MATERIAL SAFETY DATA SHEET MAROON 470

Version Number 1.0 Revision Date 05/05/2009

Page 1 of 7 Print Date 1/7/2012

1. PRODUCT AND COMPANY IDENTIFICATION

POLYONE CORPORATION 33587 Walker Road, Avon Lake, OH 44012

| Telephone Emergency telephone | : | Product Stewardship (770) 271-5902 CHEMTREC 1-800-424-9300 (24hrs for spill, leak, fire, exposure or accident). |
|----------------------------------|---|---|
| Product name | : | MAROON 470 |
| Product code | : | CC10116247 |
| Chemical Name | : | Mixture |
| CAS-No. | : | Mixture |
| Product Use | : | Industrial Applications |

2. COMPOSITION/INFORMATION ON REGULATED INGREDIENTS

| Components | CAS-No. | Weight % |
|--------------------------------|------------|----------|
| Iron oxide | 1309-37-1 | 5 - 10 |
| Rutile, antimony chromium buff | 68186-90-3 | 5 - 10 |

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 | : 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. |
| Chronic exposure | : Refer to Section 11 for Toxicological Information. |

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MATERIAL SAFETY DATA SHEET MAROON 470

Version Number 1.0 Revision Date 05/05/2009 Page 2 of 7 Print Date 1/7/2012

| 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 Lower explosion limit Autoignition temperature Suitable extinguishing media | Not applicable Not applicable Not applicable Carbon dioxide blanket, Water spray, Dry powder, Foam. | | | | | |
| Special Fire Fighting Procedures Unusual Fire/Explosion | Fullface self-contained breathing apparatus (SCBA) used in positive pressure mode should be worn to prevent inhalation of airborne contaminants. Carbon dioxide (CO2), carbon monoxide (CO), oxides of nitrogen | | | | | |
| Hazards | (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. Refer to Section 13 of this MSDS for proper disposal methods. | | | | | |
| | 7. HANDLING AND STORAGE | | | | | |
| Handling | : Take measures to prevent the build up of electrostatic charge. Heat only in areas with appropriate exhaust ventilation. | | | | | |



MATERIAL SAFETY DATA SHEET MAROON 470

| Version Number 1.0 | | | |
|--------------------------|---|--|--|
| Revision Date 05/05/2009 | 9 | | |

Page 3 of 7 Print Date 1/7/2012

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. |
| $\mathbf{E}_{\mathbf{r}}$ | | |

Exposure limit(s)

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MATERIAL SAFETY DATA SHEET MAROON 470

Version Number 1.0 Revision Date 05/05/2009 Page 4 of 7 Print Date 1/7/2012

| Components | Value | Exposure time | Exposure type | List: |
|--------------------------------|-----------|---|----------------------|-----------|
| Iron oxide 5 mg/m3 | | Time Weighted Average (TWA): | Respirable fraction. | ACGIH |
| | 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 |
| 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 Cr | ACGIH |
| | 0.5 mg/m3 | Time Weighted Average (TWA): | | MX OEL |
| | 0.5 mg/m3 | Recommended exposure limit (REL): | as Cr | NIOSH |
| | 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) Permissible Exposure Limit (PEL): | as Sb | US CA OEL |
| | 0.5 mg/m3 | Time Weighted Average (TWA): | as Sb | MX OEL |

9. PHYSICAL AND CHEMICAL PROPERTIES

Form Appearance Color Odour Melting point/range Boiling Point: Water solubility

Solid pellets BROWN Very faint Not determined Not applicable Insoluble

Evaporation rate Specific Gravity Bulk density Vapour pressure Vapour density pH

Not applicable
Not determined
Not established
Not applicable
Not applicable
Not applicable

10. STABILITY AND REACTIVITY

: Stable.

Hazardous Polymerization : Will not occur.

Conditions to avoid

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

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MATERIAL SAFETY DATA SHEET MAROON 470

| | On Number 1.0 Page 5 ion Date 05/05/2009 Print Date 1/7/2 | | | | |
|---|---|---|---|--|--|
| | | | | | |
| Incompatible Mater | rials | : Incompatible | with strong acids and | oxidizing agents. | |
| Hazardous decomp products | osition | | | noxide (CO), oxides of nitrogen and smoke are all possible. | |
| | 1 | 1. TOXICOLOG | ICAL INFORMAT | ION | |
| health data for the i | ndividual coi | nponents which co | omprise the mixture. | sure effects listed are based on exi | |
| | | | _ | m have the following characteristic | |
| CAS-No. 1309-37-1 | Cł Iron oxi | nemical Name | Effect Systemic effects | Target Organ Respiratory system. | |
| 68186-90-3 | | antimony | Irritant | Eyes, Skin, Respiratory system. | |
| | | | CAL INFORMATIO | NI | |
| | | 12. ECOLOGIC | AL INFORMATIO | 11N | |
| Persistence and deg | gradability | : Not readily bi | odegradable. | | |
| Environmental Tox | Environmental Toxicity : Chemicals are not readily available as they are bound within the polymer matrix. | | | | |
| Bioaccumulation Potential : Chemical polymer r | | | cals are not readily available as they are bound within the or matrix. | | |
| Additional advice : No data ava | | | able | | |
| | | 13. DISPOSAL | CONSIDERATION | IS | |
| Product | | possible recyc generator of v classification, | cling is preferred to d vaste material has the transportation and d | e product can be recycled. Where isposal or incineration. The responsibility for proper waste sposal in accordance with 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. TRANSPO | RT INFORMATIO | N | |
| U.S. DOT Classific | cation | : Not regulated | for transportation. | | |
| | ICAO/IATA (air) | | Refer to specific regulation. | | |
| ICAO/IATA (air) | | : Refer to speci | fic regulation. | | |

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MATERIAL SAFETY DATA SHEET MAROON 470

Version Number 1.0 Revision Date 05/05/2009

Page 6 of 7 Print Date 1/7/2012

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 | |
| Rutile, antimony | 68186-90-3 | 010 lbs | 151 LB | |
| chromium buff | | | | |

California Proposition : Not applicable 65

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 COMPOUNDSCHROMIUM | 68186-90-3 | 5.00 - 10.00 | |
| COMPOUNDSANTIMONY COMPOUNDS | | | |

Canadian Regulations:

National Pollutant Release Inventory (NPRI)

| Chemical Name | CAS-No. | Weight % | NPRI ID# |
|--------------------------------|------------|--------------|----------|
| Rutile, antimony chromium buff | 68186-90-3 | 5.00 - 10.00 | |
| | | 5.00 - 10.00 | |

WHMIS Classification : D2B

WHMIS Ingredient Disclosure List

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MATERIAL SAFETY DATA SHEET MAROON 470

| Version Number 1.0 Revision Date 05/05/2009 | Page 7 o Print Date 1/7/20 | |
|--|---|----------|
| CAS-No. 1309-37-1 68186-90-3 DSL : | All components of this product are on the Canadian Domestic Substances List (DSL) or are exempt. | |
| | Substances List (DSL) of are exempt. | |
| 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.