| 2-Propenoic acid, 2-methyl-, methyl ester | 80-62-6 | 0.10 - 1.00 | |

WHMIS Classification : D2A

WHMIS Ingredient Disclosure List

| CAS-No. |
|---|
| 7429-90-5 |
| 12001-26-2 |

DSL : DSL status has not been determined. Quantity use in Canada may be restricted by regulations.

National Inventories:

Australia AICS : Not determined

China IECS : Not determined

Europe EINECS : Listed

Japan ENCS : Not determined

| | | |
|---|---|---|
| Korea KECI | : | Not determined |
| Philippines PICCS | : | Not determined |

## 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.