PolvOn<u>e</u>

MATERIAL SAFETY DATA SHEET MSDS X155-068-055-09

Version Number 1.0 Revision Date 03/29/2007

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1. PRODUCT AND COMPANY IDENTIFICATION

POLYONE CORPORATION 33587 Walker Road, Avon Lake, OH 44012

| Telephone Emergency telephone number | : | Product Stewardship (440) 930-1395 CHEMTREC 1-800-424-9300 (24hrs for spill, leak, fire, exposure or accident). |
|--|---|---|
| Product name | : | MSDS X155-068-055-09 |
| Product code | : | VC10004816 |
| Chemical Name | : | Mixture |
| CAS-No. | : | Mixture |
| Product Use | : | Industrial Applications |

: Industrial Applications

2. COMPOSITION/INFORMATION ON REGULATED INGREDIENTS

| Components | CAS-No. | Weight % |
|---|------------|----------|
| Aluminate (Al(OH)63-), (OC-6-11)-, | 11097-59-9 | 1 - 5 |
| magnesium carbonate hydroxide (2:6:1:4) | | |
| Antimony trioxide | 1309-64-4 | 1 - 5 |

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 vapors may be released upon heating or processing. 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. May emit Hydrogen Chloride (HCl) or Carbon Monoxide (CO) under fire conditions.

POTENTIAL HEALTH EFFECTS

| Routes of Exposure: | : Inhalation, Ingestion, Skin contact | | | |
|---------------------------------|---|--|--|--|
| Acute exposure | | | | |
| Inhalation Ingestion Eyes | Resin particles, like other inert materials, can be mechanically irritating. May be harmful if swallowed. 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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| 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 o 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 see medical attention. |
| | 5. FIRE-FIGHTING MEASURES |
| Flash point | : Not applicable |
| Flammable Limits Upper explosion limit Lower explosion limit Autoignition temperature Suitable extinguishing media Special Fire Fighting Procedures Unusual Fire/Explosion Hazards | Not applicable Not applicable Not applicable Carbon dioxide blanket, Water spray, Dry powder, Foamnone. Fullface self-contained breathing apparatus (SCBA) used in positive pressure mode should be worn to prevent inhalation of airborne contaminants. May emit Hydrogen Chloride (HCl) or Carbon Monoxide (CO) under fire conditions. Carbon dioxide (CO2), carbon monoxide (CO), oxide of nitrogen (NOx), other hazardous materials, and smoke are all |
| | 6. ACCIDENTAL RELEASE MEASURES |
| | 0. 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 1 of this MSDS for proper disposal methods. |
| | 7. HANDLING AND STORAGE |

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| | | | | | | |
| Handling | | Take measures to prevent the build up of electrostatic charge. Heat only in areas with appropriate exhaust ventilation. Processing fume condensates may contain combustible or toxic residue. Periodically clean hoods, ducts, and other surfaces to minimize accumulation of these materials. | | | | |
| Storage | | Keep containers dry and tightly closed to avoid moisture absorption and contamination. Keep in a dry, cool place. | | | | |
| 8. H | XPOSURE | CONTROLS / PERSONAL | PROTECTION | | | |
| Respiratory protection | | o personal respiratory protecti usty conditions occur wear app | | | | |
| Eye/Face Protection | : Sa | afety glasses with side-shields | | | | |
| Hand protection | : P 1 | rotective gloves | | | | |
| Skin and body protection | : L | ong sleeved clothing | | | | |
| Additional Protective Measures | : Sa | 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. This product may contain residual vinyl chloride monomer (VCM) (CAS number 75-01-4) below 8.5 ppm (0.00085%). It is unlikely, under normal working conditions with adequate ventilation, that the exposure limits will be exceeded for residual VCM. However, the user should take the necessary precautions (e.g. mechanical ventilation, local exhaust ventilation, air-monitoring, respiratory protection, etc.) to ensure airborne levels of any vapors including VCM or dusts that may be released during heating or processing are below regulated levels. | | | | | |
| Engineering measures | | eat only in areas with appropriate exhaust ventilation a | | Provide | | |
| Exposure limit(s) | | | | | | |
| Components | Value | Exposure time | Exposure type | List: | | |
| Antimony trioxide | 0.5 mg/m3 | PEL: | as Sb | OSHA Z1 | | |
| | 0.5 mg/m3 | Time Weighted Average (TWA): | as Sb | ACGIH | | |
| | 9. PHYSI(| CAL AND CHEMICAL PRO | PERTIES | | | |
| | | | | | | |
| Form Appearance Color | | 1 | ic Gravity: : Not | applicable determined established | | |

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| Odour Melting point/range Boiling Point: Water solubility | : Very faint: Not determined: Not applicable: Insoluble | Vapour pressure Vapour density pH | Not applicableNot applicableNot applicable |
|--|--|---|--|
| | 10. STABILITY AN | D REACTIVITY | |
| Stability | : Stable. | | |
| Hazardous Polymerization | : Will not occur. | | |
| Conditions to avoid | : Keep away from o decomposition, do | oxidizing agents and open for not overheat. | lame. To avoid thermal |
| Incompatible Materials | | strong acids and oxidizing olymers and acetal copoly | |
| Hazardous decomposition products | (NOx), other haza Prolonged heating (200 °C) or short to | 202), carbon monoxide (Co rdous materials, and smoke (approximately 30 minute erm heating at 482 °F (250 d evolution of carbon mono | e are all possible. s or more) above 392 °F °C) may result in product |

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 |
|------------|---|------------------|---------------------------|
| 11097-59-9 | Aluminate (Al(OH)63-), (OC-6-11)-, magnesium carbonate hydroxide (2:6:1:4) | Irritant | Eyes, Skin. |
| 1309-64-4 | Antimony trioxide | Systemic effects | Eyes, Respiratory system. |
| | | sensitizer | Skin. |

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 |
|-----------|-------------------|-----------|----------------|---------|
| 1309-64-4 | Antimony trioxide | Oral LD50 | > 34,600 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 |
|-----------|-------------------|------|------|-----|
| 1309-64-4 | Antimony trioxide | 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:

Antimony trioxide 1309-64-4 Can cause eye irritation. Can cause skin irritation. Symptoms may include redness and burning of skin, and other skin damage. Additional symptoms of skin contact may include: antimony measles (a red, pimply rash).

| | 12. ECOLOGICAL INFORMATION |
|-------------------------------|---|
| Persistence and degradability | : Not readily biodegradable. |
| Environmental Toxicity | : Adverse ecological impact is not known or expected under normal use |
| Bioaccumulation Potential | : no data available |
| Additional advice | : Not applicable |
| | 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 materia 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 (air) | : Not regulated for transportation. |
| IMO / IMDG (maritime) | : Not regulated for transportation. |
| | 15. REGULATORY INFORMATION |

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|--|---------------------------------|---|---|---|--|---|
| US Regulations: | | | | | | |
| OSHA Status | : Cla | ssified as hazardous | based on | componen | ts. | |
| TSCA Status | | l components of this | | - | | npt from the TS |
| | | entory. | | | | |
| US. EPA CERCLA Hazardou | s Substanc | es (40 CFR 302) | | | | |
| Not applicable | | | | | | |
| California Proposition 65 | | ARNING! This prod ifornia to cause canc | | ns a chem | ical kno | wn to the State |
| SARA Title III Section 302 E | stremely H | Iazardous Substance | | | | |
| Unless specific chemicals are | identified | under this section th | is product | t is Not Ar | nlicabl | e under this reg |
| e mess spectric chemicals are | laonnioa | under uns section, u | is produce | | pheuon | e anaer and reg |
| | | | | | | |
| | | | | | | |
| SARA Title III Section 313 To | oxic Chem | iicals: | | | | |
| | | | is product | t is Not Ar | oplicable | e under this reg |
| Unless specific chemicals are | | | | | <u> </u> | |
| | identified | | is product CAS-N 1309-64 | No. | plicable Weigh | nt % |
| Unless specific chemicals are Chemical Name | identified | | CAS-N | No. 4-4 | Weigh | nt % • 5.00 |
| Unless specific chemicals are Chemical Name ANTIMONY COMPOUND | identified | | CAS-N 1309-64 | No. 4-4 7-6 | Weigh 1.00 - | nt % - 5.00 - 5.00 |
| Unless specific chemicals are Chemical Name ANTIMONY COMPOUND ZINC COMPOUNDS ZINC COMPOUNDS | identified | | CAS-N 1309-64 1332-07 | No. 4-4 7-6 | Weigh 1.00 - 1.00 - | nt % - 5.00 - 5.00 |
| Unless specific chemicals are Chemical Name ANTIMONY COMPOUNE ZINC COMPOUNDS ZINC COMPOUNDS Canadian Regulations: | identified DS | under this section, th | CAS-N 1309-64 1332-07 | No. 4-4 7-6 | Weigh 1.00 - 1.00 - | nt % - 5.00 - 5.00 |
| Unless specific chemicals are Chemical Name ANTIMONY COMPOUNE ZINC COMPOUNDS ZINC COMPOUNDS Canadian Regulations: National Pollutant Rele | identified DS | under this section, th | CAS-N 1309-64 1332-07 557-05- | No. 4-4 7-6 -1 | Weigh 1.00 - 1.00 - 0.10 - | tt % 5.00 5.00 1.00 |
| Unless specific chemicals are Chemical Name ANTIMONY COMPOUNE ZINC COMPOUNDS ZINC COMPOUNDS Canadian Regulations: National Pollutant Rele Chemical Name | identified DS | under this section, th | CAS-N 1309-64 1332-07 557-05- | No. 4-4 7-6 -1 Weigh | Weigh 1.00 - 1.00 - 0.10 - | nt % - 5.00 - 5.00 |
| Unless specific chemicals are Chemical Name ANTIMONY COMPOUNE ZINC COMPOUNDS ZINC COMPOUNDS Canadian Regulations: National Pollutant Rele | identified DS | under this section, th | CAS-N 1309-64 1332-07 557-05- No. | No. 4-4 7-6 -1 | Weigh 1.00 - 1.00 - 0.10 - t % 5.00 | nt % 5.00 5.00 1.00 NPRI ID# |
| Unless specific chemicals are Chemical Name ANTIMONY COMPOUND ZINC COMPOUNDS ZINC COMPOUNDS Canadian Regulations: National Pollutant Rele Chemical Name Antimony trioxide | identified DS | under this section, th tory (NPRI) CAS- 1309- | CAS-N 1309-64 1332-07 557-05- No. 64-4 07-6 | No. 4-4 -1 -1 Weigh 1.00 - | Weigh 1.00 - 1.00 - 0.10 - 0.10 - t % 5.00 5.00 | nt % 5.00 5.00 1.00 NPRI ID# 17 |
| Unless specific chemicals are Chemical Name ANTIMONY COMPOUND ZINC COMPOUNDS ZINC COMPOUNDS Canadian Regulations: National Pollutant Rele Chemical Name Antimony trioxide Zinc borate | identified DS | under this section, th tory (NPRI) CAS- 1309- 1332- | CAS-N 1309-64 1332-07 557-05- No. 64-4 07-6 | No. 4-4 -1 Weigh 1.00 - 1.00 - | Weigh 1.00 - 1.00 - 0.10 - 0.10 - t % 5.00 5.00 | nt % 5.00 5.00 1.00 NPRI ID# 17 231 |
| Unless specific chemicals are Chemical Name ANTIMONY COMPOUND ZINC COMPOUNDS ZINC COMPOUNDS Canadian Regulations: National Pollutant Rele Chemical Name Antimony trioxide Zinc borate | identified DS | under this section, th tory (NPRI) CAS- 1309- 1332- | CAS-N 1309-64 1332-07 557-05- No. 64-4 07-6 | No. 4-4 -1 Weigh 1.00 - 1.00 - | Weigh 1.00 - 1.00 - 0.10 - 0.10 - t % 5.00 5.00 | nt % 5.00 5.00 1.00 NPRI ID# 17 231 |
| Unless specific chemicals are Chemical Name ANTIMONY COMPOUND ZINC COMPOUNDS ZINC COMPOUNDS Canadian Regulations: National Pollutant Rele Chemical Name Antimony trioxide Zinc borate | identified DS ease Invent | under this section, th tory (NPRI) CAS- 1309- 1332- 557-0 | CAS-N 1309-64 1332-07 557-05- No. 64-4 07-6 | No. 4-4 -1 Weigh 1.00 - 1.00 - | Weigh 1.00 - 1.00 - 0.10 - 0.10 - t % 5.00 5.00 | nt % 5.00 5.00 1.00 NPRI ID# 17 231 |
| Unless specific chemicals are Chemical Name ANTIMONY COMPOUNE ZINC COMPOUNDS ZINC COMPOUNDS Canadian Regulations: National Pollutant Rele Chemical Name Antimony trioxide Zinc borate Zinc stearate | ase Invent | under this section, th tory (NPRI) CAS- 1309- 1332- 557-0 A | CAS-N 1309-64 1332-07 557-05- No. 64-4 07-6 | No. 4-4 -1 Weigh 1.00 - 1.00 - | Weigh 1.00 - 1.00 - 0.10 - 0.10 - t % 5.00 5.00 | nt % 5.00 5.00 1.00 NPRI ID# 17 231 |
| Unless specific chemicals are Chemical Name ANTIMONY COMPOUND ZINC COMPOUNDS ZINC COMPOUNDS Canadian Regulations: National Pollutant Rele Chemical Name Antimony trioxide Zinc borate Zinc stearate WHMIS Classification WHMIS Ingredient Dis | ase Invent | under this section, th tory (NPRI) CAS- 1309- 1332- 557-0 A | CAS-N 1309-64 1332-07 557-05- No. 64-4 07-6 | No. 4-4 -1 Weigh 1.00 - 1.00 - | Weigh 1.00 - 1.00 - 0.10 - 0.10 - t % 5.00 5.00 | nt % 5.00 5.00 1.00 NPRI ID# 17 231 |
| Unless specific chemicals are Chemical Name ANTIMONY COMPOUND ZINC COMPOUNDS ZINC COMPOUNDS Canadian Regulations: National Pollutant Rele Chemical Name Antimony trioxide Zinc borate Zinc stearate WHMIS Classification WHMIS Ingredient Dis CAS-No. | ase Invent | under this section, th tory (NPRI) CAS- 1309- 1332- 557-0 A | CAS-N 1309-64 1332-07 557-05- No. 64-4 07-6 | No. 4-4 -1 Weigh 1.00 - 1.00 - | Weigh 1.00 - 1.00 - 0.10 - 0.10 - t % 5.00 5.00 | nt % 5.00 5.00 1.00 NPRI ID# 17 231 |
| Unless specific chemicals are Chemical Name ANTIMONY COMPOUND ZINC COMPOUNDS ZINC COMPOUNDS Canadian Regulations: National Pollutant Rele Chemical Name Antimony trioxide Zinc borate Zinc stearate WHMIS Classification WHMIS Ingredient Dis | ase Invent | under this section, th tory (NPRI) CAS- 1309- 1332- 557-0 A | CAS-N 1309-64 1332-07 557-05- No. 64-4 07-6 | No. 4-4 -1 Weigh 1.00 - 1.00 - | Weigh 1.00 - 1.00 - 0.10 - 0.10 - t % 5.00 5.00 | nt % 5.00 5.00 1.00 NPRI ID# 17 231 |

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| 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 | : | Listed | |
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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.