

POLYONE CORPORATION**MATERIAL SAFETY DATA SHEET****X ST643-001-04**Version Number 1.0
Revision Date 08/28/2012Page 1 of 8
Print Date 8/29/2012**1. PRODUCT AND COMPANY IDENTIFICATION****POLYONE CORPORATION**
33587 Walker Road, Avon Lake, OH 44012Telephone : 1 (440) 930-1000 or 1 (866) POLYONE
Emergency telephone : **CHEMTREC 1-800-424-9300 (24hrs for spill, leak, fire, exposure or accident).**Product name : X ST643-001-04
Product code : EM10026465
Chemical Name : Mixture
CAS-No. : Mixture
Product Use : Industrial Applications**2. COMPOSITION/INFORMATION ON REGULATED INGREDIENTS**

Components	CAS-No.	Weight percent
Carbon	7440-44-0	10 - 30
Zinc oxide	1314-13-2	1 - 5
Manganese oxide (MnO)	1344-43-0	1 - 5
Iron oxide	1309-37-1	10 - 30
Nickel	7440-02-0	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 : Particulates, like other inert materials can be mechanically irritating.
Ingestion : May be harmful if swallowed.
Eyes : Particulates, like other inert materials can be mechanically irritating.
Skin : Experience shows no unusual dermatitis hazard from routine handling.

POLYONE CORPORATION

MATERIAL SAFETY DATA SHEET

X ST643-001-04

Version Number 1.0
Revision Date 08/28/2012

Page 2 of 8
Print Date 8/29/2012

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, Foam.
- 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

POLYONE CORPORATION

MATERIAL SAFETY DATA SHEET

X ST643-001-04

Version Number 1.0
Revision Date 08/28/2012

Page 3 of 8
Print Date 8/29/2012

- 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)

POLYONE CORPORATION

MATERIAL SAFETY DATA SHEET

X ST643-001-04

Version Number 1.0
Revision Date 08/28/2012

Page 4 of 8
Print Date 8/29/2012

Components	Value	Exposure time	Exposure type	List:
Iron oxide	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
	5 mg/m3	Time Weighted Average (TWA):	Respirable fraction.	ACGIH
	1.5 mg/m3	Time Weighted Average (TWA):	Inhalable fraction.	ACGIH
Nickel	1 mg/m3	PEL:	as Ni	OSHA Z1
	1 mg/m3	Time Weighted Average (TWA):		MX OEL
Zinc oxide	2 mg/m3	Time Weighted Average (TWA):	Respirable fraction.	ACGIH
	10 mg/m3	Short Term Exposure Limit (STEL):	Respirable fraction.	ACGIH
	5 mg/m3	Recommended exposure limit (REL):	Fume.	NIOSH
	5 mg/m3	Recommended exposure limit (REL):	Dust.	NIOSH
	15 mg/m3	Ceiling Limit Value and Time Period (if specified):	Dust.	NIOSH
	10 mg/m3	Short Term Exposure Limit (STEL):	Fume.	NIOSH
	5 mg/m3	PEL:	Fume.	OSHA Z1
	5 mg/m3	PEL:	Respirable fraction.	OSHA Z1
	15 mg/m3	PEL:	Total dust.	OSHA Z1
	5 mg/m3	Time Weighted Average (TWA):	Fume.	OSHA Z1A
	5 mg/m3	Time Weighted Average (TWA):	Respirable fraction.	OSHA Z1A
	10 mg/m3	Time Weighted Average (TWA):	Total dust.	OSHA Z1A
	10 mg/m3	Short Term Exposure Limit (STEL):	Fume.	OSHA Z1A
	5 mg/m3	Time Weighted Average (TWA):	Fume.	MX OEL
	10 mg/m3	Time Weighted Average (TWA):	Dust.	MX OEL
10 mg/m3	Short Term Exposure Limit (STEL):	Fume.	MX OEL	
Manganese oxide (MnO)	1 mg/m3	Recommended exposure limit (REL):	Fume. as Mn	NIOSH
	3 mg/m3	Short Term Exposure Limit (STEL):	Fume. as Mn	NIOSH
	5 mg/m3	Ceiling Limit Value:	as Mn	OSHA Z1
	5 mg/m3	Ceiling Limit Value:	as Mn	OSHA Z1A

POLYONE CORPORATION

MATERIAL SAFETY DATA SHEET

X ST643-001-04

Version Number 1.0
Revision Date 08/28/2012

Page 5 of 8
Print Date 8/29/2012

	0.2 mg/m ³	Time Weighted Average (TWA):	as Mn	ACGIH
	0.2 mg/m ³	Time Weighted Average (TWA):	as Mn	MX OEL

9. PHYSICAL AND CHEMICAL PROPERTIES

Form	: solid	Evaporation rate	: Not applicable
Appearance	: pellets, Slabs	Specific Gravity	: Not determined
Colour	: NO PIGMENT	Bulk density	: Not established
Odour	: very faint	Vapour 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	: To avoid thermal decomposition, do not overheat.
Incompatible Materials	: Strong acids, oxidizing and reducing 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.

Toxicity Overview

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

CAS-No.	Chemical Name	Effect	Target Organ
7440-44-0	Carbon	Systemic effects	Respiratory system, heart or circulatory system.
1314-13-2	Zinc oxide	Systemic effects	Respiratory system.
1344-43-0	Manganese oxide (MnO)	Irritant	Eyes, Skin.
1309-37-1	Iron oxide	Systemic effects	Respiratory system.
7440-02-0	Nickel	Systemic effects	Skin, 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
7440-44-0	Carbon	Oral LD50	10,000 mg/kg	rat

POLYONE CORPORATION

MATERIAL SAFETY DATA SHEET

X ST643-001-04

Version Number 1.0
Revision Date 08/28/2012

Page 6 of 8
Print Date 8/29/2012

1314-13-2	Zinc oxide	LC50 LC50 Oral LD50	2500 mg/m3 7,950 mg/kg	mouse mouse mouse
-----------	------------	---------------------------	-------------------------------	-------------------------

Carcinogenicity

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

CAS-No.	Chemical Name	OSHA	IARC	NTP
7440-02-0	Nickel	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:

Nickel 7440-02-0 Skin sensitizer "nickel itch", with pulmonary, brain, liver, kidney and muscle effects.

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 polymer matrix.
- 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



POLYONE CORPORATION

MATERIAL SAFETY DATA SHEET

X ST643-001-04

Version Number 1.0
Revision Date 08/28/2012

Page 7 of 8
Print Date 8/29/2012

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 Hazardous Substances (40 CFR 302)

Chemical Name	CAS-No.	RQ for component	RQ for Mixture/Product
Nickel	7440-02-0	100 lbs	741 LB

California Proposition 65 : WARNING! This product contains a chemical known to the State of California to cause cancer.

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 percent
NICKEL	7440-02-0	10.00 - 30.00
ZINC COMPOUNDS	1314-13-2	1.00 - 5.00
MANGANESE COMPOUNDS MANGANESE COMPOUNDS	1344-43-0	1.00 - 5.00

Canadian Regulations:

National Pollutant Release Inventory (NPRI)

Chemical Name	CAS-No.	Weight percent	NPRI ID#
Nickel	7440-02-0	10.00 - 30.00	

POLYONE CORPORATION

MATERIAL SAFETY DATA SHEET

X ST643-001-04

Version Number 1.0
Revision Date 08/28/2012

Page 8 of 8
Print Date 8/29/2012

Zinc oxide	1314-13-2	1.00 - 5.00	
Manganese oxide (MnO)	1344-43-0	1.00 - 5.00	

WHMIS Classification : D2A

WHMIS Ingredient Disclosure List

CAS-No.
1309-37-1
7440-02-0
1314-13-2
1344-43-0

DSL : DSL status has not been determined. Quantity use in Canada may be restricted by regulations.

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.