

POLYONE CORPORATION**MATERIAL SAFETY DATA SHEET****TAN 452C #2**Version Number 1.0
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Print Date 1/8/2012**1. PRODUCT AND COMPANY IDENTIFICATION****POLYONE CORPORATION**
33587 Walker Road, Avon Lake, OH 44012Telephone : Product Stewardship (770) 271-5902
Emergency telephone : **CHEMTREC 1-800-424-9300 (24hrs for spill, leak, fire, exposure or accident).**Product name : TAN 452C #2
Product code : CC10122854
Chemical Name : Mixture
CAS-No. : Mixture
Product Use : Industrial Applications**2. COMPOSITION/INFORMATION ON REGULATED INGREDIENTS**

| Components | CAS-No. | Weight % |
|---|-------------|----------|
| Chromium (III) oxide | 1308-38-9 | 1 - 5 |
| Silica, amorphous, fumed, crystal-free | 112945-52-5 | 1 - 5 |
| Silica, amorphous, precipitated and gel | 112926-00-8 | 1 - 5 |
| Iron chromite brown spinel | 12737-27-8 | 1 - 5 |
| Glyceryl monostearate | 31566-31-1 | 5 - 10 |
| Rutile, antimony chromium buff | 68186-90-3 | 10 - 30 |
| Titanium dioxide | 13463-67-7 | 30 - 60 |

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.



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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. FIRE-FIGHTING MEASURES

- Flash point** : Not applicable
- Flammable Limits**
- Upper explosion limit** : Not applicable
 - Lower explosion limit** : Not applicable
- Autoignition temperature** : Not relevant
- 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.

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. Refer to Section 13 of this MSDS for proper disposal methods.

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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)

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| Components | Value | Exposure time | Exposure type | List: |
|---|-----------|-----------------------------------|------------------------|----------|
| Chromium (III) oxide | 0.5 mg/m3 | Recommended exposure limit (REL): | as Cr | NIOSH |
| | 0.5 mg/m3 | PEL: | as Cr | OSHA Z1 |
| Glyceryl monostearate | 10 mg/m3 | Time Weighted Average (TWA): | | ACGIH |
| Rutile, antimony chromium buff | 0.5 mg/m3 | Recommended exposure limit (REL): | as Cr | NIOSH |
| | 0.5 mg/m3 | PEL: | as Cr | OSHA Z1 |
| | 0.5 mg/m3 | Time Weighted Average (TWA): | as Sb | ACGIH |
| | 0.5 mg/m3 | Recommended exposure limit (REL): | as Sb | NIOSH |
| | 0.5 mg/m3 | PEL: | as Sb | OSHA Z1 |
| | 0.5 mg/m3 | Time Weighted Average (TWA): | as Sb | OSHA Z1A |
| | 0.5 mg/m3 | Time Weighted Average (TWA): | as Sb | MX OEL |
| Silica, amorphous, fumed, crystal-free | 0.8 mg/m3 | Time Weighted Average (TWA): | | Z3 |
| | 10 mg/m3 | Time Weighted Average (TWA): | Inhalable particulate. | MX OEL |
| | 3 mg/m3 | Time Weighted Average (TWA): | Respirable dust. | MX OEL |
| Silica, amorphous, precipitated and gel | 6 mg/m3 | Time Weighted Average (TWA): | | OSHA Z1A |
| | 10 mg/m3 | Time Weighted Average (TWA): | | MX OEL |
| | 0.8 mg/m3 | Time Weighted Average (TWA): | | Z3 |
| 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 |
| Iron chromite brown spinel | 0.5 mg/m3 | Recommended exposure limit (REL): | as Cr | NIOSH |
| | 0.5 mg/m3 | PEL: | as Cr | OSHA Z1 |

9. PHYSICAL AND CHEMICAL PROPERTIES

| | | | |
|------------|--------------------|------------------|------------------|
| Form | : Solid | Evaporation rate | : Not applicable |
| Appearance | : powder, granular | Specific Gravity | : Not applicable |
| Color | : TAN | Bulk density | : Not determined |
| Odour | : Very faint | Vapour pressure | : Not applicable |

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Melting point/range : Not determined Vapour density : Not applicable
Boiling Point: : Not applicable pH : Not applicable
Water solubility : Insoluble

10. STABILITY AND REACTIVITY

Stability : Stable.
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 strong acids and oxidizing agents.
Hazardous decomposition products : Carbon dioxide (CO₂), carbon monoxide (CO), oxides of nitrogen (NO_x), 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 |
|-------------|---|------------------|---------------------------------|
| 1308-38-9 | Chromium (III) oxide | Irritant | Eyes, Skin. |
| | | sensitizer | Skin. |
| 112945-52-5 | Silica, amorphous, fumed, crystal-free | Irritant | Eyes, Respiratory system. |
| 112926-00-8 | Silica, amorphous, precipitated and gel | Irritant | Respiratory system, Eyes. |
| 12737-27-8 | Iron chromite brown spinel | Irritant | Eyes, Skin, Respiratory system. |
| 68186-90-3 | Rutile, antimony chromium buff | Irritant | Eyes, Skin, 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 |
|-------------|--|-----------|-------------|---------|
| 112945-52-5 | Silica, amorphous, fumed, crystal-free | Oral LD50 | 3,160 mg/kg | rat |

Carcinogenicity

This product contains the following components which, in their pure form, have the following carcinogenicity data:

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| 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.

Additional Health Hazard Information:

Chromium (III) oxide 1308-38-9 The bi- and trivalent forms of chrome have a low order of acute toxicity, but may cause skin sensitization and irritation to the eyes. No effects have been reported for chromium (III) oxide. Chromium (III) compounds are not considered carcinogenic in animals or humans.

Additional Health Hazard Information:

Iron chromite brown spinel 12737-27-8 The bi- and trivalent forms of chrome have a low order of acute toxicity, but may cause skin sensitization and irritation to the eyes. No effects have been reported for chromium (III) oxide. Chromium (III) compounds are not considered carcinogenic in animals or humans.

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

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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 Hazardous Substances (40 CFR 302)

| Chemical Name | CAS-No. | RQ for component | RQ for Mixture/Product |
|----------------------|-----------|------------------|------------------------|
| Chromium (III) oxide | 1308-38-9 | 010 lbs | 284 LB |

California Proposition : 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

| Chemical Name | CAS-No. | Weight % |
|--|------------|---------------|
| CHROMIUM III COMPOUNDS CHROMIUM COMPOUNDS | 1308-38-9 | 1.00 - 5.00 |
| CHROMIUM III COMPOUNDS CHROMIUM III COMPOUNDS ANTIMONY COMPOUNDS | 68186-90-3 | 10.00 - 30.00 |
| CHROMIUM III COMPOUNDS CHROMIUM COMPOUNDS | 12737-27-8 | 1.00 - 5.00 |

Canadian Regulations:

National Pollutant Release Inventory (NPRI)

| Chemical Name | CAS-No. | Weight % | NPRI ID# |
|---------------|---------|----------|----------|
|---------------|---------|----------|----------|

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| | | | |
|--------------------------------|------------|---------------|--|
| Chromium (III) oxide | 1308-38-9 | 1.00 - 5.00 | |
| Rutile, antimony chromium buff | 68186-90-3 | 10.00 - 30.00 | |
| Iron chromite brown spinel | 12737-27-8 | 1.00 - 5.00 | |

WHMIS Classification : D2A

WHMIS Ingredient Disclosure List

| |
|------------|
| CAS-No. |
| 1308-38-9 |
| 68186-90-3 |
| 12737-27-8 |

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 : 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.