

R-342-48(Rev. 12-89)

**Label No.**

**5138**

## **STAINLESS STEEL**

**WARNING:** This product is not a physical or health hazard in bulk form. Welding or machining stainless steel may generate dusts and fumes which may cause eye, nose, and throat irritation. Ozone may be emitted as a by-product during welding or plasma arc cutting. Chronic overexposure to ozone and some of the ingredients in stainless steel may cause lung damage. Nickel and chromium are listed by the International Agency for Research on Cancer and the National Toxicology Program as carcinogens.

For further information, refer to Reynolds Material Safety Data Sheet.

| <b>Ingredients</b> | <b>CAS Number</b> |
|--------------------|-------------------|
| Aluminum           | 7429905           |
| Silicon            | 7440213           |
| Iron               | 7439896           |
| Copper             | 7440508           |
| Manganese          | 7439965           |
| Chromium           | 7440473           |
| Nickel             | 7440020           |
| Molybdenum         | 7439987           |
| Titanium           | 7440326           |



**REYNOLDS METALS COMPANY**

P. O. Box 27003

Richmond, Virginia 23261-7003

*This label is required by the OSHA Hazard Communication Standard.*

**MATERIAL SAFETY DATA SHEET**

("Essentially Similar" to Form OSHA-174)

REYNOLDS METALS COMPANY R-1087-19

DATE PREPARED

12/21/89

REVISION DATE

9/24/93

MSDS #

5139

**SECTION 1 - MATERIAL IDENTIFICATION**

MANUFACTURER: Reynolds Metals Company  
 P. O. Box 27003  
 Richmond, Virginia 23261-7003

EMERGENCY TELEPHONE NUMBER:  
 (804) 281-2265

PRODUCT CLASS: Galvanized Steel  
 TRADE NAME: SHEET, BUILDING PRODUCTS

MANUFACTURER'S CODE IDENTIFICATION  
 SHEET, BUILDING PRODUCTS

**SECTION 2 - HAZARDOUS INGREDIENTS OF MATERIAL**

| Hazardous Ingredients | Typical Percent | OSHA PEL |  |                              | ACGIH TLV |  |                              | CAS Numbers |
|-----------------------|-----------------|----------|--|------------------------------|-----------|--|------------------------------|-------------|
|                       |                 | Gas ppm  | Respirable Dust/Mist mg/m <sup>3</sup> | Total Dust mg/m <sup>3</sup> | Gas ppm   | Respirable Dust/Mist mg/m <sup>3</sup> | Total Dust mg/m <sup>3</sup> |             |
| BASE METAL            |                 |          |  |                              |           |  |                              |             |
| Iron                  | min 95.0        |          | 10                                     |                              | 5         |  | 7439-89-6                    |             |
| Manganese **          | max 2.0         |          | 5C*                                    |                              | 1         | 5                                      | 7439-96-5                    |             |
| METALLIC COATING      |                 |          |  |                              |           |  |                              |             |
| Zinc **               | max 10.0        |          | 5                                      | 15                           | 5         | 10                                     | 7440-66-6                    |             |
| Aluminum **           | max 6.0         |          | 5                                      | 15                           | 5         | 10                                     | 7429-90-5                    |             |
| Iron                  | max 1.5         |          | 10                                     |                              | 5         |  | 7439-89-6                    |             |

\* "C" indicates ceiling value  
 \*\* on SARA Section 313 list.

**SECTION 3 - PHYSICAL DATA OF MATERIAL**

BOILING POINT: 2750C (Iron)  
 SPECIFIC GRAVITY: 7.9 (Iron)  
 VAPOR PRESSURE: N/A  
 VAPOR DENSITY: N/A  
 COEFFICIENT OF WATER/OIL DIST: N/A  
 ODOR THRESHOLD: N/A

FREEZING POINT: 1535C (Iron)  
 SOLUBILITY IN WATER: Insoluble  
 PHYSICAL STATE: Solid  
 pH: N/A  
 EVAPORATION RATE: N/A  
 APPEARANCE/ODOR: Odorless, silver color

**SECTION 4 - FIRE AND EXPLOSION HAZARD OF MATERIAL**

FLAMMABILITY: YES? NO? X

WHAT CONDITIONS? N/A

FLASH POINT (Method Used): N/A

UEL: N/A

LEL: N/A

**MEANS OF EXTINCTION:**

This product is not combustible. For fires involving metal dust, use dry powdered dolomite, dry sand, or dry graphite. Do not use water.

**SPECIAL PROCEDURES:**

Make certain any material that is to be remelted is free of moisture. For fire fighting, use self-contained breathing apparatus in pressure demand mode.

AUTO IGNITION TEMPERATURE: N/A

HAZARDOUS COMBUSTION PRODUCTS: None known

SENSITIVITY TO IMPACT: None known

SENSITIVITY TO STATIC DISCHARGE: None known

ND = NOT DETERMINED

N/A = NOT APPLICABLE

## SECTION 5 - REACTIVITY DATA

CH EMI CAL STABILITY: Stable

REACTIVITY AND UNDER WHAT CONDITIONS: Make certain any material that is to be remelted is free of moisture.

INCOMPATIBILITY TO OTHER SUBSTANCES: YES  
Will react with strong acids to liberate hydrogen.

HAZARDOUS DECOMPOSITION PRODUCTS: None known

## SECTION 6 - TOXICOLOGICAL PROPERTIES OF PRODUCT

|                    |                  |                     |
|--------------------|------------------|---------------------|
| ROUTE(S) OF ENTRY: | INHALATION? YES  | INGESTION? NO       |
|                    | EYE CONTACT? YES | SKIN ABSORPTION? NO |

## EFFECTS OF ACUTE EXPOSURE:

Inhalation of excessive zinc fumes may cause irritation of the respiratory tract and metal fume fever. Symptoms of metal fume fever include chills, fever, nausea, chest tightness, or metallic taste. Ozone may be emitted as a by-product during welding or plasma arc cutting. Exposure to ozone may produce irritation to eyes, nose, and throat. Welding and/or plasma arc cutting generates ultraviolet radiation which can cause skin burns or welders flash to unprotected skin and eyes.

## EFFECTS OF CHRONIC EXPOSURE:

Prolonged exposure to ozone may result in nausea, headache, and pulmonary damage. Chronic inhalation of high concentrations of iron oxide fume and dust may lead to a benign pneumoconiosis (siderosis).

## INGREDIENTS OF PRODUCT:

## BASE METAL

Iron - Not known  
Manganese - orl-rat 9000mg/kg

## METALLIC COATING

Zinc - Not known  
Aluminum - Not known  
Iron - Not known

## LC50 OF PRODUCT:

## BASE METAL

Iron - Not known  
Manganese - Not known

## METALLIC COATING

Zinc - Not known  
Aluminum - Not known  
Iron - Not known

IRRITANCY OF PRODUCT: Mild

## EXPOSURE LIMITS OF PRODUCT:

Use levels for specific ingredients shown in Section 2.

SENSITIZATION TO PRODUCT: None known

SYNERGISTIC MATERIALS: None known

CARCINOGENICITY: None known

REPRODUCTIVE EFFECTS: None known

TERATOGENICITY: None known

MUTAGENICITY: None known

MEASURES TO AVOID CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE:

Pre-existing upper respiratory and lung diseases such as, but not limited to, Bronchitis, Emphysema, and Asthma

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**SECTION 7 - PREVENTIVE MEASURES**

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**PERSONAL PROTECTIVE EQUIPMENT:****GLASSES:** As needed.**RESPIRATORY PROTECTIVE EQUIPMENT:** Safety glasses, goggles, face shield, or welding helmet, etc., as needed.**RESPIRATORY:** Use NIOSH/MSHA-approved respirator for dusts/fume/mist, if TLVs or PELs are exceeded.**FOOTWEAR:** Safety shoes, as needed.**CLOTHING:** As needed.**ENGINEERING CONTROLS:** Local exhaust if TLVs or PELs are exceeded.**HAZARD AND SPILL PROCEDURE:** None known**WASTE DISPOSAL:**

For disposal of this material as a waste, act in accordance with all applicable federal, state, and local waste management regulations.

**HANDLING PROCEDURES AND EQUIPMENT:** None known**STORAGE REQUIREMENTS:** If remelted, make certain no water or moisture is present in cavities or on external surfaces.**SPECIAL SHIPPING INFORMATION:** None known

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**SECTION 8 - FIRST AID MEASURES**

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**SKIN:** For minor burns, apply cold water. For severe burns, seek immediate medical attention.**EYES:** Immediately flush with water for 15 minutes. Seek medical attention if irritation persists.**INHALATION:** Remove to fresh air.**INGESTION:** Does not represent a hazard.

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**SECTION 9 - SPECIAL PRECAUTIONS AND COMMENTS**

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product contains a chemical or chemicals subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR 372.

**HMIS RATINGS**

Health: 1  
Flammability: 1  
Reactivity: 1

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