



POLYONE CORPORATION

MATERIAL SAFETY DATA SHEET

HM ORANGE 1655C

Version Number 1.0
Revision Date 04/01/2004

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1. PRODUCT AND COMPANY IDENTIFICATION

POLYONE CORPORATION
33587 Walker Road, Avon Lake, OH 44012

Telephone : Product Stewardship (770) 271-5902
Emergency telephone number : **CHEMTREC 1-800-424-9300 (24hrs for spill, leak, fire, exposure or accident).**

Product name : HM ORANGE 1655C
Product code : CC10051847
Chemical Name : Mixture
CAS-No. : Mixture
Product Use : Industrial Applications

2. COMPOSITION/INFORMATION ON REGULATED INGREDIENTS

Components	CAS-No.	Weight %
Formamide, N,N'-1,6-hexanediyldis[N-(2,2,6,6-tetramethyl-4-piperidinyl)-	124172-53-8	10 - 30
Chrome yellow (Lead chromate pigment)	1344-37-2	1 - 5
Calcium carbonate	1317-65-3	10 - 30
Molybdate orange (Lead chromate pigment)	12656-85-8	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 : 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.



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Chronic exposure : Refer to Section 11 for Toxicological Information.

**Medical Conditions
Aggravated by Exposure:** : None known.

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** : Not applicable
 - Lower explosion limit** : Not applicable
- Autoignition temperature** : Not applicable
- Suitable extinguishing media** : Carbon dioxide blanket, water spray, dry powder, foamnone.
- 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** : Carbon dioxide (CO₂), carbon monoxide (CO), oxides of nitrogen (NO_x), 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

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- 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:
Calcium carbonate	5 mg/m3	PEL:	Respirable fraction.	OSHA Z1
	15 mg/m3	PEL:	Total dust.	OSHA Z1
Chrome yellow (Lead chromate pigment)	1 mg/m3	PEL:		OSHA Z1
	0.05 mg/m3	Time Weighted Average (TWA):		OSHA
	0.03 mg/m3	OSHA Action level:		OSHA
	0.01 mg/m3	Time Weighted Average (TWA):	as Cr	ACGIH
Molybdate orange (Lead chromate pigment)	0.05 mg/m3	Time Weighted Average (TWA):	as Pb	ACGIH
	0.1 mg/m3	Ceiling Limit Value:		OSHA Z2
	0.01 mg/m3	Time Weighted Average (TWA):	as Cr	ACGIH
	0.05 mg/m3	Time Weighted Average (TWA):	as Pb	ACGIH

9. PHYSICAL AND CHEMICAL PROPERTIES

Form	: Solid	Evaporation rate	: Not applicable
Appearance	: Pellets	Specific Gravity:	: Not determined
Color	: ORANGE	Bulk density	: Not established
Odor	: Very faint	Vapor pressure	: Not applicable
Melting point/range	: Not determined	Vapour density	: Not applicable
Boiling Point:	: Not applicable	pH	: Not applicable
Water solubility	: Insoluble		

10. STABILITY AND REACTIVITY

Stability	: Stable.
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 (CO ₂), carbon monoxide (CO), oxides of nitrogen (NO _x), 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.

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Toxicity Overview

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

CAS-No.	Chemical Name	Effect	Target Organ
124172-53-8	Formamide, N,N'-1,6-hexanediylbis[N-(2,2,6,6-tetramethyl-4-piperidiny)]-	Irritant	Eyes.
1344-37-2	Chrome yellow (Lead chromate pigment)	Systemic effects	central nervous system (CNS), reproductive system.
1317-65-3	Calcium carbonate	Irritant	Eyes, Skin.
		Systemic effects	Eyes, Skin, Respiratory system.
12656-85-8	Molybdate orange (Lead chromate pigment)	Irritant	Eyes, Skin.
		Systemic effects	central nervous system (CNS), reproductive 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
124172-53-8	Formamide, N,N'-1,6-hexanediylbis[N-(2,2,6,6-tetramethyl-4-piperidiny)]-	LC50 Oral LD50	> 5.0 mg/l > 2,000 mg/kg	rat 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
1344-37-2	Chrome yellow (Lead chromate pigment)	no	1	no
12656-85-8	Molybdate orange (Lead chromate pigment)	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.

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:

Chrome yellow (Lead chromate pigment) 1344-37-2 Systemic effects include neurotoxic, teratogenic, fetotoxic and reproductive with abdominal pain, anemia, pallor, decreased hand grip strength with characteristic "wrist drop".

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Additional Health Hazard Information:

Molybdate orange (Lead chromate pigment) 12656-85-8 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 : Chemicals are not readily available as they are bound within the matrix of the polymer.
- Bioaccumulation Potential : Chemicals are not readily available as they are bound within the matrix of the polymer.
- 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 (air) : 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)

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Not applicable

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

SARA Title III Section 302 Extremely Hazardous Substance

Not applicable

SARA Title III Section 313 Toxic Chemicals:

Chemical Name	CAS-No.	Weight %
CHROMIUM VI COMPOUNDSLEAD COMPOUNDS, INORGANICLEAD COMPOUNDS	1344-37-2	3.08
CHROMIUM VI COMPOUNDSLEAD COMPOUNDS, INORGANICLEAD COMPOUNDS	12656-85-8	23.36

Canadian Regulations:

National Pollutant Release Inventory (NPRI)

Chemical Name	CAS-No.	Weight %	NPRI ID#
Chrome yellow (Lead chromate pigment)	1344-37-2	3.08	245
Chrome yellow (Lead chromate pigment)	1344-37-2	3.08	246
Molybdate orange (Lead chromate pigment)	12656-85-8	23.36	245
Molybdate orange (Lead chromate pigment)	12656-85-8	23.36	246

WHMIS Classification : D2A

WHMIS Ingredient Disclosure List

CAS-No.
1344-37-2
12656-85-8

DSL : All of the components of this product are listed on the Canadian Inventories or are exempt. However, at least one component of this product is on the Canadian Non-Domestic Substances List (NDSL). Quantity use in Canada is restricted by regulations.

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National Inventories:

- Australia AICS : Listed
- China IECS : Listed
- Europe EINECS : Not determined
- Japan ENCS : Not determined
- Korea KECI : Listed
- Philippines PICCS : 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 when used in combination with any other materials and/or in any particular process or processing conditions.