

STEEL (NICKEL BASED ALLOYS)

ACIER ALLIÉ À BASE DE NICKEL

P6340

WARNING!

HAZARDS

HEALTH :

Products in the natural state do not present an inhalation, ingestion or contact hazard. However, operations such as burning, welding, sawing, brazing and grinding may release fumes and/or dusts which may present health hazards if overexposed. The product has not been determined to be carcinogenic. However, individual components, nickel, and certain chromium compounds in a dust or fume form have been associated with carcinogenicity.

FIRE / REACTIVITY :

Products in the solid state present no fire or explosion hazard. React with strong acids to evolve hydrogen (a flammable gas).

EMERGENCY MEASURES

FIRST AID : (dusts/fumes exposure)

Inhalation : move to fresh air. Eye : flush thoroughly with water and wash carefully under eyelids. Skin : does not present a hazard, wash with soap and water. Ingestion : not expected.

FIRE / REACTIVITY :

Use extinguishing media appropriate to the surrounding material.

PRECAUTIONARY MEASURES

Use local ventilation if overexposed to dust/fume. Wear dust and fume respirator if necessary. Avoid contact with strong acids.

<u>Ingredient</u>	<u>Conc.(%)</u>	<u>CAS #</u>
Nickel	31-99	7440-02-0
Aluminum	<5	7429-90-5
Chromium	<48	7440-47-3
Cobalt	<15	7440-48-4
Copper	<68	7440-50-8
Iron	<84	7439-89-6
Manganese	<5	7439-96-5
Molybdenum	<10	7439-78-7
Niobium	<5	7440-03-1
Titanium	<5	7440-32-6
Silicon	<1	7440-21-3
Tantalum	<2	7440-25-7
Tungsten	<5	7440-33-7
Yttrium	<1	7440-65-5

TOXIC MATERIAL

Metal Goods Service Centers
Div. of Alcan Aluminum Corporation
P.O. Box 346
St-Louis, MO
63166

BEFORE USING, READ SAFETY DATA SHEET (SDS)

AVERTISSEMENT!

RISQUES

SANTÉ :

Les produits en acier ne présentent pas de danger à l'inhalation, à l'ingestion ou au contact. Cependant, des opérations telles que chauffage, soudage, sciage, brasage et meulage peuvent dégager des fumées et/ou poussières présentant un risque à la santé en cas de surexposition. Le produit n'est pas considéré comme étant cancérogène, mais certains de ses composants, tels que le nickel ou certains composés du chrome sous forme de poussières ou fumées, le sont.

FEU / RÉACTIVITÉ :

Sous forme solide, ne présente pas de risque de feu ou d'explosion. Peut réagir avec les acides forts pour produire de l'hydrogène (un gaz inflammable).

MESURES D'URGENCE

PREMIERS SOINS : (exposition fumées/poussières)

Inhalation : aller dans un endroit aéré. Yeux : rincer abondamment avec de l'eau et bien rincer sous les paupières. Peau : ne présente pas de risque, laver à l'eau et au savon. Ingestion : peu probable.

FEU / RÉACTIVITÉ :

Utiliser un agent extincteur approprié pour les matières environnantes.

PRÉCAUTIONS

Utiliser une ventilation locale en cas de surexposition aux poussières/fumées. Porter un respirateur anti-particule et fumée si nécessaire. Éviter le contact avec les acides forts.

<u>Ingrédient</u>	<u>Conc.(%)</u>	<u># CAS</u>
Nickel	31-99	7440-02-0
Aluminium	<5	7429-90-5
Chrome	<48	7440-47-3
Cobalt	<15	7440-48-4
Cuivre	<68	7440-50-8
Fer	<84	7439-89-6
Manganèse	<5	7439-96-5
Molybdène	<10	7439-78-7
Niobium	<5	7440-03-1
Titane	<5	7440-32-6
Silicium	<1	7440-21-3
Tantale	<2	7440-25-7
Tungstène	<5	7440-33-7
Yttrium	<1	7440-65-5

MATIÈRE TOXIQUE

Centres de Service de Produits de Métaux
Div. de Alcan Aluminium Corporation
C.P. 346
St-Louis, MO
63166

LIRE LA FICHE SIGNALÉTIQUE AVANT D'UTILISER CE PRODUIT

1. PRODUCT AND COMPANY IDENTIFICATION**PRODUCT NAME :** Steel (nickel based alloys)**PRODUCT NUMBER :** P6340**SUPPLIER :** 0804001

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SYNONYMS : Nickel 2XX, Monel alloy 4XX, Inconel alloy 6XX & 7XX, Incoloy alloy 8XX**APPEARANCE AND ODOUR :** Grey-black odorless solid**USES :** Primary metal**2. COMPOSITION / INFORMATION ON INGREDIENTS**

NAME	CAS #	LD ₅₀	LC ₅₀	EC DIRECTIVE Symbol	R phrases	CONC.
Nickel	7440-02-0	9000 mg/kg (oral-rat)	Unknown	Xn	40-43	31-99 %
Base metal :						
Alloying elements :						
Aluminum	7429-90-5	Unknown	Unknown	None	None	< 5 %
Chromium	7440-47-3	Unknown	Unknown	Not classified		< 48 %
Cobalt	7440-48-4	6170 mg/kg (oral-rat)	Unknown	Xn	42/43	< 15 %
Copper	7440-50-8	Unknown	Unknown	None	None	< 68 %
Iron	7439-89-6	Unknown	Unknown	None	None	< 84 %
Manganese	7439-96-5	9000 mg/kg (oral-rat)	Unknown	None	None	< 5 %
Molybdenum	7439-78-7	Unknown	Unknown	None	None	< 10 %
Niobium	7440-03-1	Unknown	Unknown	None	None	< 5 %
Titanium	7440-32-6	Unknown	Unknown	None	None	< 5 %
Silicon	7440-21-3	3160 mg/kg (oral-rat)	Unknown	None	None	< 1 %
Tantalum	7440-25-7	Unknown	Unknown	None	None	< 2 %
Tungsten	7440-33-7	5 g/kg (intraper.-rat)	Unknown	None	None	< 5 %
Yttrium	7440-65-5	Unknown	Unknown	None	None	< 1 %

3. HAZARDS IDENTIFICATION

Not hazardous.

4. FIRST AID MEASURES

In case of dust exposure:

Inhalation : In case of discomfort, remove to a ventilated area. Consult a physician.**Skin contact :** Wash skin thoroughly with soap and water.**Eye contact :** Flush eyes thoroughly with water, taking care to rinse under eyelids. If irritation persists, continue flushing for 15 minutes, rinsing from time to time under eyelids. If discomfort continues, consult a physician.**Ingestion :** Not applicable.**5. FIRE-FIGHTING MEASURES****EXTINGUISHING MEDIA :** The product in the solid state presents no fire or explosion hazard.**HAZARDOUS COMBUSTION PRODUCTS :** Not applicable.**6. ACCIDENTAL RELEASE MEASURES**

Not applicable.

7. HANDLING AND STORAGE

HANDLING PRECAUTIONS : Follow the recommendations in ANSI Z49.1, Safety in welding and cutting. (ANSI: American National Standard Institute)

STORAGE CONDITIONS : Not applicable.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Provide general and local ventilation to maintain concentrations of air contaminants below recommended standards. Use an approved respirator designed for the hazard, where concentrations exceed exposure limits. Wear goggles, as necessary.

EXPOSURE LIMITS :

(ACGIH=American Conference of Governmental Industrial Hygienists; TLV=Threshold Limit Value; OSHA=Occupational Safety and Health Administration [USA]; PEL=Permissible Exposure Limit; TWA=Time-Weighted Average; STEL=Short Term Exposure Limit; Ceiling=Ceiling value)

	ACGIH (TLV)		OSHA (PEL)	
	TWA	STEL	TWA	Ceiling
Iron oxide, fume	5 mg/m ³	None	10 mg/m ³	None
dust	None	None	10 mg/m ³	None
Chromium metal	0.5 mg/m ³	None	1.0 mg/m ³	None
Copper (fume)	0.2 mg/m ³	None	0.1 mg/m ³	None
(dust)	1.0 mg/m ³	None	1.0 mg/m ³	None
Nickel metal	1.0 mg/m ³	None	1 mg/m ³	None
Manganese (dust)	5 mg/m ³	None	5 mg/m ³	5 mg/m ³ -ceil
(fumes)	1 mg/m ³	3 mg/m ³	5 mg/m ³	5 mg/m ³
Molybdenum (tot.dust)	None	None	15 mg/m ³	None
- Soluble compounds	5 mg/m ³	None	5 mg/m ³	None
- Insoluble compounds	10 mg/m ³	None	None	None
Copper (fume)	0.2 mg/m ³	None	0.1 mg/m ³	None
(dust)	1.0 mg/m ³	None	1.0 mg/m ³	None
Titanium	None	None	None	None
Tungsten (ins. compounds)	5 mg/m ³	10 mg/m ³	None	None
Yttrium (metal & comp.)	1 mg/m ³	None	1 mg/m ³	None

9. PHYSICAL AND CHEMICAL PROPERTIES

pH : Not applicable.	flashpoint : Not applicable.
boiling point : Not applicable.	autoignition temp. : Not applicable.
melting point : > 2300°C	lower flammable limit : Not applicable.
vapour pressure : Not applicable.	higher flammable limit : Not applicable.
vapour density (air=1) : Not applicable.	explosive properties : Not applicable.
evaporation rate : Not applicable.	NFPA fire code : 0
relative density (water=1) : 7	oxidizing properties : Not applicable.
water solubility : Not applicable.	odour threshold : Not applicable.
partition coefficient (n-octanol/water) : Not applicable.	

10. STABILITY AND REACTIVITY

STABLE (yes/no) : Yes

CONDITIONS AND MATERIAL TO AVOID : Strong acids.

HAZARDOUS DECOMPOSITION PRODUCTS : Metallic dust or fumes may be produced during welding, burning, grinding and machining. Reaction with evolution of hydrogen: on contact with acids.

11. TOXICOLOGICAL INFORMATION

ROUTES OF EXPOSURE :

inhalation : Yes	ingestion : No
eye contact : No	skin contact : No
	skin absorption : No

ACUTE EFFECTS :

in case of dust exposure:

Inhalation : Irritation of respiratory tract and eyes. High concentrations of freshly-formed copper oxide and fumes can produce symptoms of metal fume fever.

Skin contact : Not applicable.

Eye contact : Not applicable.

Ingestion : Not applicable.

CHRONIC EFFECTS :

Prolonged and repeated overexposure to dust can lead to a benign pneumoconiosis. Nickel fumes may cause severe pneumonitis and/or sensitization. High concentrations of manganese dust can affect the central nervous system (apathy, drowsiness, weakness and other symptoms resembling to Parkinson's disease).

Medical conditions aggravated by exposure to the product : Not determined.

Carcinogenicity / Mutagenicity / Reproductive toxicity : Nickel, chromium and some of their compounds are listed in the current "Annual Report on Carcinogens" prepared by the "National Toxicology Program" (NTP). Does not contain any other carcinogen or potential carcinogen (IARC, NTP, OSHA). (IARC=International Agency for Research on Cancer; NTP=National Toxicology Program [USA]; OSHA=Occupational Safety and Health Administration [USA])

12. ECOLOGICAL INFORMATION

No information available

13. DISPOSAL CONSIDERATIONS

Recycle if possible. Dispose of waste in accordance with federal, state, or local regulations.

14. TRANSPORT INFORMATION

This product is not classified as dangerous under the Transport Regulations, for road, rail, sea or air transport (no UN number).

15. REGULATORY INFORMATION

WHMIS CLASSIFICATION (Canada) : D2 Material causing other toxic effects

EEC CLASSIFICATION (Europe) : Not classified

Warning symbol : None

Warning word : None

Risk phrases : None

Safety phrases : None

USA REGULATIONS:**Section 313 Supplier Notification**

This product may contain the following toxic chemical(s) subject to the reporting requirements of section 313 of the Emergency Planning and Community Right-To-Know Act of 1986 (Title III of SARA) and of 40 CFR 372. (This information must be included in all MSDSs that are copied and distributed for this material).

Chemical Name	CAS #
Manganese	7439-96-5
Chromium	7440-47-3
Nickel	7440-02-0
Copper	7440-50-8
Cobalt	7440-48-4

16. OTHER INFORMATION

Abbreviations :

CAS # = Chemical Abstracts Service Registry Number; EC = European Community
LD₅₀ = Lethal dose 50%; LC₅₀ = Lethal concentration 50%; LCL₀ = lowest published lethal concentration

* Although the information in this MSDS was obtained from sources which we believe to be reliable, it cannot be guaranteed. In addition, this information may be used in a manner beyond our knowledge or control. The information is therefore provided for advice purposes only, without any representation or warranty express or implied. *

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