

Vale Inco Electrolytic Cobalt Rounds

Hazardous Ingredients

Hazardous Ingredients	Composition (%)	C.A.S. No	PEL ¹ –mg/m ³	TLV ² –mg/m ³
Cobalt (Co)	99.9	7440-48-4	0.02	0.02

Physical and Chemical Data

Ingredient	Mol. Wt.	Specific Gravity	Melting point (°C)	Boiling point (°C)	Solubility in H ₂ O (g/100ml)
Cobalt	58.93	8.9	1495	2900	0

Physical Hazards

None.

Health Hazards³

Cobalt

LD₅₀ oral rat: 6171 mg/kg

Inhalation:

Asthmatic symptoms and pulmonary fibrosis occurring in the tungsten carbide industry may be related to the inhalation of metallic cobalt dust. Evidence of polycythemia (an increase in the total red cell mass of the blood in the body) and altered thyroid, kidney and liver function have also been found. Excessive doses of metallic cobalt have produced cardiac changes in miniature swine.

Skin Contact:

Repeated contact with metallic cobalt can cause cobalt sensitivity and allergic skin rashes.

Wounds:

Cobalt powders have caused tumors at the site of injection in rodents. However, studies of cobalt containing prostheses do not suggest a significant risk for humans.

Preexisting Conditions:

Sensitized individuals may experience an allergic skin rash or asthma.

California Proposition 65

A NSRL (No Significant Risk Level) as a carcinogen has not been adopted for cobalt. A MADL (Maximum Allowable Dose Level) has not been adopted for cobalt as a chemical causing reproductive toxicity Cobalt metal powder is on the Second Priority List for NSRL Development. Cobalt is not on the Priority List for MADL Development

Precautions for safe storage, handling and use

If user operations generate dust, fume or mist, use ventilation to keep exposure to airborne cobalt below the PEL. If ventilation alone cannot so control exposure, use NIOSH-approved respirators selected according to OSHA 29 CFR 1910.134.

Avoid repeated skin contact. Wear suitable gloves. Wash thoroughly after handling. Launder clothing and gloves as needed.

MATERIAL SAFETY DATA SHEET

MSDS

Do not store near acids. Like other metals, cobalt can react with acids to liberate hydrogen gas which can form explosive mixtures in air.

Spill, leak and disposal procedure

Pick up and place in original container. Cobalt-containing waste is normally collected to recover cobalt values. Should waste disposal be deemed necessary, follow EPA and local regulations.

Emergency and first aid procedures

For skin rashes, seek medical attention. Cleanse wounds thoroughly to remove any particles.

SARA Section 313 Supplier Notification

This product contains the following chemical(s) subject to the reporting requirements of Section 313 of the Emergency Planning and Community Right-to-Know Act of 1986 and of 40 CFR 372:

Cobalt

Refer to the Hazardous Ingredients section of this MSDS for the appropriate CAS numbers and percent by weight.

Vale Inco America's Inc.
Park 80 West, Plaza Two
Saddle Brook, NJ 07663

Preparation Information

MSDS Prepared by: Vale Inco Limited
200 Bay St., Royal Bank Plaza
Suite 1600, South Tower, PO Box 70
Toronto, Ontario, Canada, M5J 2K2

Product Stewardship (416) 361-7801

MSDS available online at www.valeinco.com
msds@valeinco.com

Note:

Vale Inco believes that the information in this Material Safety Data Sheet is accurate. However, Vale Inco makes no express or implied warranty as to the accuracy of such information and expressly disclaims any liability resulting from reliance on such information.

Footnotes:

1. OSHA Permissible Exposure Limit
2. Threshold Limit Value of the American Conference of Governmental Industrial Hygienists.
3. Describes possible health hazards of the product supplied. If user operations change it to other chemical forms, whether as end products, intermediates or fugitive emissions, the possible health hazards of such forms must be determined by the user.