



POLYONE CORPORATION

MATERIAL SAFETY DATA SHEET

FARC BRONZE

Version Number 1.2
Revision Date 06/09/2005

Page 1 of 9
Print Date 11/18/2011

1. PRODUCT AND COMPANY IDENTIFICATION

POLYONE CORPORATION
8155 Cobb Center Drive, Kennesaw, GA 30152

Telephone : Product Stewardship (770) 590-3500 x.3563
Emergency telephone number : **CHEMTREC 1-800-424-9300 (24hrs for spill, leak, fire, exposure or accident).**

Product name : FARC BRONZE
Product code : FO20009637
Chemical Name : Mixture
CAS-No. : Mixture
Product Use : Industrial Applications

2. COMPOSITION/INFORMATION ON REGULATED INGREDIENTS

Components	CAS-No.	Weight %
Nickel antimony yellow rutile (C.I. Pigment Yellow 53)	8007-18-9	0.1 - 1
Silica, cristobalite	14464-46-1	0.1 - 1
Manganese antimony titanium brown rutile (C.I. Pigment Yellow 164)	68412-38-4	1 - 5
Carbon black	1333-86-4	1 - 5
Rutile, antimony chromium buff	68186-90-3	1 - 5
Silica, amorphous, diatomaceous earth	68855-54-9	1 - 5
Spinels, chromium (III) copper black	68186-91-4	1 - 5
Titanium dioxide	13463-67-7	1 - 5

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.

POLYONE CORPORATION

MATERIAL SAFETY DATA SHEET

FARC BRONZE

Version Number 1.2
Revision Date 06/09/2005

Page 2 of 9
Print Date 11/18/2011

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.

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, 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 : May emit Hydrogen Chloride (HCl) or Carbon Monoxide (CO) under fire conditions. 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 : The product should not be allowed to enter drains, water courses or the soil. Should not be released into the environment.

POLYONE CORPORATION

MATERIAL SAFETY DATA SHEET

FARC BRONZE

Version Number 1.2
Revision Date 06/09/2005

Page 3 of 9
Print Date 11/18/2011

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 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 : 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

FARC BRONZE

Version Number 1.2
Revision Date 06/09/2005

Page 4 of 9
Print Date 11/18/2011

Components	Value	Exposure time	Exposure type	List:
Manganese antimony titanium brown rutile (C.I. Pigment Yellow 164)	5 mg/m ³	Ceiling Limit Value:	Dust. as Mn	OSHA Z1
	0.5 mg/m ³	PEL:	Dust. as Sb	OSHA Z1
	0.2 mg/m ³	Time Weighted Average (TWA):	as Mn	ACGIH
	0.5 mg/m ³	Time Weighted Average (TWA):	as Sb	ACGIH
Nickel antimony yellow rutile (C.I. Pigment Yellow 53)	1 mg/m ³	PEL:	as Ni	OSHA Z1
	0.5 mg/m ³	PEL:	as Sb	OSHA Z1
	0.5 mg/m ³	Time Weighted Average (TWA):	as Sb	ACGIH
	0.2 mg/m ³	Time Weighted Average (TWA):	Inhalable fraction. as Ni	ACGIH
Carbon black	3.5 mg/m ³	Time Weighted Average (TWA):	Total dust. as carbon black	ACGIH
	3.5 mg/m ³	PEL:	Total dust. as carbon black	OSHA Z1
Rutile, antimony chromium buff	0.5 mg/m ³	PEL:	as Sb	OSHA Z1
	0.5 mg/m ³	Time Weighted Average (TWA):	as Cr	ACGIH
	0.5 mg/m ³	Time Weighted Average (TWA):	as Sb	ACGIH
	0.5 mg/m ³	PEL:	as Cr	OSHA Z1
Silica, amorphous, diatomaceous earth	5 mg/m ³	PEL:	Respirable fraction.	OSHA Z1
	0.8 mg/m ³	Time Weighted Average (TWA):		Z3
Silica, cristobalite	0.05 mg/m ³		Respirable fraction.	Z3
	0.15 mg/m ³		Total dust.	Z3
	0.05 mg/m ³	Time Weighted Average (TWA):	Respirable fraction.	ACGIH
	0.05 mg/m ³	Time Weighted Average (TWA):	Respirable.	Z3
	0.15 mg/m ³	Time Weighted Average (TWA):	Total dust.	Z3
Spinels, chromium (III) copper black	0.5 mg/m ³	Time Weighted Average (TWA):	as Cr	ACGIH
	0.5 mg/m ³	PEL:	as Cr	OSHA Z1
Titanium dioxide	10 mg/m ³	Time Weighted Average (TWA):		ACGIH
	15 mg/m ³	PEL:	Total dust.	OSHA Z1

POLYONE CORPORATION

MATERIAL SAFETY DATA SHEET

FARC BRONZE

Version Number 1.2
Revision Date 06/09/2005

Page 5 of 9
Print Date 11/18/2011

9. PHYSICAL AND CHEMICAL PROPERTIES

Form	: liquid	Evaporation rate	: Not established
Appearance	: Viscous, liquid	Specific Gravity:	: Not determined
Color	: TAN	Bulk density	: Not applicable
Odor	: Very faint	Vapor pressure	: Not determined
Melting point/range	: Not applicable	Vapour density	: Not determined
Boiling Point:	: Not applicable	pH	: Not applicable
Water solubility	: Immiscible		

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., Avoid contact with acetal homopolymers and acetal copolymers during processing.
Hazardous decomposition products	: Carbon dioxide (CO ₂), 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
8007-18-9	Nickel antimony yellow rutile (C.I. Pigment Yellow 53)	Irritant	Eyes, Skin.
		sensitizer	Skin.
14464-46-1	Silica, cristobalite	Systemic effects	Respiratory system.
		Irritant	Eyes, Skin, Respiratory system.
68412-38-4	Manganese antimony titanium brown rutile (C.I. Pigment Yellow 164)	Irritant	Eyes, Skin.
1333-86-4	Carbon black	Systemic effects	Eyes, Respiratory system.

POLYONE CORPORATION

MATERIAL SAFETY DATA SHEET

FARC BRONZE

Version Number 1.2
Revision Date 06/09/2005

Page 6 of 9
Print Date 11/18/2011

68186-90-3	Rutile, antimony chromium buff	Irritant	Eyes, Skin, Respiratory system.
68855-54-9	Silica, amorphous, diatomaceous earth	Irritant	Eyes, Skin, Respiratory system.
68186-91-4	Spinels, chromium (III) copper black	Irritant	Eyes, Skin, Respiratory system.
13463-67-7	Titanium dioxide	Systemic effects	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 Dermal LD50	> 15,400 mg/kg > 3 gm/kg	rat rabbit

Carcinogenicity

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

CAS-No.	Chemical Name	OSHA	IARC	NTP
8007-18-9	Nickel antimony yellow rutile (C.I. Pigment Yellow 53)	no	1	no
14464-46-1	Silica, cristobalite	no	1	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 antimony yellow rutile (C.I. Pigment Yellow 53) 8007-18-9 Skin sensitizer "nickel itch", with pulmonary, brain, liver, kidney and muscle effects.

Additional Health Hazard Information:

Silica, cristobalite 14464-46-1 This material in its free releasable form may cause respiratory tract irritation. Long term exposure may cause coughing, chest pain, diminished chest expansion and possibly silicosis which is a scarring of the lungs.

Additional Health Hazard Information:

POLYONE CORPORATION

MATERIAL SAFETY DATA SHEET

FARC BRONZE

Version Number 1.2
Revision Date 06/09/2005

Page 7 of 9
Print Date 11/18/2011

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.

Additional Health Hazard Information:

Rutile, antimony chromium buff 68186-90-3 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).

Additional Health Hazard Information:

Spinels, chromium (III) copper black 68186-91-4 The bi and trivalent forms of chrome have a low order of acute toxicity but may cause skin sensitization and irritation to the eyes. No effects have been reported for chromium (III) oxide. Chromium (III) compounds are not considered carcinogenic in animals or humans.

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. DOT Classification : Refer to specific regulation.

POLYONE CORPORATION

MATERIAL SAFETY DATA SHEET

FARC BRONZE

Version Number 1.2
Revision Date 06/09/2005

Page 8 of 9
Print Date 11/18/2011

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)

Not applicable

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
Not applicable

SARA Title III Section 313 Toxic Chemicals:

Chemical Name	CAS-No.	Weight %
MANGANESE COMPOUNDSANTIMONY COMPOUNDS	68412-38-4	1.00 - 5.00
NICKEL COMPOUNDSANTIMONY COMPOUNDS	8007-18-9	0.10 - 1.00
CHROMIUM III COMPOUNDS	68186-90-3	1.00 - 5.00
CHROMIUM III COMPOUNDS COPPER COMPOUNDS (WITH EXCEPTIONS)	68186-91-4	1.00 - 5.00
NICKEL COMPOUNDS	0-06-6	- 0.10
ANTIMONY COMPOUNDS	0-01-1	- 0.10

Canadian Regulations:

National Pollutant Release Inventory (NPRI)

Chemical Name	CAS-No.	Weight %	NPRI ID#
Manganese antimony titanium brown rutile (C.I. Pigment Yellow 164)	68412-38-4	1.00 - 5.00	147
		1.00 - 5.00	17
Nickel antimony yellow rutile (C.I. Pigment Yellow 53)	8007-18-9	0.10 - 1.00	168
		0.10 - 1.00	17

POLYONE CORPORATION**MATERIAL SAFETY DATA SHEET****FARC BRONZE**Version Number 1.2
Revision Date 06/09/2005Page 9 of 9
Print Date 11/18/2011

Rutile, antimony chromium buff	68186-90-3	1.00 - 5.00	69
		1.00 - 5.00	17
Spinels, chromium (III) copper black	68186-91-4	1.00 - 5.00	69
		1.00 - 5.00	71
Zinc	7440-66-6	0.10 - 1.00	231
1,2,4-Trimethylbenzene	95-63-6	0.10 - 1.00	223

WHMIS Classification : D2A

WHMIS Ingredient Disclosure List

CAS-No.
68412-38-4
1333-86-4
68186-90-3
68855-54-9
68186-91-4
95-63-6

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 : Not determined
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 when used in combination with any other materials and/or in any particular process or processing conditions.