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Material Safety Data Sheet Jesmonite Stainless Steel Powder

1. Identification of the Substance/Preparation and Company

Product Name: Jesmonite Stainless Steel Powder

Company Address:

Tersus Limited. Challenge Court, Bishop's Castle, Shropshire, SY9 5DW

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2. Composition/Information on Ingredients

Substance: Stainless Steel powder including iron, chromium, nickel and molybdenum in flake form.

3. Hazards Identification

The main hazards associated with the use of this product are:

1. Chromium – generally considered a nuisance dust.

2. Nickel – sinus and pulmonary carcinogenesis by long period exposure.

3. Molybdenum – dust irritates nose and eyes and trachea by inhalation.

4. First Aid Measures

Inhalation: Fresh air. If suspect symptoms appear, seek medical advice.

Ingestion: Unlikely. No specific first aid required.

Eyes: Rinse thoroughly with water. If discomfort persists, seek medical advice.

Skin contact: Wash with mild soap and water. For rashes – seek medical advice.

Wounds: Clean thoroughly and remove all powder particles.

5. Fire Fighting Measures

Extinguishing agents: Carbon dioxide and dry chemical extinguishing agents.

Special fire fighting procedures: DO NOT USE WATER.

Protection requirements: Wear fire fighting equipment as necessary for the incident.

6. Accidental Release Measures

Protection requirements: Wear appropriate protective clothing including safety glasses. Remove any sources of ignition.

Environmental precautions: Keep material out of water sources and sewers.

Cleaning: Sweep gently to avoid dust cloud formation. Collect for disposal.

7. Storage and Handling

Handling: Wear protective clothing, avoid breathing dust and fumes from burning material, avoid bodily contact.

Storage: It is important that all powder is stored in a sealed container at all times. Store in a dry area. No eating or smoking in area where substance is handled, processed or stored. Water fountain prohibition in work area. Signs posted in areas exposed to nickel and access limited to these areas.

Recommended shelf life: 3 months in natural state.

8. Exposure Controls/Personal Protection

Preventative measures

Avoid dusty working conditions.

Use sufficient dust extraction.

Wash hands thoroughly after handling.

Personal protection

In case of insufficient ventilation, suitable respiratory equipment with fine particle filter (p2) should be worn. Wear suitable gloves and goggles (if there is any risk of eye contact).

9. Physical and Chemical Properties

Appearance	Silver white to grey fine powder
Odour	None
pH	N/A
Boiling point	> 2000°C
Melting point	1350°C
Flash point	N/A
Flammability	Flammable solid
Auto flammability	400°C (Cr)
Explosive properties	N/A
Oxidising properties	N/A
Vapour pressure	N/A
Density	N/A
Solubility	Low solubility in water

10. Stability and Reactivity

Chemical stability

Stable at normal handling and storage conditions. Violent reactions with nitric acid, acetylene and oxidising agents.

11. Toxicological Information

No details for stainless steel flake, details for individual constituents as follows:

Nickel metal is listed as carcinogenic to humans. Nickel metal is a pulmonary sensitiser, primary skin irritant and skin sensitiser. Exposure during refining causes lung cancer. Contact with nickel compounds, causes 'nickel itch' – sensitisation including itching, burning, erythema and eczema. Inhalation of nickel salts irritates the respiratory tract. Ingestion can produce vomiting and collapse.

Target organs: Eyes, lungs, skin, nasal septum, kidneys, liver, blood, respiratory, gastrointestinal and central nervous system. Primary entry routes inhalation, ingestion, skin or eye contact, skin absorption.

Health effects: Exposure to chromium dust may be irritating to skin, eyes and mucous membranes. Prolonged exposure may result in skin sensitisation. Sufficient evidence of respiratory carcinogenicity in people occupationally exposed during chromate production.

Manganese may be irritating to eyes, skin and mucous membranes. Poisoning may affect the central nervous system and respiratory system, liver and kidneys. Chronic exposure may cause permanent damage to the central nervous system.

Although nickel and chromium are both considered carcinogens, there is not evidence to suggest that stainless steel is carcinogenic.

12. Ecological Information

None available.

13. Disposal Considerations

Spillage should be collected with a vacuum cleaner to avoid excess dust. Dispose in a safe manner in accordance with local regulations.

14. Transport Information

Non classified

15. Regulatory Information

1. Control of substances hazardous to health (COSHH).
2. EH40/96 – Occupational Exposure Limits (April 1996).
3. The Chemicals (Hazard Information and Packaging) Regulations.

16. Other Information

Recommended uses and restrictions: Various.

Data sources: Manufacturers Health and Safety Data Sheet.

Training information: The information contained in this data sheet must be provided to all employees using this product.

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