

MATERIAL SAFETY DATA SHEET

MX2043B ORANGE 104

Version Number 1.0
Revision Date 06/11/2002

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| 1. PRODUCT AND COMPANY IDENTIFICATION |
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POLYONE CORPORATION
2700 Papin Street, St. Louis, MO 63103

NON-EMERGENCY TELEPHONE : Product Stewardship, (314) 771-1800

Emergency telephone number : **CHEMTREC 1-800-424-9300 (24hrs for spill, leak, fire, exposure or accident).**

Product name : MX2043B ORANGE 104

Product code : FO00006045

Chemical Name : Mixture

CAS-No. : Mixture

Product Use : Industrial Applications

| |
|--|
| 2. COMPOSITION/INFORMATION ON HAZARDOUS INGREDIENTS |
|--|

| Components | CAS-No. | Weight % |
|------------------------------------|-----------|----------|
| Lead chromate | 7758-97-6 | 0.1 - 1 |
| Chromium oxide (CrO ₃) | 1333-82-0 | 0.1 - 1 |

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|----------------------------------|
| 3. HAZARDS IDENTIFICATION |
|----------------------------------|

EMERGENCY OVERVIEW

This mixture has not been evaluated as a whole for health effects. Information provided on health effects of this product is based on the individual components. However, some vapors or contaminants 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. See sections 8 and 11 for special precautions.

POTENTIAL HEALTH EFFECTS

Routes of Exposure: : Inhalation, Skin contact, Ingestion

Acute exposure

Inhalation : Inhalation of airborne droplets may cause irritation of the respiratory tract.

Ingestion : May be harmful if swallowed.

Eyes : May cause eye/skin irritation.

Skin : Experience shows no unusual dermatitis hazard from routine handling.

Chronic exposure : Refer to Section 11 for Toxicological Information.

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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 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 : No data available.

Flammable Limits
Upper explosion limit : No data available.
Lower explosion limit : No data available.

Autoignition temperature : Not applicable.

Suitable extinguishing media : Carbon dioxide blanket, dry powder, foam, Water spray.

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 : May emit Hydrogen Chloride (HCl) or Carbon Monoxide (CO) under fire conditions.

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 : Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Package all material in appropriate container for disposal. Refer to Section 13 of this MSDS for proper disposal methods.

7. HANDLING AND STORAGE

Handling : Heat only in areas with appropriate exhaust ventilation. Processing

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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. Store in a cool dry place.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Respiratory protection : Under normal handling conditions a respirator is not 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: |
|------------------------------------|-------------------------|---|---------------------|-----------|
| Lead chromate | 0.012 mg/m ³ | Time Weighted Average (TWA): | Dust. as Cr | ACGIH |
| | 0.05 mg/m ³ | Time Weighted Average (TWA): | as Pb | ACGIH |
| Lead chromate | 1 mg/m ³ | PEL: | as Cr | OSHA Z1 |
| Lead chromate | 0.05 mg/m ³ | Time Weighted Average (TWA): | Dust. as Pb | OSHA |
| | 0.03 mg/m ³ | OSHA Action level: | Dust. as Pb | OSHA |
| Chromium oxide (CrO ₃) | 0.1 mg/m ³ | Ceiling Limit Value: | as CrO ₃ | OSHA Z1A |
| Chromium oxide (CrO ₃) | 0.1 mg/m ³ | Ceiling Limit Value: | as CrO ₃ | OSHA Z1A |
| Chromium oxide (CrO ₃) | 0.05 mg/m ³ | Time Weighted Average (TWA): | | ACGIH |
| Chromium oxide (CrO ₃) | 0.05 mg/m ³ | Time Weighted Average (TWA) Permissible Exposure Limit (PEL): | as Cr | US CA OEL |
| | 0.1 mg/m ³ | Ceiling Limit Value: | as Cr | US CA OEL |
| | 0.5 mg/m ³ | Time Weighted Average (TWA): | | MX OEL |
| | 0.01 mg/m ³ | Time Weighted Average (TWA): | | ACGIH |
| Chromium oxide (CrO ₃) | 0.01 mg/m ³ | Time Weighted Average (TWA) Permissible Exposure Limit (PEL): | as Cr | US CA OEL |
| | 0.1 mg/m ³ | Ceiling Limit Value: | as Cr | US CA OEL |
| | 1 mg/m ³ | Time Weighted Average (TWA): | | MX OEL |
| | 1 mg/m ³ | PEL: | | OSHA Z1 |
| Chromium oxide (CrO ₃) | 1 mg/m ³ | Time Weighted Average (TWA): | | OSHA Z1A |

9. PHYSICAL AND CHEMICAL PROPERTIES

| | | | |
|---------------------|-------------------|------------------|-------------------|
| Form | : Liquid | Evaporation rate | : Not established |
| Appearance | : Viscous, Liquid | Specific Gravity | : Not determined |
| Color | : ORANGE | Bulk density | : Not applicable. |
| Odor | : Very faint | Vapor pressure | : Not determined |
| Melting point/range | : Not applicable | Vapor density | : Not determined |
| Boiling Point: | : Not applicable | pH | : Not applicable. |
| Water solubility | : Immiscible | | |

10. STABILITY AND REACTIVITY

| | |
|--------------------------|-------------------|
| Stability | : Stable. |
| Hazardous Polymerization | : Will not occur. |

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- 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. Avoid contact with acetal homopolymers and acetal copolymers during processing.
- Hazardous decomposition products : Carbon dioxide (CO₂), carbon monoxide (CO), oxides of nitrogen (NO_x), hydrogen chloride (HCl), other hazardous materials, and smoke are all possible. Prolonged heating may result in product degradation. As a general rule of thumb, degradation begins to occur after one hour at 177 °C (350 °F), after 10 minutes at 204 °C (400 °F), and within 5 minutes at 232 °C (450 °F).

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 |
|-----------|------------------------------------|------------------|--|
| 7758-97-6 | Lead chromate | Systemic effects | central nervous system, reproductive system. |
| 1333-82-0 | Chromium oxide (CrO ₃) | Systemic effects | Eyes, Skin, Respiratory system, blood and blood forming system, Liver, Kidney. |
| | | Corrosive | Eyes, Skin. |
| | | Highly Toxic | Refer to MSDS for Toxicity Data.. |

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 |
|-----------|------------------------------------|-----------|------------|---------|
| 7758-97-6 | Lead chromate | Oral LD50 | > 12 gm/kg | mouse |
| 1333-82-0 | Chromium oxide (CrO ₃) | Oral LD50 | 80 mg/kg | rat |

Carcinogenicity:

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

| CAS-No. | Chemical Name | OSHA | IARC | NTP |
|-----------|---------------|------|------|-----|
| 7758-97-6 | Lead chromate | no | no | 1 |

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.

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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:

Lead chromate 7758-97-6 Systemic effects include neurotoxic, teratogenic, fetotoxic and reproductive with abdominal pain, anemia, pallor, decreased hand grip strength with characteristic "wrist drop".

12. ECOLOGICAL INFORMATION

- Persistence and degradability : Not readily biodegradable.
- Environmental Toxicity : Environmental toxicity has not been established for this mixture as a whole.
- Bioaccumulation Potential : No data available.
- Additional advice : No data available.

13. DISPOSAL CONSIDERATIONS

- Product : 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.

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US. EPA CERCLA Hazardous Substances (40 CFR 302)

| Chemical Name | CAS-No. | % in Product | RQ for component | RQ for Mixture/Product |
|-----------------------|-----------|--------------|------------------|------------------------|
| Chromium oxide (CrO3) | 1333-82-0 | 0.08 | 10lbs | 11,351 LB |

California Proposition 65 : WARNING! This product contains a chemical known in the State of California to cause cancer., WARNING! This product contains a chemical known in the State of California to cause birth defects or other reproductive harm.

SARA Title III Section 313 Toxic Chemicals:

| Chemical Name | CAS-No. | Weight % |
|--|-----------|----------|
| CHROMIUM VI COMPOUNDS LEAD COMPOUNDS, INORGANIC | 7758-97-6 | 0.77 |
| LEAD COMPOUNDS, INORGANIC | 7446-14-2 | 0.04 |
| CHROMIUM VI COMPOUNDS | 1333-82-0 | 0.08 |

Canadian Regulations:

WHMIS Classification : C D1A

WHMIS Ingredient Disclosure List

| CAS-No. |
|-----------|
| 1309-64-4 |
| 1305-78-8 |
| 7758-97-6 |
| 7446-14-2 |
| 75-01-4 |
| 1333-82-0 |

DSL : Listed.

National Inventories:

Australia AICS : Not determined.

China IECS : Not determined.

Europe EINECS : Not determined.

Japan ENCS : Not determined.

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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.