

Hazardous Decomposition Product(s) :

In the form of particles (small chips, fine turnings, dusts), aluminum reacts with water and air humidity, strong basic solutions, strong acidic solutions, halogenated acids (eg.: hydrofluoric acid), producing flammable hydrogen gas.

11. Toxicological Information

Acute Effects :**LD₅₀ / LC₅₀ :**

CAS	Designation	LD 50 (oral rat)	LC 50
7439-86-6	Iron	30 g /kg	Unknown
7439-96-5	Manganese	9000 mg/kg	Unknown
7440-21-3	Silicon	3160mg/kg	Unknown

Solid aluminum does not present any acute health effects.

Inhalation : Aluminum and silicon dusts generated during specific operations are considered as nuisance particulates.
Skin Contact : Skin contact with hot metal can cause burns.
Eyes Contact : Aluminum dust can irritate the eyes (mechanical abrasion).
Ingestion : Not applicable

Chronic Effects :

Solid aluminum does not present any chronic health effects.

Skin Contact : Skin sensitization to nickel may result in chronic eczema: "Nickel itch".

Medical Conditions Aggravated by Exposure to the Product :

Not applicable

Carcinogenicity : Certain alloys of this serie may contain chromium and nickel. 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])

Mutagenicity : No data available.

Reproductive Toxicity :

No data available.

Supplementary Information :

Aluminum fumes generated during welding or melting present low health risks. Welding or plasma arc cutting of aluminum alloys can generate ozone, nitric oxides and ultraviolet radiation. Ozone overexposure may result in mucous membrane irritation or pulmonary discomfort. UV radiation can cause skin erythema and welders flash. High concentrations of freshly-formed fumes of copper, magnesium, manganese or zinc oxides can produce symptoms of metal fume fever. High concentrations of manganese dust can affect the central nervous system (apathy, drowsiness, weakness and other symptoms resembling to Parkinson's disease). High concentrations of copper dust can cause irritation of the upper respiratory tract.

12. Ecological Information

Ecotoxicity : Aluminum ecotoxicity has not been demonstrated using standard OECD test protocols.

Mobility : Aluminum is not mobile in the environment, unless it comes into contact with an aqueous environment with a pH below 5.5 or above 8.5.

Persistence/ Biodegradability :

Not relevant for metals.

Bioaccumulation : Minimal.

Material safety data sheet (MSDS)

13. Disposal Considerations

Methods of Disposal :

Recycle. Aluminum in the form of particles may be reactive. Its hazardous characteristics, including fire and explosion, should be determined prior to disposal. Dispose of waste in accordance with federal, state, or local regulations.

Note : Reference to the European Waste Catalog (EWC) in section 15.

14. Transport Information

TDGR: not regulated ; ADR : not regulated ; CFR 49: not regulated ; IMO: not regulated ; ICAO: not regulated ; IATA: not regulated .

(TDGR = Transport of Dangerous Good Regs.(Canada). ADR : European agreement relative to international transport of dangerous goods by road. CFR 49 = Code of Federal Regs.(USA). IMO = International Maritime Organization. ICAO = International Civil Aviation Organization. IATA = International Air Transport Association.)

15. Regulatory Information

Canadian Regulation :**WHMIS Classification :**

D2B Toxic material causing other toxic effects.

WHMIS : Workplace Hazardous Materials Information System.

European Union Classification :**Warning Symbol(s) :**

Xn

Harmful

Risk Phrase(s) :

R40: Limited evidence of a carcinogenic effect.

R43: May cause sensitization by skin contact.

Safety Phrase(s) :

S22: Do not breathe dust.

S36: Wear suitable protective clothing.

References :

Directive 67/548/EC on the approximation of laws, regulations and administrative provisions relating to the classification, packaging and labeling of dangerous substances.

Directive 1999/45/EC concerning the approximation of the laws, regulations and administrative provisions of the Member States relating to the classification, packaging and labeling of dangerous preparations

European Waste Catalog (EWC) :

EU 12 01 03* : Wastes from shaping and physical and mechanical surface treatment of metals and plastics; non-ferrous metal filings and turnings.

(Reference : Decree No. 2002-540 of April 18, 2002 relative to the classification of wastes.)

USA Regulation(s) :**Supplier notification:**

This product may contain trace amounts of lead, which concentration does not meet the disclosure requirements of the "Hazard Communication Standard" (HCS) of the United States or the Canadian "Workplace Hazardous Material Information System" (WHMIS). Any process resulting in exposure to more than 0.5 mg/m³ of metal dust per day may result in a daily dose of lead of over 0.5 µg/day, the dose above which the "California Safe Drinking Water and Toxic Enforcement Act" of 1986 requires notification. Refer to the appropriate regulation notification wording guidelines.

Section 313

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 SDSs that are copied and distributed for this material).

Chemical Name	CAS number
Manganese	7439-96-5
Chromium	7440-47-3
Copper	7440-50-8
Zinc compound	-----
Nickel	7440-02-0

16. Other Information

Although the information in this SDS 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.

This safety data sheet is in accordance with WHMIS, Directive 2001/58/CE and ANSI Z400.1-2003.

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N/A N/A