PolyOne

MATERIAL SAFETY DATA SHEET X ST-5136-2A

Version Number 1.0 Revision Date 03/17/2014

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| POLYONE CORPORATI 33587 Walker Road, Avon | | OH 44012 |
|--|---|--|
| Telephone Emergency telephone number | : | 1 (440) 930-1000 or 1 (866) POLYONE CHEMTREC 1-800-424-9300 (24hrs for spill, leak, fire, exposure or accident). |
| Product name | : | X ST-5136-2A |
| Product code | : | EM10031979 |
| Chemical Name | : | Mixture |
| CAS-No. | : | Mixture |
| Product Use | • | Industrial Applications |

| Components | CAS-No. | Weight percent |
|--------------|-----------|----------------|
| Carbon black | 1333-86-4 | 10 - 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 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 Ingestion Eyes Skin | Particulates, like other inert materials can be mechanically irritating. May be harmful if swallowed. Particulates, like other inert materials can be mechanically irritating. 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. |

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| | | 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. FIREFIGHTING MEASURES |
| Flash point | : | not applicable |
| Flammable Limits Upper explosion limit Lower explosion limit Auto-ignition 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 | 5. A | CCIDENTAL 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. |
| | | 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. |

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| 8. | EXPOSURE | CONTROLS/PERSONAL I | PROTECTION | | | | |
|---|---|---|---------------------------|--|--|--|--|
| Respiratory protection | : N | o personal respiratory protecti | ve equipment normally | required. | | | |
| Eye/Face Protection | : S | : Safety glasses with side-shields | | | | | |
| Hand protection | : P | : Protective gloves | | | | | |
| Skin and body protection | : L | ong sleeved clothing | | | | | |
| Additional Protective Measures | : S | afety shoes | | | | | |
| General Hygiene Considerations | | andle in accordance with good ractice. Wash hands before br | | | | | |
| Engineering measures | | leat only in areas with appropri | iate exhaust ventilation. | . Provide | | | |
| | aj | ppropriate exhaust ventilation | | | | | |
| Exposure limit(s) | aj | ppropriate exhaust ventilation a | | | | | |
| | | | at machinery. | | | | |
| Exposure limit(s) Components Carbon black | aj Value 3.5 mg/m3 | ppropriate exhaust ventilation a Exposure time Recommended exposure limit (REL): | | List: NIOSH | | | |
| Components | Value | Exposure time Recommended exposure | at machinery. | List: | | | |
| Components | Value 3.5 mg/m3 | Exposure time Recommended exposure limit (REL): Recommended exposure | at machinery. | List: NIOSH | | | |
| Components | Value 3.5 mg/m3 0.1 mg/m3 | Exposure time Recommended exposure limit (REL): Recommended exposure limit (REL): | at machinery. | List: NIOSH NIOSH | | | |
| Components | Value 3.5 mg/m3 0.1 mg/m3 3.5 mg/m3 | Exposure time Recommended exposure limit (REL): Recommended exposure limit (REL): PEL: Time Weighted Average | at machinery. | List: NIOSH NIOSH OSHA Z1 | | | |
| Components | Value 3.5 mg/m3 0.1 mg/m3 3.5 mg/m3 3.5 mg/m3 | Exposure time Recommended exposure limit (REL): Recommended exposure limit (REL): PEL: Time Weighted Average (TWA): Time Weighted Average | at machinery. | List: NIOSH NIOSH OSHA Z1 OSHA Z14 | | | |

9. PHYSICAL AND CHEMICAL PROPERTIES

- Form Appearance Colour Odour Melting point/range Boiling Point: Water solubility
- solid
 pellets, Slabs
 BLACK
 very faint
 Not determined
 not applicable
 insoluble
- Evapouration 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



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| Stability | : | The product is stable if stored and handled as prescribed. |
|----------------------------------|---|--|
| Hazardous Polymerization | : | Will not occur. |
| Conditions to avoid | : | To avoid thermal decomposition, do not overheat. |
| Incompatible Materials | : | Strong acids, oxidizing and reducing 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 |
|-----------|---------------|------------------|---------------------------|
| 1333-86-4 | Carbon black | Systemic effects | Eyes, 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 |
|-----------|---------------|-------------|---------------|---------|
| 1333-86-4 | Carbon black | Oral LD50 | >15,400 mg/kg | rat |
| | | Dermal LD50 | > 3 gm/kg | rabbit |

Additional Health Hazard Information:

Carbon black 1333-86-4 Carcinogenicity: Many inhalation toxicologists believe that the tumor response observed in the referenced rat studies is species specific and does not correlate to human exposure. However, the IARC evaluation in Monograph Volume 65, issued in April 1996 concluded that, "There is sufficient evidence in experimental animals for the carcinogenicity of carbon black". Based on this evaluation, along with their evaluation of inadequate evidence of carcinogenicity in humans, IARC's overall evaluation is that "Carbon Black is possibly carcinogenic to humans (Group 2B). The IARC 2B listing only pertains to airborne, unbound carbon black particles of respirable size. Carbon Black has not been listed as a carcinogen by the National Toxicology Program (NTP) or the Occupational Safety and Health Administration (OSHA). The National Institute of Occupational Safety and Health (NIOSH) criteria document on carbon black recommends that only carbon black with PAH (polynuclear aromatic hydrocarbon) levels greater than 0.1% be considered suspect carcinogens.

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 |



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| 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 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 Hazardo | as Substances (40 CFR 302) |
| not applicable | |
| California Proposition 65 | n : Not applicable |
| SARA Title III Section 302 I | Extremely Hazardous Substance |
| Unless specific chemicals are | identified under this section, this product is Not Applicable under this regula |

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SARA Title III Section 313 Toxic Chemicals:

Unless specific chemicals are identified under this section, this product is Not Applicable under this regulation

Canadian Regulations:

National Pollutant Release Inventory (NPRI)

not applicable

WHMIS Classification : D2A

WHMIS Ingredient Disclosure List

| CAS-No. | - |
|-----------|---|
| 1333-86-4 | |

DSL

All components of this product are on the Canadian Domestic Substances List (DSL) or are exempt.

National Inventories:

| | | 16 OTHER DEODMAN |
|-------------------|---|------------------|
| | | |
| Philippines PICCS | : | Listed |
| Korea KECI | : | Listed |
| I | | |
| Japan ENCS | : | Not determined |
| Europe EINECS | : | Listed |
| | | |
| China IECS | : | Listed |
| Australia AICS | : | Listed |

:

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.