

MATERIAL SAFETY DATA SHEET

GRAY M5431-A

Version Number 1.0
Revision Date 10/05/2001

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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 : GRAY M5431-A
 Product code : CC10002472
 Chemical Name : Mixture
 CAS-No. : Mixture
 Product Use : Industrial Applications

2. COMPOSITION/INFORMATION ON INGREDIENTS

| Components | CAS-No. | Weight % |
|--|------------|----------|
| 1,6-Hexanediamine, N,N'-bis(2,2,6,6-tetramethyl-4-piperidiny)-, polymer with 2,4,6-trichloro-1,3,5-triazine, reaction products with2 | 70624-18-9 | 5 - 10 |
| Chromium (III) oxide | 1308-38-9 | 1 - 5 |
| Calcium carbonate | 1317-65-3 | 5 - 10 |
| Titanium dioxide | 13463-67-7 | 5 - 10 |

3. HAZARDS IDENTIFICATION**EMERGENCY OVERVIEW**

This mixture has not been evaluated as a whole. All ingredients are bound and potential for hazardous exposure as shipped is minimal. However, some fumes may be released upon heating or crosslinking and the end-user (fabricator) must take the necessary precautions (mechanical ventilation, respiratory protection, etc.) to protect his employee from exposure. See Sections 3 and 11 for special precautions.

POTENTIAL HEALTH EFFECTS

Routes of Exposure: : Inhalation, Ingestion, Skin contact

Acute exposure

Inhalation : Resin particles, like other inert materials, can be mechanically irritating.
 Ingestion : 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.

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Chronic exposure : Refer to Section 11 for Toxicological Information.

Medical Conditions : None known.

Aggravated by Exposure:

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 : None

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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- 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.
- Eye/Face Protection : Safety glasses with side-shields.
- 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)

| Components | Value | Exposure time | Exposure type | List: |
|----------------------|-----------------------|------------------------------|----------------------|---------|
| Calcium carbonate | 10 mg/m ³ | Time Weighted Average (TWA): | Dust. | ACGIH |
| | 5 mg/m ³ | PEL: | Respirable fraction. | OSHA Z1 |
| | 15 mg/m ³ | PEL: | Total dust. | OSHA Z1 |
| Chromium (III) oxide | 0.5 mg/m ³ | Time Weighted Average (TWA): | as Cr | ACGIH |
| Titanium dioxide | 10 mg/m ³ | Time Weighted Average (TWA): | Total dust. | ACGIH |
| | 15 mg/m ³ | PEL: | Total dust. | OSHA Z1 |

9. PHYSICAL AND CHEMICAL PROPERTIES

- | | | | |
|---------------------|-------------------|------------------|-------------------|
| Form | : Solid | Evaporation rate | : Not applicable. |
| Appearance | : Pellets | Specific Gravity | : Not determined. |
| Color | : GREY | Bulk density | : Not established |
| Odor | : Very faint | Vapor pressure | : Not applicable |
| Melting point/range | : Not determined. | Vapor density | : Not applicable |
| Boiling Point: | : Not applicable | pH | : Not applicable |

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Water solubility : Insoluble

10. STABILITY AND REACTIVITY

Stability : Stable.

Hazardous Polymerization : Will not occur.

Conditions to avoid : Keep away from oxidizing agents and open flame. To avoid thermal decomposition, do not overheat.

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 |
|------------|--|------------------|-----------------------------------|
| 70624-18-9 | 1,6-Hexanediamine, N,N'-bis(2,2,6,6-tetramethyl-4-piperidiny)-,polymer with 2,4,6-trichloro-1,3,5-triazine, reaction products with 2 | Highly Toxic | Refer to MSDS for Toxicity Data.. |
| 1317-65-3 | Calcium carbonate | Irritant | Eyes, Skin. |
| | | Systemic effects | 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 |
|------------|--|-------------------|---------------------------|------------|
| 70624-18-9 | 1,6-Hexanediamine, N,N'-bis(2,2,6,6-tetramethyl-4-piperidiny)-,polymer with 2,4,6-trichloro-1,3,5-triazine, reaction products with 2 | LC50 Oral LD50 | 112 mgm34H 9,910 mg/kg | rat rat |

Additional Health Hazard Information:

Chromium (III) oxide 1308-38-9 The trivalent form has a low order of toxicity but may causedermatitis, pulmonary sensitization and corrosive effect on eyes.

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- Persistence and degradability : Not readily biodegradable.
- Environmental Toxicity : Chemicals are not readily available as they are bound within the matrix of the polymer.
- Bioaccumulation Potential : Chemicals are not readily available as they are bound within the matrix of the polymer.
- Additional advice : No data available.

13. DISPOSAL CONSIDERATIONS

- Product : Like most thermoplastics 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. D.O.T. / CA T.D.G. Classification (Non-bulk ground) : Not regulated for transportation.
- ICAO/IATA : Not regulated for transportation.
- IMO / IMDG : Not regulated for transportation.

15. REGULATORY INFORMATION

US Regulations:

- OSHA Status : Classified as hazardous based on components.
- TSCA Status : All components of this product are listed on the TSCA inventory or are exempt.
- California Proposition 65 : This product does not contain a substance listed by California Prop 65.

SARA Title III Section 313 Toxic Chemicals:

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| Chemical Name | CAS-No. | Weight % |
|------------------------|-----------|----------|
| CHROMIUM III COMPOUNDS | 1308-38-9 | 1.18 |

Canadian Regulations:

WHMIS Classification : D1A

WHMIS Ingredient Disclosure List

| CAS-No. |
|-----------|
| 1308-38-9 |
| 1309-37-1 |

DSL : Listed.

National Inventories:

Australia AICS : Listed.

China IECS : Listed.

Europe EINECS : Not determined.

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.