

Firestone Metal Products Company

Material Safety Data Sheet

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SECTION 1: PRODUCT IDENTIFICATION

Product Name:	Metal Roofing Products: UC-1, 2, 3, 4, 5, 6, 7, 8, 9, 11, 14, 600, 601, 700; UR, HR, VR, 5VC, Flat Lock, ES-1, 2, 3, 4; sheet and coil stock, UNA-Edge DE, GS, CO; Brake metal
Chemical Name / Synonym:	Galvalume & Acrylume sheet – Carbon Steel
Chemical Family:	None
24-Hour Emergency Phone:	(800) 424-9300 CHEMTREC
Manufacturer's Name:	Firestone Metal Products Company
Manufacturer's Address:	250 West 96 th Street, Indianapolis, IN 46260
NFPA Hazard Rating:	Health 1, Flammability 0, Reactivity 0
HMIS Hazard Rating:	Health 1, Flammability 0, Reactivity 0

SECTION 2: CHEMICAL COMPOSITION

Chemical Name:	Common Name:	CAS #:	% (by wt)	Exposure Limits:
Iron	Iron	7439-89-6	>92	5 mg/m ³ (respirable) TLV (FeO ₂) 10 mg/m ³ PEL (FeO ₂)
Aluminum	Aluminum	7429-90-5	<3.5	10 mg/m ³ (total) TLV 5 mg/m ³ (respirable) PEL 15 mg/m ³ (total) PEL
Manganese	Manganese	7439-96-5	<1.2	0.2 mg/m ³ TLV 5 mg/m ³ PEL - Ceiling
Zinc	Zinc	7440-66-6	<2.3	2 mg/m ³ (respirable) TLV (ZnO) 10 mg/m ³ (respirable) TLV – STEL (ZnO) 5 mg/m ³ (respirable) PEL (ZnO) 15 mg/m ³ (total) PEL (ZnO)
Miscellaneous Metals, Minerals and Other Additives*	None	TSCA Reg.		Constituent-specific

*Included at < 1% (by weight) per constituent are carbon, copper, phosphorus, silicon, and sulfur.

Note: The following weight percentage applies only to a Regal Red paint finish on coated portion of a finished product:

Lead Chromate Molybdate Pigment	None	12656-85-8	10-15	0.05 mg/m ³ (as Pb) TLV 0.012 mg/m ³ (as Cr) TLV
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SECTION 3: HAZARD IDENTIFICATION

Primary Route of Exposure:	Inhalation and skin.
Signs and Symptoms of Exposure:	<p>General handling of metal products typically do not present a health hazard. Sharp metal fastener may cause skin cuts. Repeated contact with coating may lead to skin irritation and dermatitis.</p> <p>Upon welding, cutting, or welding on materials the following signs and symptoms of exposure:</p> <p>Dusts and fumes generated during welding, cutting or welding activities can cause irritation to the eyes, respiratory tract and mucous membranes. Accumulation of zinc oxide dust can cause skin eruptions, typically in warm and moist areas of the body. Inhalation of the zinc oxide fume (and some other metals found in this compound in very low concentrations) can cause metal fume fever, symptoms including muscular pain, chills, nausea and vomiting. Symptoms typically last for 24-48 hours, and are not life-threatening nor cause any permanent damage.</p> <p>Upon welding, cutting, or welding on materials that have been painted regal red, in addition to effects noted in above paragraph, the following are signs and symptoms of exposure to lead chromate:</p> <p>Dizziness, headache, nausea and/or respiratory irritation may be associated with inhalation of lead chromate fume.</p>
Medical Conditions Aggravated by Exposure:	Chronic respiratory disorders, including (but not limited to) asthma, chronic bronchitis and emphysema.
Chronic Effects:	<p>No chronic effects are expected due to general handling of metal products.</p> <p>Upon heating of this material (e.g., welding, cutting, or welding), the following chronic effects may occur:</p> <p>The inhalation of large amounts of iron dust may result in iron pneumoconiosis, termed siderosis, a benign condition identified via x-rays to appear as deposition of iron oxide on the lungs; however, little or no adverse health effects are typically reported with workers diagnosed with siderosis. The repeated inhalation of large amounts of manganese dust and fume can cause fibrotic changes in the lung, including some resembling those of silicosis. Additionally, repeated exposures to large amounts of manganese can lead to central nervous system (CNS) effects.</p> <p>If painted regal red, may cause central nervous system depression.</p>
Carcinogenicity:	Applies to metal painted regal red only: contains lead chromate, which is an IARC class 1 carcinogen, <i>carcinogenic to humans</i> , and an NTP <i>known to be a human carcinogen</i> .

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SECTION 4: FIRST AID MEASURES

First Aid Procedures:	<p>Treat skin cuts via washing wound with soap and clean water, and apply antibiotic.</p> <p>If particles from this material contact the eyes, hold eyelids open and flush immediately with a gentle stream of water for at least 15 minutes, preferably at an eyewash fountain. If particles become imbedded, or irritation continues, get medical attention. Following skin contact, clean immediately by washing affected area with soap and water. In case of inhalation of fumes or dusts, remove to fresh uncontaminated air. Administer oxygen if breathing is labored. Give artificial respiration if breathing has stopped. Get medical attention immediately if oxygen or artificial respiration are administered. While an unlikely means of exposure, in case of accidental ingestion, do not induce vomiting. Get medical attention and advise the physician of the nature of the material.</p>
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SECTION 5: FIRE FIGHTING PROCEDURES

Suitable Extinguishing Media:	Not applicable. Material will not burn unless involved in an intense fire supported by surrounding materials. In this case, extinguish using suitable media for surrounding materials.
Hazardous Combustion Products:	Various metal oxides and carbon oxides.
Recommended Fire Fighting Procedures:	No special procedures recommended for solid material. Do not permit water to come in contact with molten metal.
Unusual Fire and Explosion Hazards:	None for solid material. Molten metal will splatter when it comes in contact with water.

SECTION 6: PRECAUTIONS FOR SAFE HANDLING AND USE

Steps to Be Taken in Case Material is Released or Spilled:	Not Applicable for solid material. When cleaning up fine dusts, avoid creating airborne dust via wet wiping or vacuuming using a system equipped with fine particle filter.
Precautions to Be Taken in Handling and Storing:	Store away from acids.

SECTION 7: EXPOSURE CONTROLS / PERSONAL PROTECTION

Ventilation:	Activities involving the generation of high amounts of fine dusts and/or fumes should be evaluated to determine if additional local exhaust is necessary
Respiratory Protection:	Activities involving the generation of high amounts of fine dusts and/or fumes should be evaluated to determine if a NIOSH approved air purifying respirator may be appropriate based on employer-determined exposure levels. Air supplied or SCBA respirators may be required when the measured chemical concentration exceeds the capacity of the air purifying respirator or when personal exposure levels are unknown.

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Eye Protection:	Safety glasses with side shields may be warranted when cutting or grinding on this product. Employer-determined protective eye ware for welding, torching or other hot-work activities is required.
Skin Protection:	Cut-resistant gloves may be warranted while handling solid material. Welding or other hot-work gloves may be warranted when carrying out welding, cutting or other hot-work activities involving this material.
Other:	Other protective clothing may be warranted depending upon the activities involving this material. The employer must make this determination.
Work / Hygienic Practices:	Wash exposed skin prior to eating, drinking or smoking and at the end of each shift.

SECTION 8: PHYSICAL AND CHEMICAL PROPERTIES

Appearance and Odor:	Solid metallic gray or red-painted metal with no odor.		
Flash Point:	Not Applicable	Lower Explosive Limit:	Not Applicable
Method Used:	Not Applicable	Upper Explosive Limit:	Not Applicable
Evaporation Rate:	Not Applicable	Boiling Point:	Not Applicable
pH (undiluted product):	Not Applicable	Melting Point:	2750° F (base metal) 800-900° F (metallic coating)
Solubility in Water:	Insoluble	Specific Gravity:	Unknown
Vapor Density:	Not Applicable	Percent Volatile:	Not Applicable
Vapor Pressure:	Not Applicable		

SECTION 9: STABILITY AND REACTIVITY

Thermal Stability:	Stable
Hazardous Polymerization:	Will not occur
Conditions to Avoid:	Strong acids and calcium hypochlorite.

SECTION 10: TRANSPORTATION

Regulatory Agency:	Not Regulated
Proper Shipping Name:	Not Applicable
Hazard Classification:	Not Applicable
Identification Number:	Not Applicable
Labels Required:	Not Applicable
Other Requirements:	Not Applicable

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SECTION 11: MISCELLANEOUS INFORMATION

Additional Comments:	There may be a small amount of surface residue from treatments and oil coatings. Removal of such coatings should be considered prior to handling, welding, cutting, or other fume-generating activities.
Date of Previous MSDS:	February 20, 2008
Changes Since Previous MSDS:	Parent company name change in Disclaimer section.
Telephone Number for Additional Information:	(317) 575-7190

DISCLAIMER

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