

MATERIAL SAFETY DATA SHEET

BROWN

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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 : BROWN
Product code : CC10146778
Chemical Name : Mixture
CAS-No. : Mixture

Product Use : Industrial Applications

2. COMPOSITION/INFORMATION ON INGREDIENTS

| Components | CAS-No. | Weight percent |
|--|------------|----------------|
| Manganese antimony titanium brown rutile | 68412-38-4 | 1 - 5 |
| (C.I. Pigment Yellow 164) | | |
| Iron oxide | 1309-37-1 | 1 - 5 |
| Nickel iron chromite black spinel (C.I. | 71631-15-7 | 10 - 30 |
| Pigment Black 30) | | |

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 enduser (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 : 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.



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> 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

Move to fresh air in case of accidental inhalation of fumes from Inhalation

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

Unusual Fire/Explosion

Hazards

contaminants. 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.



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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.

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)



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| Components | Value | Exposure time | Exposure type | List: |
|---|----------------|-----------------------------------|------------------------------|----------|
| Nickel iron chromite black spinel (C.I. Pigment Black 30) | 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 Cr | OSHA Z1A |
| | 0.015 mg/m3 | Recommended exposure limit (REL): | as Ni | NIOSH |
| | 1 mg/m3 | PEL: | as Ni | OSHA Z1 |
| | 1 mg/m3 | Time Weighted Average (TWA): | as Ni | OSHA Z1A |
| | 0.2 mg/m3 | Time Weighted Average (TWA): | Inhalable fraction. as Ni | ACGIH |
| Manganese antimony titanium brown rutile (C.I. Pigment Yellow 164) | 1 mg/m3 | Recommended exposure limit (REL): | Fume. as Mn | NIOSH |
| | 3 mg/m3 | Short Term Exposure Limit (STEL): | Fume. as Mn | NIOSH |
| | 5 mg/m3 | Ceiling Limit Value: | as Mn | OSHA Z1 |
| | 5 mg/m3 | Ceiling Limit Value: | as Mn | OSHA Z1A |
| | 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 |
| 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 |

9. PHYSICAL AND CHEMICAL PROPERTIES

Form Evapouration rate : Not applicable : solid : Not determined Appearance : pellets Specific Gravity Colour : BROWN Bulk density : Not established Odour : very faint Vapour pressure : not applicable Melting point/range : Not determined : not applicable Vapour density Boiling Point: : not applicable pН : not applicable

Water solubility : insoluble



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10. STABILITY AND REACTIVITY

Stability : The product is stable if stored and handled as prescribed.

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 (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 |
|------------|-----------------------------|------------------|---------------------|
| 68412-38-4 | Manganese antimony | Irritant | Eyes, Skin. |
| | titanium brown rutile (C.I. | | |
| | Pigment Yellow 164) | | |
| 1309-37-1 | Iron oxide | Systemic effects | Respiratory system. |
| 71631-15-7 | Nickel iron chromite black | Irritant | Eyes, Skin. |
| | spinel (C.I. Pigment Black | | |
| | 30) | | |
| | | sensitizer | Skin. |

Carcinogenicity

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

| CAS-No. | Chemical Name | OSHA | IARC | NTP |
|------------|--------------------------------|------|------|-----|
| 71631-15-7 | Nickel iron chromite black | no | 1 | no |
| | spinel (C.I. Pigment Black 30) | | | |

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.



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Additional Health Hazard Information:

Nickel iron chromite black spinel (C.I. Pigment Black 30) 71631-15-7 Skin sensitizer "nickel itch", with pulmonary, brain, liver, kidney and muscle effects.

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 : 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



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California Proposition : WARNING! This product contains a chemical known to the State of

65 California to cause cancer.

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 |
|------------------------------------|------------|----------------|
| CHROMIUM III COMPOUNDSCHROMIUM III | 71631-15-7 | 10.00 - 30.00 |
| COMPOUNDSCHROMIUM COMPOUNDSNICKEL | | |
| COMPOUNDS | | |
| MANGANESE COMPOUNDSMANGANESE | 68412-38-4 | 1.00 - 5.00 |
| COMPOUNDS ANTIMONY COMPOUNDS | | |

Canadian Regulations:

National Pollutant Release Inventory (NPRI)

| Traditional Tolletonic Trolleton In Control (1717 111) | | | |
|--|------------|---------------|----------|
| Chemical Name | CAS-No. | Weight | NPRI ID# |
| | | percent | |
| Nickel iron chromite black spinel (C.I. Pigment | 71631-15-7 | 10.00 - 30.00 | |
| Black 30) | | | |
| Manganese antimony titanium brown rutile (C.I. | 68412-38-4 | 1.00 - 5.00 | |
| Pigment Yellow 164) | | | |
| | | 1.00 - 5.00 | |

WHMIS Classification : D2B

WHMIS Ingredient Disclosure List

| CAS-No. |
|------------|
| 71631-15-7 |
| 68412-38-4 |
| 1309-37-1 |

DSL : All components of this product are on the Canadian Domestic

Substances List (DSL) or are exempt.

National Inventories:



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Australia AICS : Listed

China IECS : Listed

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.