

Olin MSDS No.: 00025.0001	Review Date: 1/1/11
Revision No.: 5	Revision Date: 1/1/09

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name:	COATED COLD ROLLED CARBON STEEL	FOIL1100, FOIL1500, FOIL5100, FOIL5500,
Chemical Name:	Metal Alloy	
Synonyms:	Carbon Steel Alloys	FOIL7100, FOIL7500
Chemical Family:	Metal/Mixture	
Formula:	Not applicable - mixture	
Product Use:	Metallurgical Products, Tin Coated Products	

COMPANY ADDRESS	MSDS Control Group	TECHNICAL	EMERGENCY TELEPHONE NUMBER:
	Olin Brass	INFORMATION:	1-618-258-5167
	427 North Shamrock St.	618-258-5003	
	East Alton, IL 62024-1197		
	www.olinbrass.com		

2. COMPOSITION/INFORMATION ON INGREDIENTS

CAS Number	Components	% By Weight	EINECS/ ELINCS #	EU Classification	
				Symbol	R-Phrase
7439-89-6	Iron	60 - 100	231-096-4	None	None
7439-96-5	Manganese	1 - 5	231-105-1	None	None
Not applicable - mixture	Coating*	0 - 3	None	None	None

*May consist of phenolic resins, synthetic rubbers, and carbon black at low concentrations.

OSHA REGULATORY STATUS: In solid form, not hazardous. Dust or fume: irritant

In solid form, this material is not hazardous. Dust and fumes are hazardous materials.

3. HAZARDS IDENTIFICATION

WARNING!

EXPOSURE TO DUST OR FUMES CAN CAUSE EYE IRRITATION. CONTAINS A MATERIAL WHICH MAY CAUSE NERVOUS SYSTEM EFFECTS. USE ONLY WITH ADEQUATE VENTILATION. WASH THOROUGHLY AFTER HANDLING.

<u>HAZARD RATINGS (for dust or fume)</u>	Degree of hazard (0 = low, 4 = extreme)		
<u>Hazardous Materials Identification System (HMIS)</u>	Health: 1*	Flammability: 0	Physical Hazard: None
<u>National Fire Protection Association (NFPA)</u>	Mixture. Not rated.		

HUMAN THRESHOLD RESPONSE DATA

<u>Odor Threshold:</u>	Unknown
<u>Irritation Threshold:</u>	Unknown
<u>Immediately Dangerous to Life or Health (IDLH) Value(s):</u>	The IDLH for this product is not known. The IDLH for manganese is 500 mg/m ³ .

POTENTIAL HEALTH EFFECTS

ACUTE EFFECTS

Eye: Dust or fume can cause mild irritation consisting of reversible redness, swelling, and pain.

Skin: Material not expected to be absorbed through the skin. Contact with dust not expected to be irritating.

Inhalation: Inhalation of high concentrations of powder, dust, or fume may cause mild respiratory and nasal irritation, coughing, and difficulty breathing.

Ingestion: Ingestion of large amounts of dust may cause nausea, vomiting, constipation, cramps, and or stomach pain.

CHRONIC EFFECTS: Prolonged or repeated inhalation of large amounts of dust or fume may cause more severe irritation and possibly lung damage. Chronic exposure to very high concentrations of manganese dust has caused nervous system effects including muscle weakness, tremors, and behavioral changes.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE:: Exposure to dust or fume may aggravate an existing dermatitis or neurological condition, asthma, emphysema, or other respiratory disease.

POTENTIAL ENVIRONMENTAL EFFECTS: None known. Product has not been tested for environmental properties.

4. FIRST AID MEASURES

EYE CONTACT: Immediately flush out fume and dust particles with large amounts of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. If eye irritation develops, call a physician at once.

SKIN CONTACT: If exposed to dust or fumes, wash skin with plenty of water. Remove contaminated clothing and shoes and launder before reuse. If skin irritation or rash develops and persists or recurs, get medical attention.

INHALATION: If symptoms of lung irritation occur (coughing, wheezing or breathing difficulty), remove from exposure area to fresh air immediately. If breathing has stopped, perform artificial respiration. Keep affected person warm and at rest. Get medical attention.

INGESTION: Not a likely route of exposure for finished metal alloy. If dust is ingested, immediately drink water to dilute. Consult a physician if symptoms develop.

NOTE TO PHYSICIANS: There is no specific antidote to the active ingredients in this product; use symptomatic treatment.

5. FIRE FIGHTING MEASURES

PROPERTY	VALUE	PROPERTY	VALUE
Explosive	No	Flammable	No
Combustible	No	Pyrophoric	No
Flash Point (°C):	Not applicable	Burning Rate of Material:	Not applicable
Lower Explosive Limit:	Not applicable	Autoignition Temp.:	Not applicable
Upper Explosive Limit:	Not applicable	Flammability Classification: (defined by 29 CFR 1910.1200)	Not applicable

UNUSUAL FIRE AND EXPLOSION HAZARDS: Do not use water on molten metal.

EXTINGUISHING MEDIA: Use fire-extinguishing media appropriate to fight surrounding fire.

SPECIAL FIREFIGHTING PROCEDURES: Wear a self-contained breathing apparatus (SCBA) with a full face piece operated in pressure-demand or positive-pressure mode and full protective clothing.

6. ACCIDENTAL RELEASE MEASURES

FOR ALL TRANSPORTATION ACCIDENTS, CALL (618)258-5167. Not applicable to steel in solid state. For spills involving finely divided particles, clean-up personnel should be protected against contact with eyes and skin. Fine, dry material should be removed by vacuuming or wet sweeping methods to prevent spreading of dust. Avoid using compressed air. Do not release into sewers or waterways. Collect material in appropriate, labeled containers for recovery or disposal in accordance with federal, state, and local regulations.

7. HANDLING AND STORAGE

HANDLING: No special requirements.
STORAGE: No special requirements.
Shelf Life Limitations: None known.
Incompatible Materials for Packaging: None known.
Incompatible Materials for Storage or Transport: Store away from acids and incompatible materials.
OTHER PRECAUTIONS: Do not shake clothing, rags or other items to remove dust. Dust should be removed by washing or HEPA vacuuming.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

CAS #	CHEMICAL NAME	ACGIH TLV	OSHA PEL	INTERNATIONAL OELS
7439-89-6	Iron	None established	None established	None established
7439-96-5	Manganese	0.2 mg/m ³	Ceiling - 5 mg/m ³	Belgium, Denmark, Finland, France, Switzerland, U.K. - 1 mg/m ³ Sweden - 2.5 mg/m ³ Germany (MAK) - 0.5 mg/m ³

*This substance is regulated by OSHA as a Particulate Not Otherwise Regulated (PNOR). The exposure limits listed for both OSHA and ACGIH refer to total dust; the OSHA PEL for the respirable fraction is 5 mg/m³.

ENGINEERING CONTROLS: Local exhaust ventilation is recommended if significant dusting occurs or fumes are generated. Otherwise, use general exhaust ventilation.
EYE / FACE PROTECTION: Use safety glasses.
SKIN PROTECTION: Wear impervious (cut-resistant), gloves and other protective clothing (aprons, coveralls) as appropriate. If handling heated materials, use heat resistant gloves and clothing. Wash hands after handling.
RESPIRATORY PROTECTION: Respiratory protection not normally needed. If dusting occurs or fumes are generated above the PEL/TLV, use a NIOSH-approved half-face or full-face respirator equipped with High Efficiency Particulate (HEPA) filter cartridges.
GENERAL HYGIENE CONSIDERATIONS: Do not eat, drink, or smoke while using this product in dust form.

9. PHYSICAL AND CHEMICAL PROPERTIES

PROPERTY	VALUE	PROPERTY	VALUE
Appearance:	Metallic gray	Vapor Density (air = 1):	Not applicable
Odor:	None	Boiling Point (°F):	No data
Molecular Weight:	Not applicable - Mixture	Melting point:	2750°F
Physical State:	Solid	Specific gravity (g/cc):	7.85
pH:	Not applicable	Bulk Density:	No data
Vapor Pressure (mm Hg):	Not applicable	Viscosity (cps):	Not applicable
Vapor Density:	Not applicable	Decomposition Temperature:	Not applicable
Solubility in Water (20 °C):	Negligible	Evaporation Rate:	Not Applicable
Volatiles, Percent by volume:	Not applicable	Octanol/water partition coefficient:	Unknown

10. STABILITY AND REACTIVITY

STABILITY: Stable under normal temperatures and pressure.
CONDITIONS TO AVOID: Storage with strong acids or calcium hypochlorite.
MATERIALS TO AVOID: Will react with strong acids to form hydrogen. Iron oxide dusts in contact with calcium hypochlorite evolve oxygen and may cause an explosion.

HAZARDOUS DECOMPOSITION

PRODUCTS:

When heated to decomposition, may produce metal oxides and fumes.

HAZARDOUS POLYMERIZATION:

Will not occur.

11. TOXICOLOGICAL INFORMATION

POTENTIAL EXPOSURE ROUTES: For dust: ingestion, inhalation, and eye contact. For fume: inhalation and eye contact. The finished alloy metal is not hazardous.

ACUTE ANIMAL TOXICITY DATA:

For Product:		For Components	
		Iron	Manganese
Oral LD ₅₀	Believed to be > 5 g/kg	30 g/kg (rat)	9 g/kg (rat)
Dermal LD ₅₀	Believed to be > 2 g/kg	No data	No data
Inhalation LC ₅₀	Believed to be slightly to moderately toxic	No data	No data
Irritation	Eye and respiratory irritant	Eye irritant	Mild skin & eye irritant

SUBCHRONIC/ CHRONIC TOXICITY:

No information for product.

CARCINOGENICITY:

This product is not known or reported to be carcinogenic by OSHA, IARC, NTP, ACGIH, or EPA.

MUTAGENICITY:

This product is not known or reported to be mutagenic.

REPRODUCTIVE, TERATOGENICITY,

This product is not known or reported to cause reproductive or developmental effects.

OR DEVELOPMENTAL EFFECTS:

NEUROLOGICAL EFFECTS:

This product is not known or reported to cause neurological effects. Chronic exposure to very high concentrations of manganese dust has caused nervous system effects including muscle weakness, tremors, and behavioral changes in humans.

INTERACTIONS WITH OTHER CHEMICALS WHICH ENHANCE TOXICITY:

None known or reported.

12. ECOLOGICAL INFORMATION

ECOTOXICITY:

No data is available on this product.

MOBILITY:

No data

PERSISTANCE/DEGRADABILITY:

No data

BIOACCUMULATION:

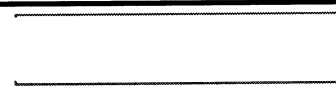
No data

13. DISPOSAL CONSIDERATIONS

If this product becomes a waste, it DOES NOT meet the criteria of a hazardous waste as defined under 40 CFR 261, in that it does not exhibit the characteristics of hazardous waste of Subpart C, nor is it listed as a hazardous waste under Subpart D. Care must be taken to prevent environmental contamination from the use of this material. The user of this material has the responsibility to dispose of unused material, residues and containers in compliance with all relevant local, state and federal laws and regulations regarding treatment, storage and disposal for hazardous and non-hazardous wastes. This product may be a candidate for metal reclamation.

14. TRANSPORT INFORMATION

	U.S. DOT	RID/ADR	IMDG	IATA	IMO	Canada TDG
<i>PROPER SHIPPING NAME:</i>	Not regulated					
<i>HAZARD CLASS:</i>						
<i>UN NO.:</i>						
<i>PACKING GROUP:</i>						
<i>LABEL:</i>						
<i>REPORTABLE QUANTITY:</i>						



15. REGULATORY INFORMATION

US FEDERAL

TSCA	The components of this product are listed on the Toxic Substance Control Act inventory.				
CERCLA:	None reported				
SARA 313:	Manganese				
SARA 313 Hazard Class:	<u>Health:</u>	Acute - No Chronic - No	<u>Fire:</u> None	<u>Reactivity:</u> None	<u>Release of Pressure:</u> None
SARA 302 EHS List:	None of the components of this product are listed.				

RQ = Reportable Quantity

STATE RIGHT-TO-KNOW STATUS

Component	*CA Prop. 65	New Jersey	Pennsylvania	Massachusetts	Michigan
Iron	Not listed	Not listed	Not listed	Not listed	Not listed
Manganese	Not listed	X	X	X	Not listed

EUROPEAN REGULATIONS

This material in its massive solid form is not required to be labeled under EC regulations.

German WGK Classification: Unknown

CANADIAN REGULATIONS

DSL LIST: The components of this product are on the DSL or are exempt from reporting under the New Substances Notification Regulations.

IDL: Manganese

WHMIS: This product is considered to be a manufactured article and therefore not subject to WHMIS requirements.

16. OTHER INFORMATION

PREPARED BY: Olin Brass

NOTICE: THE INFORMATION IN THIS MSDS SHOULD BE PROVIDED TO ALL WHO WILL USE, HANDLE, STORE, TRANSPORT, OR OTHERWISE BE EXPOSED TO THIS PRODUCT. THIS INFORMATION HAS BEEN PREPARED FOR THE GUIDANCE OF PLANT ENGINEERING, OPERATIONS AND MANAGEMENT AND FOR PERSONS WORKING WITH OR HANDLING THIS PRODUCT. OLIN BRASS BELIEVES THIS INFORMATION TO BE RELIABLE AND CURRENT AS OF THE DATE OF PUBLICATION, BUT MAKES NO WARRANTY THAT IT IS.

17. Document Review

This document reviewed annually.