Material Safety Data Sheet

I. Material Description

Company-	Issue Date-
Flannery, Incorporated 300 Parkside Drive San Fernando, CA 91340 (818) 837-7585; Fax (818) 837-1155 www.flannerytrim.com	April 2005 Revision Date- November 2007
Product Name- Bullnose Corners, Fast Mask, Shadow Mold, Corner Caps, Steel Trims	
Common Name- Galvanized Carbon and High Strength - Low Alloy Steel (Hot Dipped)	
Trade Name- Galvanized Steel (Chemical Family: Carbon Steel Alloy)	
Manufacturer's Code Identification- N/A (CAS #65997-19-5)	

II. Ingredients

Base Metal and Residuals-

Ingredients		Percent				CAS Number
Iron	Fe	min.	97			7439-89-6
Aluminum	Al	max.	0.08			7429-90-5
Carbon	C	max.	0.3			7440-44-0
Chromium	Cr	max.	0.1			7440-47-3
Columbium	Cb	max.	0.05			7440-03-1
Copper	Cu	max.	0.35			7440-50-8
Manganese	Mn		0.10-1.25			7439-96-5
Molybdenum	Mo	max.	0.05			7439-98-7
Nickel	Ni	max.	0.1			7440-02-0
Nitrogen	N	max.	0.012			7727-37-9
Phosphorus	P	max.	0.025			7723-14-0
Silicon	Si	max.	0.3			7440-21-3
Sulfur	S	max.	0.025			7704-03-1
Tin	Sn	max.	0.02			7440-31-5
Titanium	Ti	max.	0.08			7440-32-6
Vanadium	V	max.	0.08			7440-62-2

Coating Materials-

Ingredients		Percent				CAS Number
Zinc	Zn	min.	99			7440-66-6
Aluminum	Al		0.2-0.5			7429-90-5
Lead	Pb		0.015-0.025			7439-92-1

III. Physical Data

Appearance-	Metallic Gray		Physical Form-	Solid
Vapor Pressure-	N/A		Evaporation Rate-	N/A
Vapor Density-	N/A		Density-	
Boiling Temperature-	N/A		Specific Gravity-	7.85
Melting Temperature-	Base Material- 2750º F		Water Solubility-	NII
	Coating- 750º F		pH-	N/A
Soluble in Water-	No		Odor-	None

IV. Stability and Reactivity

Stability-

Stable under normal conditions of storage and handling.

Conditions to Avoid-

Storage near strong oxidizers.

Hazardous Decomposition Products-

Thermal decomposition may release hazardous metal fumes.

Hazardous Polymerization-

N/A

V. Fire and Explosion Data

Fire Information-

Flashpoint- N/A
Auto-ignition Temperature- N/A
Flammable Limits- N/A
Explosive Limits- N/A
NFPA Fire Rating-
- Health Hazard- 2
- Flammability- 0
- Reactivity- 0

(Key: Least=0, Slight=1, Moderate=2, High=3, Extreme=4)

Unusual Fire and Explosive Hazards

No unusual fire or explosive hazards are expected. However, dust powder or fumes are flammable or explosive when exposed to heat or flames.

VI. Fire Fighting Measures

Special Firefighting Procedures-

For fires beyond the incipient stage, emergency responders in the immediate hazard area should wear bunker gear. When the potential chemical hazard is unknown, in enclosed or confined spaces, or when explicitly required by DOT, a self-contained breathing apparatus should be worn. In addition, wear other appropriate protective equipment as conditions warrant (see Section VII). Isolate immediate hazard area and keep unauthorized personnel out. Stop spill/relase if it can be done with minimal risk. Move undamaged containers from immediate hazard area if it can be done with minimal risk. Water spray may be useful in minimizing or dispersing vapors. Cool equipment exposed to fire with water, if it can be done with minimal risk.

VII. Exposure Controls, Personal Protective Equipment

Engineering Controls-

If current ventilation practices are not adequate to maintain airbourne dust concentrations below the established exposure limits (see Section II), additional ventilation or exhaust systems may be required.

Personal Protective Equipment (PPE)-

Eyes-

Approved eye protection to safeguard against potential eye contact, irritation, or injury is recommended. Depending on conditions of use, a face shield may be necessary.

Skin-

Not required based on the hazards of the material. However, it is considered good practice to wear gloves when handling chemicals.

Inhalation-

A NIOSH/MSHA approved air purifying respirator with a type 95 particulate filter may be used under conditions where airbourne concentrations expected to exceed exposure limits (see below). Protection provided by air-purifying respirators is limited (see manufacturer's respirator selection guide). Use a positive pressure air supplied respirator if there is potential for uncontrolled release, exposure levels are not known, or any other circumstances where air-purifying repirators may not provide adequate protection. A respiratory protection program that meets OSHA's 29 CFR 1910.134 and ANSI Z88.2 requirements must be followed whenever workplace conditions warrant a respirator's use.

Other-

Eye wash and quick-drench shower facilities should be available in the work area. Thoroughly clean shoes and wash contaminated clothing before reuse. It is recommended that impervious clothing be worn.

Exposure Guidelines-

Component	ACGIH TLV	ACGIH STEL		OSHA STEL	OSHA PEL
Nuisance particulates, if generated	10 mg/m³ total 3 mg/m³ respirable	None		None	15 mg/m³ total 5 mg/m³ respirable
Chromium	0.5 mg/m³	None		0.5 mg/m³	1 mg/m³
Iron (oxide dust & fume)	5 mg/m³	None		None	10 mg/m³
Manganese	0.2 mg/m³	None		5 mg/m³ (CEIL)	None
Nickel	1.5 mg/m³ 0.2 mg/m³ (insol)	None		None	1 mg/m³
Zinc (Oxide)	5 mg/m³ (fume) 10 mg/m³ (dust)	10 mg/m³ (fume)		None	5 mg/m³ (fume) 15 mg/m³ (oxide) tota 5 mg/m³ (oxide) tota

VIII. Emergency Medical Procedures

Eyes-

If irritation or redness develops from dust exposure, move victim away from exposure and into fresh air. Flush eyes with clean water. If symptoms persist, seek medical attention.

Skin-

First aid is not normally required. However, it is good practice to wash any material from skin.

Inhalation-

First aid is not normally required. If breathing difficulties develop, move victim away from source of exposure and into fresh air. Seek immediate medical attention.

Ingestion-

First aid is not normally required; however, if dust is swallowed and symptoms develop, seek medical attention.

IX. Hazards Identification

Emergency Overview-

Avoid contact with eyes. Wash thoroughly after handling. Odorless, metallic gray solid.

Potential Health Effects-

Note: Steel products, under normal conditions, do not present an inhalation, ingestion, or skin hazard. However, operations such as welding, grinding, sawing, and burning, which may cause airbourne particulates or fume formation, may present a health hazard.

Eyes-

Contact with dusts or particulates produced by cutting, welding, or grinding may be abrasive and irritating to the eyes and cause stinging, watering, and redness.

Skin-

Contact with dusts or particulates produced by cutting, welding, or grinding may be abrasive and mildly irritating to the skin. Particulates may cause a red-brown pigmentation of the skin following repeated exposure. No harmful effects from skin absorption are expected.

Inhalation-

No LC50 toxicity data available for the product. Dusts or particulates produced by cutting, welding, or grinding are expected to have a low degree of toxicity by inhalation.

Ingestion-

No LD50 toxicity data available for the product. Dusts or particulates produced by cutting, welding, or grinding are not known to be toxic.

Signs and Symptoms-

Effects of overexposure may include irritation of the nose and throat and digestive tract.

Cancer-

No information available on the cancer hazard of this material. However, a component has been identified as a cancer hazard (see Section XIII),

Target Organs-

A component of this product is a potential hazard to the male reproductive system (see Section XIII).

Developmental-

No data available.

Other Comments-

Chronic exposure to manganese may result in a central nervous system disorder (manganism). Symptoms may include confusion, bizarre behavior, visual hallucinations, difficulty with speech and movement, tremor, loss of balance, decreased libido and impotence.

Chronic exposure to high concentrations of iron have been associated with hemosiderosis, hemochromatosis and in severe cases, liver cirrhosis. Typical occupational exposures to iron compounds are not expected to cause these effects. Chronic inhalation can produce "mottling" of the lungs (siderosis). This is considered a benign pneumoconiosis and does not normally lead to fibrosis or cause significant physiologic impairment.

Metal fume fever is a brief, self-limited illness characterized by fever, chills, aching muscles, sweating, nausea, vomiting, and coughing. Symptoms typically occur several hours after exposure to metal oxide fumes and subside with 24-48 hours.

This material/product contains chemicals known to the State of California to cause cancer and/or reproductive toxicity (see Sections XIII and XIV).

Medical Conditions Aggravated by Exposure-

Conditions aggravated by exposure may include skin disorders, respiratory (asthma-like), and male reproductive disorders.

X. Environmental Impact

Accidental Release Measures- In case of dust release, stay upwind and away from spill. Notify persons down wind of spill/release, isolate immediate hazard area and keep unauthorized personnel out. Contain spill if it can be done with minimal risk. Wear appropriate protective equipment including respiratory protection as conditions warrant (see Section VII). Prevent spilled material from entering sewers, storm drains, other unauthorized treatment drainage systems, and natural waterways. Notify appropriate federal, state, and local agencies. Sweep up and package appropriately for disposal .
Ecological Information- No ecological data is available.
Waste Disposal Methods- This material, if discarded as produced, is not a RCRA "listed" or "characteristic" hazardous waste. Use which results in chemical or physical change or contamination may subject it to regulation as a hazardous waste. Along with properly characterizing all waste materials, consult state and local regulations regarding the proper disposal of this material.
Recycling- Galvanized steel in its solid form is recyclable. Galvanized steel should be tested to determine if it has any hazardous characteristics prior to disposal.

XI. Handling and Storage

Handling- The use of appropriate respiratory protection is advised when concentrations exceed any established exposure limits (see Sections II and VII). Wash thoroughly after handling. Do not wear contaminated clothing or shoes. Use good personal hygiene practice.
Storage- Keep away from any incompatible material (see Section IV).

XII. Transportation Information

Transport- DOT/TCI/IMO/UN Proper Shipping Name: Not regulated DOT/TCI/IMO/UN Identification Number: Not applicable DOT/IMO/UN Classification: Not regulated

XIII. Toxicological Information

Manganese CAS# 7439-96-5- Repeated administration of manganese resulted in limited evidence of male reproductive effects in laboratory animals. The adverse effects included decreased spermatids, spermatocytes, and degeneration of seminiferous tubules. Chronic administration of certain inorganic manganese salts has resulted in limited evidence of central nervous system effects in laboratory animals. The effects included degenerative changes in basal ganglionic cells.

XIII. Toxicological Information Continued...

Nickel CAS# 7440-02-0-

There is sufficient evidence in animals for the carcinogenicity of metallic nickel, nickel monoxides, nickel hydroxides and crystalline sulfides, and limited evidence in animals for other nickel compounds (e.g., alloys, arsenides, and nickel carbonyl). Occupational exposure has been associated with cancer of the lung and nasal cavity. Nickel and nickel compounds have been identified as carcinogens by NTP and IARC.

Welding Fumes-

Welding fumes may be different in composition from the original welding product, with the chief component being ordinary oxides of metal being welded. Chronic health effects (including cancer) have been associated with the fumes and dusts of individual component metals (see above), and welding fumes as a general category have been listed by IARC as a carcinogen. There is also limited evidence that welding fumes may cause adverse reproductive and fetal effects. Evidence is stronger where welding materials contain known reproductive toxicants.

This material/product contains chemicals known to the State of California to cause cancer and/or reproductive toxicity that may be released during welding (see Section XIV).

XIV. Regulatory Information

Osha (Occupational Safety and Health Administration)-

This material is considered to be nonhazardous as defined by the OSHA Hazard Communication Standard. However, dusts and fumes from this product may be hazardous as identified in Sections IX and XIII.

Component	TSCA Inventory	DSL	SARA 313 (Deminimus)	SARA 302	SARA 304	CERCLA RQ	CAA 112(r)	CA Prop 65
Aluminum	X	X	X (1%)	---	---	---	---	---
Carbon	X	X	---	---	---	---	---	---
Chromium	X	X	X (1%)	---	X	5000	---	X
Columbium	X	X	---	---	---	---	---	---
Copper	X	X	X (1%)	---	X	5000	---	---
Iron	X	X	---	---	---	---	---	---
Lead	X	X	X (N/A)	---	X	10	---	X
Manganese	X	X	X (1%)	---	---	---	---	---
Molybdenum	X	X	---	---	---	---	---	---
Nickel	X	X	X (0.1%)	---	X	100	---	X
Nitrogen	X	X	---	---	---	---	---	---
Phosphorus	X	X	X (1%)	X	X	1	---	---
Silicon	X	X	---	---	---	---	---	---
Sulfur	X	X	---	---	---	---	---	---
Tin	X	X	---	---	---	---	---	---
Titanium	X	X	---	---	---	---	---	---
Vanadium	X	X	X (1%)	---	---	---	---	---
Zinc	X	X	X (1%)	---	X	1000	---	---

California Safe Drinking Water and Toxic Act of 1986 (Proposition 65)-

This material/product contains chemicals (as listed above) known to the State of California to cause cancer and/or reproductive toxicity.

XIV. Regulatory Information Continued...

Sections 311/312-

This product has been reviewed according to the EPA "Hazard Categories" promulgated under Sections 311 and 312 of SARA Title III and is considered, under applicable definitions, to meet the following categories:

Acute: No Chronic: Yes Fire: No Reactivity: No

This material has not been identified as a carcinogen by NTP, IARC, OSHA.

Notification Pursuant to EPCRA, 40 CFR PART 372.45-

This material contains toxic chemicals which are subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR part 372. The following chemicals contained in this material are subject to the reporting requirements of Section 313:

Chemical	CAS Number	Typical Weight Percentage
Aluminum	7429-90-5	0.08 max
Chromium	7440-47-3	0.10 max
Copper	7440-50-8	0.35 max
Lead	7439-92-1	0.015-0.025
Manganese	7439-96-5	0.10-1.25
Nickel	7440-02-0	0.10 max
Phosphorus	7723-14-0	0.025 max
Vanadium	7440-62-2	0.08 max
Zinc	7440-66-6	>99

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