



MATERIAL SAFETY DATA SHEET

for
Elgiloy®

SECTION 1 - PRODUCT IDENTIFICATION

SUPPLIER'S NAME: Elgiloy Specialty Metals
Division of Combined Metals of Chicago LLC

ADDRESS: 1565 Fleetwood Drive
Elgin, IL 60123

CONTACT INFORMATION: 847-695-1900 (Phone)
847-695-0169 (Fax)

PRODUCT CLASS: Cobalt-based Alloy

TRADE NAME: Elgiloy (See Section 2A)

PRODUCT FORM: Strip / Sheet / Wire / Bar / Parts

SECTION 2 - HAZARDOUS INGREDIENTS

This section includes elements contained in the as-shipped product and is applicable to cutting and grinding. Fumes and gases from welding processes are covered in Sec. 6.

<u>INGREDIENT</u>	<u>CAS No.</u>	<u>PEL (OSHA)</u> mg/m ³	<u>TLV (ACGIH)</u> mg/m ³
* Cobalt (Co)	7440-48-4	0.1	0.02
* Chromium (Cr)	7440-47-3	1.0	0.5
* Nickel (Ni)	7440-02-0	1.0	1.5
** Iron (Fe)	1309-37-1	10.0	5.0
Molybdenum (Mo)	7439-98-7	15.0	10.0
* Manganese (Mn)	7439-96-5	C5.0	0.2

* - The indicated elements are classified as toxic by the EPA in 40 CFR 372.65 and are subject to reporting requirements of SARA Title III Section 313 and 40 CFR 372.45.

** - This substance is regulated in the oxide form.

SECTION 2A - TRADENAME AND NOMINAL COMPOSITION

Product	Nominal Composition – Weight Percent					
	Co	Cr	Ni	Fe	Mo	Mn
Elgiloy	40	20	15	Bal	7	2

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SECTION 3 - PHYSICAL DATA

None, material is provided in the solid metal form.

PHYSICAL CONDITION: Solid
SHAPE: Strip / Sheet / Wire / Bar / Parts
COLOR: Metallic grey
ODOR: None - odorless
pH: Not applicable
SPARKING POINT: Not applicable
MELTING POINT: 1427°C (2600°F) - approximate
BOILING POINT: Not applicable (High)
Density: 8.30 g/cm³ (0.300 lbs/in³)
VAPOR PRESSURE: Nil
VAPOR DENSITY: Nil
SOLUBILITY IN WATER: Insoluble

SECTION 4 - FIRE AND EXPLOSION DATA

Nonflammable. Product is a solid metal.

SECTION 5 - HEALTH HAZARD INFORMATION

EXPOSURE LIMITS: Section 2 lists specific elements and exposure limits.
IMPORTANT – Determine actual exposure by industrial hygiene monitoring.

PRIMARY ROUTES OF ENTRY: Inhalation, ingestion and skin absorption.

POSSIBLE SIGNS AND SYMPTOMS OF EXPOSURE TO DUST, WELDING FUMES AND GASES:

SHORT TERM EXPOSURE: Metallic taste; nausea; tightness of chest; fever; irradiation of eyes, nose, throat and skin; loss of consciousness/death due to welding gases or lack of oxygen.

LONG TERM EXPOSURE: Adverse effects may result from long term exposure to welding fumes, gases or dusts. These effects may include skin sensitization, neurological damage and respiratory disease such as bronchial asthma, lung fibrosis or pneumoconiosis. Nickel and Chromium have been determined by the IARC to be suspected carcinogens.

Aggravation of pre-existing respiratory or allergic conditions may occur in some workers.

EMERGENCY AND FIRST AID: Remove victim from exposure and obtain prompt medical attention. If victim is unconscious, administer oxygen. If not breathing, resuscitate immediately.

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SECTION 6 - REACTIVITY

STABILITY: Stable
POLYMERIZATION: Will not occur

INCOMPATIBLE MATERIALS: None
HAZARDOUS DECOMPOSITION: None

Metal products themselves are not normally reactive in normal atmospheric conditions. Caution must be taken when welding due to fumes and gases. When metals come in contact with strong acids there is a risk of decomposition products such as acidic droppings, and the release of gases, such as hydrogen and nitrogen.

SECTION 7 - SPILL OR LEAK PROCEDURES

As product is a solid metal in the as-shipped condition, spills or leaks cannot occur and no special precautions or procedures are required. Residue from cutting or grinding should be swept or vacuumed and placed in suitable containers for disposal in accordance with local, state or federal disposal regulations.

SECTION 8 - SPECIAL PROTECTION INFORMATION

VENTILATION: When cutting, grinding or welding and the process may cause a release of dust or fumes, use local and general exhaust ventilation to keep airborne concentrations of dust or fumes below the TLV.

PROTECTIVE EQUIPMENT: Approved protective equipment should be worn when handling material, especially operations involving cutting, grinding or welding. Gloves and barrier creams may be necessary to prevent skin sensitization and dermatitis. If process involves grinding or any other action that causes the release of dust or fumes, approved safety glasses or goggles should be worn.

RESPIRATORY PROTECTION: If processing causes the release of fumes in excess of the permissible exposure limits, NIOSH approved respirators should be worn for the protection against airborne dust or fumes. Respirators should be used in accordance with 29 CFR 1910.134.

SECTION 9 - SPECIAL PRECAUTIONS

Under normal conditions no special precautions are required. However, PEL/TLV exposures should be kept below OSHA and ACGIH recommendations to insure the proper protection of the worker's health.

® - Elgiloy is a registered trademark of Elgiloy Specialty Metals.

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