

**G&H® Wire Company**2165 Earlywood Drive
Franklin, IN 46131

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MATERIAL SAFETY DATA SHEET DIRECTIVE 91/155/EEC

1. SUBSTANCE/PREPARATION AND COMPANY IDENTIFICATION

- 1.1 Chemical Nature, Gas Atomized Metal Powder used in metal injection molding for Apollo Nickel Free Brackets & Buccal Tubes
- 1.2 Company Identification:
G&H Wire Company
2165 Earlywood Drive
Franklin, IN 46131
Telephone: 317-346-6655
Facsimile: 317-346-6663
- 1.3 Emergency Contact: 317-346-6655

2. COMPOSITION/INFORMATION ON INGREDIENTS

- | | | |
|-----|------------|--------|
| 2.1 | Iron | 0-80% |
| 2.2 | Chromium | 13-23% |
| 2.3 | Manganese | 0-23% |
| 2.4 | Molybdenum | 0-12% |
| 2.5 | Cobalt | 0-37% |
| 2.6 | Copper | 0-5% |
| 2.7 | Silicon | 0-5% |
| 2.8 | Aluminum | 0-5% |
| 2.9 | Niobium | 0-5% |

Trace elements may be present in minute amounts. Certain materials such as lime, alkaline salts, oils and certain residuals (<1% total weight of product) may remain on the product surface.

3. HAZARDS IDENTIFICATION

- 3.1 Possible routes of entry (a) inhalation
- 3.2 Effects of overexposure: - The raw material is in powder form and may include particles that can be inhaled into the lungs.

4. FIRST-AID MEASURES

- 4.1 Inhalation: Any effects of over exposure will be long term and normal first-aid actions will not be appropriate.
- 4.2 Skin Contact: Brush off with a soft brush and wash with soap and water.
- 4.3 Eye Contact: Flush with flowing water and seek medical attention.

- 4.4 Ingestion: Any effects of over exposure will be long term and normal first-aid actions will not be appropriate.

5. FIRE-FIGHTING MEASURES

Treat as for the cause of the fire.

6. ACCIDENTAL RELEASE MEASURES

- 6.1 Spilled product will create a dust hazard if not handled correctly.
6.2 Wear suitable respirator protection and collect spillage by vacuum cleaning with equipment designed for industrial dusts.
6.3 Do not sweep up.

7. HANDLING AND STORAGE

- 7.1 Handling: Insure handling systems prevent the creating of dusts so far as practical. If exposure standards may be exceeded (dust is evident by sight or as deposits around the working area) suitable extraction equipment with filtration must be provided.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

- 8.1 Occupational Exposure Standard 0.1 mg/m³ (TWA 8hours).
8.2 Health surveillance is necessary for workers who come into contact with this product.
8.3 Unless handling and process systems are totally sealed, it is recommended that suitable respiratory protection is worn at all times when handling this product. Where it is necessary to make contact with the product, such as when cleaning process equipment, self contained breathing may be necessary. Wherever possible, use cleaning equipment which will avoid dust such as industrial vacuum cleaners with self sealing bags for disposal.

9. PHYSICAL AND CHEMICAL PROPERTIES

- 9.1 Appearance: Solid, odorless, metal

10. STABILITY AND REACTIVITY

- 10.1 Thermal Decomposition: None
10.2 Conditions to Avoid: None
10.3 Materials to Avoid: Strong Acids
10.4 Hazardous Decomposition Products: None
10.3 Hazardous Polymerization: Will not occur

11. TOXICOLOGICAL INFORMATION

- 11.1 Respiration: Cough, shortness of breath. X Respiration: Possible long term effects, pneumonitis with fever.

12. ECOLOGICAL INFORMATION

- 12.1 12 Acute Toxicity in Fish (LC-50/48h): not defined
- 12.2 Bacteria Toxicity (EC-0): not defined
- 12.3 Biodegradability: not defined
- 12.4 Further Details:

13. DISPOSAL CONSIDERATIONS

- 13.1 Product: Dispose of in accordance with EPA and local regulations
- 13.2 Packaging: N/A
- 13.3 Waste Disposal Code: N/A Chips or pieces can be recycled as scrap steel

14. TRANSPORT INFORMATION

- 14.1 Overland Transport ADR/RID/GGVS/GGVE: N/A
- 14.2 Sea Transport GGVSEA/IMDG-Code: N/A
- 14.3 Air Transport ICAO/IATA-DGR: N/A
- 14.4 Inland Waterway Transport ADNR: N/A
- 14.5 Further Details: Product is not considered dangerous for transport.

15. REGULATORY INFORMATION

Preparation as defined by the (German) Chemicals Act (dated 4/03/1990).

- 15.1 Labeling: N/A
 - Product Contains: N/A
 - Danger Symbol: None
 - R-Sentences R36/37/38: When cutting or grinding
 - S-Sentences S26: N/A
 - S-Sentences S28: N/A
- 15.2 National Regulation:
 - VbF:
 - TA-Air:
 - Water Pollution 1:

16. OTHER INFORMATION

- 16.1 The information contained herein is based on the present state of our knowledge and is intended to describe our products from the point of view of safety requirements. Therefore, it should not be construed as guaranteeing specific properties.
- 16.2 Revision Date: August 27, 2008