

# GenFlex Roofing Systems Material Safety Data Sheet

Material Name: GenFast™ Bar Anchor

February 4, 2008

## \*\*\* Section 1 - Chemical Product and Company Identification \*\*\*

**Product Use:** Anchor

**Manufacturer Information**

GenFlex Roofing Systems, LLC  
250 West 96<sup>th</sup> Street  
Indianapolis, IN 46260

Phone: 317-575-7190 (Non-Emergency)

Emergency # 1-800-424-9300 (CHEMTREC)

International # 1-703-527-3887 (CHEMTREC)

**General Comments**

NOTE: CHEMTREC telephone number is to be used only in the event of chemical emergencies involving a spill, leak, fire, exposure, or accident involving chemicals. All non-emergency questions should be directed to customer service.

## \*\*\* Section 2 - Hazards Identification \*\*\*

**Emergency Overview**

This product is a silver gray metallic solid. Under normal conditions of use, this product is not expected to create any unusual health or emergency hazards. If the product is subjected to welding, burning, grinding or machining metal particulates or elemental oxides can be generated. **DO NOT WELD, BURN, GRIND OR MACHINE THIS PRODUCT.** Breathing dust from this product may cause metal fume fever. Contact of the skin with dusts from this material may result in an allergic sensitization reaction. Inhalation of dusts from this product may result in allergic respiratory sensitization reactions. This product contains components which are cancer hazards.

**Potential Health Effects: Eyes**

This product may cause irritation to the eyes.

**Potential Health Effects: Skin**

Contact with dusts or thermal processing fumes may cause irritation. Prolonged or repeated contact with processing fumes or dusts may cause an allergic skin sensitization reaction.

**Potential Health Effects: Ingestion**

Ingestion of this product is unlikely, however, ingestion may cause nausea, vomiting and diarrhea.

**Potential Health Effects: Inhalation**

Dusts may cause irritation to nose, throat and respiratory system. Inhalation of dusts may cause respiratory sensitization in some individuals, resulting in allergic symptoms of the respiratory tract producing asthma-like conditions (including wheezing, shortness of breath and difficulty breathing). This product may cause metal fume fever with resulting flu-like symptoms.

**HMIS Ratings: Health: 1\* Fire: 0 Reactivity: 1 Pers. Prot.:** safety glasses, gloves

Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe \* = Chronic hazard

## \*\*\* Section 3 - Composition / Information on Ingredients \*\*\*

CAS #	Component	Approx. Percent
7439-89-6	Iron	~95
7439-96-5	Manganese	<2
7440-47-3	Chromium	<1.25
7440-02-0	Nickel	<0.75

**Component Related Regulatory Information**

This product may be regulated, have exposure limits or other information identified as the following: Manganese compounds, n.o.s., Nickel compounds.

**Component Information/Information on Non-Hazardous Components**

This product has been determined to be an (article), meeting the criteria established in 29 CFR1910.1200(b) (6) (v) and does not pose a physical hazard and/or health risk under normal conditions of use.

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### \*\*\* Section 4 - First Aid Measures \*\*\*

**First Aid: Eyes**

In case of contact with eyes, rinse immediately with plenty of water for 15 minutes and seek medical advice.

**First Aid: Skin**

For skin contact, flush with large amounts of water. If irritation persists, get medical attention.

**First Aid: Ingestion**

If the material is swallowed, get immediate medical attention or advice -- Do not induce vomiting unless instructed to do so by medical personnel.

**First Aid: Inhalation**

Remove immediately to fresh air. If symptoms develop or persist, seek immediate medical attention.

**First Aid: Notes to Physician**

### \*\*\* Section 5 - Fire Fighting Measures \*\*\*

**Flash Point:** Not applicable

**Method Used:** Not applicable

**Upper Flammable Limit (UFL):** Not applicable

**Lower Flammable Limit (LFL):** Not applicable

**Auto Ignition:** Not applicable

**Flammability Classification:** Non Flammable

**Rate of Burning:** Not applicable

**General Fire Hazards**

Contact with strong acids may release flammable hydrogen gas.

**Hazardous Combustion Products**

Decomposition of this product may yield metallic oxides.

**Extinguishing Media**

Dry chemical, foam, water, sand. When molten metal, avoid using water.

**Fire Fighting Equipment/Instructions**

Firefighters should wear full protective clothing including self contained breathing apparatus.

**NFPA Ratings: Health: 1 Fire: 0 Reactivity: 1**

Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe

### \*\*\* Section 6 - Accidental Release Measures \*\*\*

**Containment Procedures**

Containment of this material should not be necessary.

**Clean-Up Procedures**

Collect dust using a vacuum cleaner with a HEPA filter. Place in a closed container. Clean-up personnel should wear suitable protective equipment.

**Evacuation Procedures**

None identified.

**Special Procedures**

For molten metal, contain the flow over the floor using sand or salt flux as a dam. Do not attempt to halt the flow of metal with shovels or hand tools.

### \*\*\* Section 7 - Handling and Storage \*\*\*

**Handling Procedures**

Avoid getting this material into contact with your skin and eyes. Avoid breathing dusts from this material. Wash thoroughly after handling. Avoid contact with acids

**Storage Procedures**

None identified.

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## \*\*\* Section 8 - Exposure Controls / Personal Protection \*\*\*

### Exposure Guidelines

#### A: General Product Information

Follow all applicable exposure limits.

#### B: Component Exposure Limits

##### Manganese (7439-96-5)

ACGIH: as Mn, 0.2 mg/m3 TWA  
OSHA: fume, as Mn: 1 mg/m3 TWA  
compounds, as Mn: C 5 mg/m3  
NIOSH: as Mn: 1 mg/m3 TWA  
3 mg/m3 STEL

##### Chromium (7440-47-3)

ACGIH: 0.5 mg/m3 TWA  
OSHA: (as Cr): 1 mg/m3 TWA  
NIOSH: as Cr: 0.5 mg/m3 TWA; see Appendix C for supplementary exposure limits

##### Nickel (7440-02-0)

ACGIH: metal, inhalable fraction: 1.5 mg/m3 TWA  
OSHA: 1 mg/m3 TWA  
NIOSH: as Ni: 0.015 mg/m3 TWA; NIOSH Potential Occupational Carcinogen - see Appendix A

### Engineering Controls

Under normal handling and use conditions of this product, exposure to hazardous ingredients is unlikely due to product form. The exposure limits provided are for reference purposes in the event that dusts are generated. Keep formation of airborne dusts to a minimum.

### PERSONAL PROTECTIVE EQUIPMENT

#### Personal Protective Equipment: Eyes/Face

Wear safety goggles with side shields.

#### Personal Protective Equipment: Skin

Use impervious gloves. For molten metal, heat and flame resistant gloves and clothing should be worn.

#### Personal Protective Equipment: Respiratory

If ventilation is not sufficient to effectively remove and prevent buildup of dusts or processing fumes, appropriate NIOSH/MSHA approved respiratory protection must be provided.

#### Personal Protective Equipment: General

Use good industrial hygiene practices in handling this material.

## \*\*\* Section 9 - Physical & Chemical Properties \*\*\*

<b>Appearance:</b>	Silvery grey solid	<b>Odor:</b>	Odorless
<b>Physical State:</b>	Solid	<b>pH:</b>	Not available
<b>Vapor Pressure:</b>	Not applicable	<b>Vapor Density:</b>	Not applicable
<b>Boiling Point:</b>	Not available	<b>Solubility (H<sub>2</sub>O):</b>	Not applicable
<b>Specific Gravity:</b>	7.55	<b>Freezing Point:</b>	1550°C
<b>Evaporation Rate:</b>	Not applicable	<b>Flash Point</b>	Not applicable

## \*\*\* Section 10 - Chemical Stability & Reactivity Information \*\*\*

### Chemical Stability

Stable under normal conditions.

#### Chemical Stability: Conditions to Avoid

Contact with acids. Avoid generation of dusts.

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### Incompatibility

This product may react with strong acids.

### Hazardous Decomposition

None identified.

### Hazardous Polymerization

Hazardous polymerization will not occur.

## \*\*\* Section 11 - Toxicological Information \*\*\*

### Acute Toxicity

#### A: General Product Information

No information available for the product.

Prolonged or repeated contact with nickel can cause allergic skin reactions including redness, itching and a rash in sensitive individuals. Prolonged or repeated inhalation of nickel compounds may also result in allergic lung reactions producing an asthma-like condition. Occupational exposure to nickel has been associated with respiratory cancers.

Overexposure to manganese dusts may result in pneumoconiosis, a lung disease due to permanent deposition of substantial amounts of particulate matter in the lungs. Overexposure to manganese may result in CNS effects, anemia and pneumonitis which increases the risk of pneumonia. Workers exposed to manganese dusts have been reported to develop "manganism", a disorder of the central nervous system with symptoms which may include masklike facial expression, spastic gait, tremors, slurred speech, sometimes dystonia, fatigability, anorexia, asthenia, apathy and inability to concentrate. Inhalation of dusts containing manganese compounds can cause metal fume fever which involves a transient onset of flu-like symptoms. Exposure to manganese compounds may result in toxic accumulation in critical organs such as the liver, kidney and brain.

Zinc poisoning can cause anemia, lethargy and dizziness. Inhalation of zinc fumes may cause metal fume fever, a flu-like illness generally lasting 24 hours or less.

Chromium III, the naturally occurring form, has low toxicity while chromium VI is highly toxic due to strong oxidation characteristics and permeability through biological membranes. Excessive exposure to chromium VI can produce allergic skin sensitization reactions and severe nasal irritation, scarring and damage to the lungs, liver and kidney damage. Excessive exposure to chromium VI can produce allergic skin sensitization reactions and severe nasal irritation, scarring and damage to the lungs, liver and kidney damage. Industrial exposure to chromium may cause dermatitis, skin ulcers, perforation of the nasal septum, as well as cancers of the lungs, nasal cavity and paranasal sinuses.

#### B: Component Analysis - LD50/LC50

##### Iron (7439-89-6)

Oral LD50 Rat : 30 gm/kg

##### Manganese (7439-96-5)

Oral LD50 Rat : 9 gm/kg

### Carcinogenicity

#### A: General Product Information

No carcinogenicity data available for this product.

The carcinogenic effect of nickel has been well documented in occupationally exposed nickel refinery workers. Lung and nasal cancers were the predominant forms of cancer in the exposed workers.

Hexavalent chromium compounds have been reported to be carcinogenic in humans.

#### B: Component Carcinogenicity

##### Chromium (7440-47-3)

ACGIH: A4 - not classifiable as a human carcinogen

IARC: Monograph 49; 1990 (Group 3 (not classifiable))

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## Nickel (7440-02-0)

ACGIH: A5 - Not Suspected as a Human Carcinogen

NIOSH: occupational carcinogen

NTP: Suspect Carcinogen; (under Nickel and Certain Nickel Compounds) (Possible Select Carcinogen)

IARC: Monograph 49; 1990 (Evaluated as a group) (related to Nickel compounds) (Group 1 (carcinogenic to humans))

## Epidemiology

No data available for this product.

A number of occupational health surveys and epidemiological studies have shown an association between sustained exposure to airborne manganese compounds or fumes and chronic neurologic disorders.

Asthma induced by occupational exposure to nickel has been documented. The asthma can result from either primary irritation or from an allergic response.

Contact dermatitis in workers exposed to nickel compounds is one of the most prevalent effects of nickel exposure.

## Neurotoxicity

No data available for this product.

Chronic overexposure to manganese can cause "manganism". Manganism is characterized by fatigue, irritability, headaches and asthenia. Symptoms are reversible when exposure stops. Chronic overexposure to manganese compounds may result in CNS effects such as weakness, sleepiness, emotional instability and spastic gait. These effects can be permanent

## Mutagenicity

No data available for this product.

Chromium VI compounds have been mutagenic in bacteria, caused chromosome aberrations in mammalian cells and have been associated with increased frequencies of chromosome aberrations in lymphocytes in chromate workers.

## Teratogenicity

No information available for the product.

## Other Toxicological Information

None available.

## \*\*\* Section 12 - Ecological Information \*\*\*

### Ecotoxicity

#### A: General Product Information

No data available for this product.

#### B: Component Analysis - Ecotoxicity - Aquatic Toxicity

No ecotoxicity data are available for this product's components.

### Environmental Fate

No data available for this product.

## \*\*\* Section 13 - Disposal Considerations \*\*\*

### US EPA Waste Number & Descriptions

#### A: General Product Information

This product contains chromium which is a hazardous waste (D007). Waste should be tested using methods described in 40 CFR Part 261 to determine if it meets applicable definitions of hazardous wastes.

#### B: Component Waste Numbers

##### Chromium (7440-47-3)

RCRA: waste number D007; regulatory level = 5.0 mg/L

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## Disposal Instructions

Dispose of waste material according to Local, State, Federal, and Provincial Environmental Regulations.

### \*\*\* Section 14 - Transportation Information \*\*\*

#### US DOT Information

**Shipping Name:** Not regulated as dangerous goods.

**Hazard Class:** None

**UN/NA #:** None

**Packing Group:** None

**Required Label(s):** None

#### International Transportation Regulations

### \*\*\* Section 15 - Regulatory Information \*\*\*

#### US Federal Regulations

##### A: General Product Information

None identified.

##### B: Component Analysis

This material contains one or more of the following chemicals required to be identified under SARA Section 302 (40 CFR 355 Appendix A), SARA Section 313 (40 CFR 372.65) and/or CERCLA (40 CFR 302.4).

##### Manganese (7439-96-5)

SARA 313: form R reporting required for 1.0% de minimis concentration

CERCLA: Statutory RQ = 1 pound (.454 kg); no final RQ is being assigned to the generic or broad class (related to Manganese compounds, n.o.s.)

##### Chromium (7440-47-3)

SARA 313: form R reporting required for 1.0% de minimis concentration

CERCLA: final RQ = 5000 pounds (2270 kg) (no reporting of releases of this hazardous material is required if the diameter of the pieces of the solid metal released is equal to or exceeds 0.004 inches)

##### Nickel (7440-02-0)

SARA 313: form R reporting required for 0.1% de minimis concentration

CERCLA: final RQ = 100 pounds (45.4 kg) (no reporting of releases of this hazardous substance is required if the diameter of the pieces of the solid metal released is equal to or exceeds 0.004 inches)

#### State Regulations

##### A: General Product Information

No information available.

##### B: Component Analysis - State

The following components appear on one or more of the following state hazardous substances lists:

Component	CAS #	CA	FL	MA	MN	NJ	PA
Iron	7439-89-6	Yes	No	No	No	No	No
Manganese	7439-96-5	Yes	Yes	Yes	Yes	Yes	Yes
Chromium	7440-47-3	Yes	Yes	Yes	Yes	Yes	Yes
Nickel	7440-02-0	Yes	Yes	Yes	Yes	Yes	Yes

The following statement(s) are provided under the California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65):

WARNING! This product contains a chemical known to the state of California to cause cancer.

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## Other Regulations

### A: General Product Information

No information available.

### B: Component Analysis - Inventory

Component.	CAS #	TSCA	DSL	EINECS
Iron	7439-89-6	Yes	Yes	Yes
Manganese	7439-96-5	Yes	Yes	Yes
Chromium	7440-47-3	Yes	Yes	Yes
Nickel	7440-02-0	Yes	Yes	Yes

### C: TSCA 12(b) Export Notification

This material has no components listed.

### D: Component Analysis - WHMIS IDL

The following components are identified under the Canadian Hazardous Products Act Ingredient Disclosure List:

Component	CAS #	
Manganese	7439-96-5	1% item 974 (1077)
Chromium	7440-47-3	0.1% item 399 (561)
Nickel	7440-02-0	0.1% item 1126 (1193)

## \*\*\* Section 16 - Other Information \*\*\*

Date of Previous MSDS: April 3, 2007

Changes Since Previous MSDS: Section 1 – Company address change.

## Key/Legend

EPA = Environmental Protection Agency; TSCA = Toxic Substance Control Act; ACGIH = American Conference of Governmental Industrial Hygienists; IARC = International Agency for Research on Cancer; NIOSH = National Institute for Occupational Safety and Health; NTP = National Toxicology Program; OSHA = Occupational Safety and Health Administration; NFPA = National Fire Protection Association; HMIS = Hazardous Material Identification System; CERCLA = Comprehensive Environmental Response, Compensation and Liability Act; SARA = Superfund Amendments and Reauthorization Act

## \*\*\* Disclaimer \*\*\*

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