

MATERIAL SAFETY DATA SHEET (MSDS)

MSDS-4

Issue Date: February 14, 2007

Section 1 – Chemical Product and Company Name

Product Name: *Nickel Base Alloy Forging*

Synonyms: None

Emergency Phone Number: (585) 235-6060

Manufacturer/Distributor:

Burke Forging & Heat Treating, Inc.
30 Sherer Street
Rochester, NY 14611
Phone: (585) 235-6060

Section 2 – Composition/Information on Ingredients

Note: None of these ingredients in the solid metal form are hazardous as defined by OSHA (29 CFR Part 1910.1000). The following information is applicable only if forgings are subject to operations that generate fumes or dust (welding, cutting or grinding). Exposure limits are tabulated for respirable fumes or particles.

<u>Ingredient</u> <u>Name</u>	<u>Formula</u>	<u>CAS No.</u>	<u>Contained</u> <u>Wt. %</u>	<u>Exp. Limits (mg/m³)</u>	
				<u>ACGIH</u> <u>TLV</u>	<u>OSHA</u> <u>PEL</u>
Iron (oxide)	Fe ₂ O ₃	1309-37-1	<25.0	5	10
Chromium	Cr	7440-47-3	<35.0	0.5	1
Nickel	Ni	7440-02-0	>50.0	1	1
Manganese	Mn	7439-96-5	<2.0	5	5
Molybdenum	Mo	7439-98-7	<20.0	5	5
Silicon	Si	7440-21-3	<2.0	5	5
Copper	Cu	7740-50-8	<40.0	1	1
Cobalt	Co	7440-48-4	<5.0	0.05	0.10
Tungsten	W	7440-37-7	<5.0	5	none

Section 3 – Hazards Identification

Emergency Overview: Welding fumes or dusts from this product may be hazardous.

Acute Effects: Fumes or dusts may cause irritation of the skin, eyes, or respiratory tract, allergic rashes, nausea, headache, dizziness, vomiting, and weakness.

Chronic Effects: Prolonged or repeated exposures may cause allergic responses, shortness of breath, chronic bronchitis, pneumonitis.

Potential Health Effects/Medical Conditions Aggravated by Exposure: Respiratory diseases, hypersensitivity to one or more constituent metals.

Routes of Entry: Inhalation, dermal contact.

Section 4 – First Aid Measures

Inhalation: Immediately remove victim to fresh air. If breathing has stopped, give artificial respiration. If breathing is difficult, give oxygen.

Ingestion: None required.

Eye/Skin Contact: Immediately flush with copious amounts of water (eyes) or soap and water (skin).

Section 5 – Fire Fighting Measures

Special Fire Fighting Instructions and Equipment: None required.

Extinguishing Media: Use what is appropriate for surrounding fire.

Hazardous Combustion Products: Welding fumes.

Unusual Fire and Explosion Hazard: None known.

Section 6 – Accidental Release Measures

Clean up Procedures/Specialized Equipment: None required.

Section 7 – Handling and Storage

Precautions to be Taken in Handling and Storage: None required.

Section 8 – Exposure Controls/Personal Protection

Engineering Controls: Only trained personnel should attempt to weld, cut or grind steel forgings. Provide adequate general and local exhaust ventilation.

Skin Protection: Protective gloves.

Respiratory Protection: In cases of fumes or dusts, use appropriate equipment to minimize inhalation of particles. Recommend respirator designed to meet NIOSH 42CFR84N95 requirements, TC-84A-0454.

Eye/Face Protection: Safety glasses

Other Protective Equipment: Safety shoes when handling steel forgings.

Section 9 – Physical and Chemical Properties

Appearance/Odor: Gray solid, odorless, Melting Point 2400-2800°F

Specific Gravity: (water=1) 7.5-8.5

Section 10 – Stability and Reactivity

Stability: Stable under normal storage conditions.

Hazardous Polymerization: Will not occur.

Conditions and Materials to Avoid: Strong acids.

Hazardous Decomposition Products: None known.

Section 11 – Toxicological Information

The solid metal is non-toxic (it is not mutagenic, teratogenic or determined to cause adverse reproductive effects or be carcinogenic by the NTP, IARC or OSHA, but fumes or dust from welding, cutting and grinding the metal may cause a variety of adverse effects, including acute effects such as irritation, metal fume fever and bronchitis and chronic effects such as siderosis, effects on the central nervous system and possibly some forms of cancer.

Section 12 – Ecological Information

No adverse ecological effects are expected from using this product.

Section 13 – Disposal Considerations

Waste Disposal Method: Dispose of material in accordance with local provincial and Federal regulations.

Section 14 – Transportation Information

No applicable transportation regulations (DOT) exist for steel forgings.

Section 15 – Regulatory Information

This product is not subject to regulations of the Department of Transportation, Environmental Protection Agency or the Occupational Safety and Health Administration.

Section 16 – Other Information

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