

# SAFETY DATA SHEET

Revision Date : July 2015

## 1. CHEMICAL PRODUCT & COMPANY IDENTIFICATION

PRODUCT NAME: ZAM  
Zinc-Aluminum-Magnesium-alloy COATED STEEL  
MANUFACTURER'S NAME: Wheeling-Nisshin Inc.  
ADDRESS: Penn & Main St. Follansbee, WV 26037  
TELEPHONE No. (304) 527-2800

## 2. HAZARDS IDENTIFICATION

### (1) GHS CLASSIFICATION

Physical hazards: Classification not possible  
Health hazards: Classification not possible  
Environmental hazards: Classification not possible

### (2) GHS LABEL ELEMENTS

Classification not applicable

### (3) MOST IMPORTANT HAZARDS INFORMATION

No information available

## 3. COMPOSITION/INFORMATION ON INGREDIENTS

• SUBSTANCE/MIXTURE : Mixture

| • CHEMICAL COMPONENTS: | CAS. No.  | OSHA PEL   | ACGIH TLV   | WEIGHT % |
|------------------------|-----------|--|---|----------|
| IRON                   | 7439-89-6 | 10 mg/M <sup>3</sup><br>as Fe <sub>2</sub> O <sub>3</sub> Fume | 5 mg/M <sup>3</sup><br>as Fe <sub>2</sub> O <sub>3</sub> Fume | BALANCE  |
| MANGANESE              | 7439-96-5 | 5 mg/M <sup>3</sup>  | 1 mg/M <sup>3</sup><br>as Fume                                | <0.5     |
| ZINC                   | 7440-66-6 | 5 mg/M <sup>3</sup><br>as ZnO Fume                             | 5 mg/M <sup>3</sup><br>as ZnO Fume                            | 0.2~4    |
| ALUMINUM               | 7429-90-5 | None Listed  | 10 mg/M <sup>3</sup>  | 0.01~0.3 |
| MAGNESIUM              | 7439-95-4 | 15 mg/M <sup>3</sup><br>as Oxide Fume                          | 10 mg/M <sup>3</sup>  | 0.01~0.1 |

Note:

- 1) Chemical compositions may vary within the above range depending on different standards for steel types.
- 2) Products for applications may contain traces of elements not specified above.
- 3) The weight of additional-coating film shall be 0.001% or less of total product weight.

## 4. FIRST-AID MEASURES

Not applicable.

## 5. FIRE-FIGHTING MEASURES

Steel Products in the solid state is not combustible.

## 6. ACCIDENTAL RELEASE MEASURES

Not applicable to steel products in the solid state.

## 7. HANDLING & STORAGE

(1) Caution at handling:

- 1) Steel products under normal condition do not present an inhalation, ingestion or contact health hazard. However, operations such as Burning, Welding, Sawing, Brazing, Grinding, etc. may result in the following effects if exceed permissible limits as listed in section 2.

Chronic inhalation of high concentration of Iron oxide fumes/dusts may lead to a siderosis. The inhalation of high concentrations of freshly formed oxide fumes and dusts of Manganese can cause a meta fume fever.

- 2) Hazards associated with dust/fume collection should be checked depending on the form of substances involved. (For example, it should be recognized that powdered oxides of certain elements may have combustible or explosive properties.)
- 3) If metal should liquefy when the products are subjected to certain processes including pickling and descaling, caution should be exercised not to contact or inhale the liquefied substance.

**(2) Caution at storage**

Avoid contact with strong acid and storage in an environment of high temperature and high humidity.

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**8. EXPOSURE CONTROL**

Not applicable

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**9. PHYSICAL & CHEMICAL PROPERTIES**

**Steel sheet**

Physical property

Physical state: Solid in sheet

Appearance: Metallic luster

Odor: Odorless

Density: 7.5~8 g/cm<sup>3</sup>

Melting point: > 1400°C

Chemical property

- Insoluble in water
- Liquefies in strong acid of pH4 and less
- Hardly affected by alkali
- Powdered form may have combustible and explosive properties

**Coating layer**

Physical property

Physical state: Solid in sheet

Appearance: Metallic luster

Odor: Odorless

Density: 6.5~7 g/cm<sup>3</sup>

Melting point: > 300°C

Chemical property

- Has good anti-corrosive properties in the atmosphere
- Insoluble in water
- Hardly affected by salts, however affected by strong alkali and oxidative acid.
- Powdered form may have combustible and explosive properties

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**10. STABILITY & REACTIVITY**

Stable under normal condition.

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**11. TOXICOLOGICAL INFORMATION**

No useful information is available at present covering the coated steel sheet and/or pipe.

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**1 2. ECOLOGICAL INFORMATION**

No useful information is available at present covering the coated steel sheet and/or pipe.

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**1 3. DISPOSAL CONSIDERATIONS**

The products are recyclable as ferrous scrap.

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**1 4. TRANSPORT INFORMATION**

No information is available at present applicable to the coated steel sheet and/or pipe.

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**1 5. REGULATORY INFORMATION**

Regulatory information with regard to this substance in your country or region should be examined by your own responsibility.

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**1 6. OTHER INFORMATION**

This manufacturing safety data sheet is produced based on data and information currently available. It is provided solely as the reference and information of the parties that handle our products in order to ensure their chemically safe handling, and as such does not constitute a warranty of safety. The parties that handle our products are kindly requested to take safety measures appropriate to individual uses and applications.