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## 1. PRODUCT AND COMPANY IDENTIFICATION

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**PRODUCT NAME:** Drop off anode butts.

**PRODUCT NUMBER:** 000075 (P6285)

**SUPPLIER:** Rio Tinto Alcan (RTA)  
 Primary Metal  
 1188 Sherbrooke West  
 Montréal, Québec H3A 3G2  
 Canada

**Emergency phone :** 1-800-567-7455 \*  
**Phone :** 514 848-8000  
**Fax :** 514 848-8115/8116

\* Please call collect for outside calls of North America.

**SYNONYMS:** Mégots d'anodes "piquets".

**APPEARANCE AND ODOUR:** Black odourless solid.

**USES:** Process by-product to be reused in steel works.

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## 2. COMPOSITION / INFORMATION ON INGREDIENTS

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NAME	CAS #	LD <sub>50</sub>	LC <sub>50</sub>	CONC.
Carbon	7440-44-0	Unknown	Unknown	88 - 96%
Cryolite (recovered) (Na <sub>3</sub> AlF <sub>6</sub> )	15096-52-3	> 5 g/kg	Unknown	3.0 – 6.0%
Aluminum oxide	1344-28-1	Unknown	Unknown	0.0 – 3.0%
Aluminum fluoride	7784-18-1	Unknown	Unknown	0.1 - 0.5%
Fluorspar	7789-75-5	4250 mg/kg (oral-rat)	Unknown	0.2 - 0.4%
Sulfur	7704-34-9	Unknown	Unknown	1.0 – 3.0%
Iron	7439-89-6	30 g/kg(oral-rat)	Unknown	0.0 - 0.2%
Silicates (as SiO <sub>2</sub> )	-----	Unknown	Unknown	0.0 - 0.2%
Beryllium	7440-41-7	Unknown	Unknown	< 0.005%

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## 3. HAZARDS IDENTIFICATION

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May emit toxic and corrosive gases at high temperatures. Beryllium may induce sensitization and cause a serious chronic lung disease.

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## 4. FIRST AID MEASURES

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**INHALATION:** If overcome by high dust concentrations, remove to a ventilated area.

**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. Do not scrub, since the abrasion may cause irritation.

**INGESTION:** Not applicable

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## 5. FIRE-FIGHTING MEASURES

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Non combustible.

**EXTINGUISHING MEDIA:** In case of fire do not spray water directly on product.

**HAZARDOUS COMBUSTION PRODUCTS:** Not applicable

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## 6. ACCIDENTAL RELEASE MEASURES

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Avoid spreading dust. Avoid contaminating surface water, waterways or sewers leading to surface water. Recycle if possible.

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## 7. HANDLING AND STORAGE

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**HANDLING PRECAUTIONS:** Avoid all contact with the skin, eyes and respiratory tract. Avoid generating excess dust during handling.

**STORAGE CONDITIONS:** Store away from acids, oxidizing agents and all sources of ignition. Store in a cool and dry area.

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## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

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Provide general and local ventilation to maintain concentrations of air contaminants below recommended standards. Avoid prolonged or repeated skin contact. Change work clothing daily. Good housekeeping and industrial hygiene practices are recommended where employees are exposed to beryllium levels above the 0.1 µg/m<sup>3</sup> or where the potential exists for significant skin contact with dusts containing beryllium. In this case, clean work clothing should be provided and contact with personal clothing must be avoided. Access to beryllium work area should be restricted.

### Exposure limits:

	ACGIH (TLV)		OSHA (PEL)	
	TWA	STEL	TWA	CEILING
Carbon (as nuisance particulates) – total dust	10 mg/m <sup>3</sup>	None	15 mg/m <sup>3</sup>	None
- Respirable dust	3 mg/m <sup>3</sup>	None	5 mg/m <sup>3</sup>	None
Aluminum oxide (total dust)	10 mg/m <sup>3</sup>	None	15 mg/m <sup>3</sup>	None
- respirable dust	None	None	5 mg/m <sup>3</sup>	None
Ferric oxide (fume, dust)	5 mg/m <sup>3</sup>	None	10 mg/m <sup>3</sup>	None
Fluorides (as F)	2.5 mg/m <sup>3</sup>	None	2.5 mg/m <sup>3</sup>	None
Beryllium (Be) *	0.002 mg/m <sup>3</sup>	0.01 mg/m <sup>3</sup>	0.002 mg/m <sup>3</sup>	0.005 mg/m <sup>3</sup>

\* DOE (Dept. of Energy, USA) has set an exposition limit value (TWA - 8 hour) of 0.0005 mg/m<sup>3</sup> of air for workers exposure.

(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)

## 9. PHYSICAL AND CHEMICAL PROPERTIES

<b>PH:</b> (100% SOLUTION)	Not applicable	<b>FLASHPOINT:</b>	Not applicable
<b>BOILING POINT:</b>	Not applicable	<b>AUTOIGNITION TEMPERATURE:</b>	Not determined
<b>TEMPS DE DÉCOMPOSITION</b>	Not applicable	<b>LOWER FLAMMABLE LIMIT:</b>	Not applicable
<b>VAPOUR PRESSURE:</b>	Not applicable	<b>HIGHER FLAMMABLE LIMIT:</b>	Not applicable
<b>VAPOUR DENSITY (AIR = 1):</b>	Not applicable	<b>EXPLOSIVE PROPERTIES:</b>	Not applicable
<b>EVAPORATION RATE:</b>	Not applicable	<b>NFPA FIRE CODE:</b>	0
<b>RELATIVE DENSITY (WATER = 1):</b>	≈ 1.5	<b>OXIDIZING PROPERTIES:</b>	Not applicable
<b>WATER SOLUBILITY:</b>	Not determined	<b>PARTITION COEFFICIENT</b>	Not applicable
<b>ODOUR THRESHOLD:</b>	Not applicable	<b>(N-OCTANOL/WATER):</b>	

## 10. STABILITY AND REACTIVITY

<b>STABLE (YES/NO):</b>	Yes
<b>CONDITIONS AND MATERIAL TO AVOID:</b>	Reacts with strong oxidizing agents.
<b>HAZARDOUS DECOMPOSITION PRODUCTS:</b>	If strongly heated, emits carbon oxides, sulfur oxides and toxic fluoride fumes.

## 11. TOXICOLOGICAL INFORMATION

### ROUTES OF EXPOSURE:

<b>INHALATION:</b>	Yes	<b>INGESTION:</b>	No		
<b>EYE CONTACT:</b>	Yes	<b>SKIN CONTACT:</b>	Yes	<b>SKIN ABSORPTION:</b>	No

### ACUTE EFFECTS:

**INHALATION:** Dust may irritate the respiratory system, and result in difficulty of breathing. Overexposure to dust and fumes containing beryllium may cause inflammation of the lung tissues.

**SKIN CONTACT:** May result in skin irritation. Beryllium in dust may gain entrance under the skin through superficial cuts and abrasions, with the potential to induce sensitization and to cause dermatitis (Granulomas).

**EYE CONTACT:** Irritation.

**INGESTION:** Not applicable

### CHRONIC EFFECTS:

Prolonged overexposure to fluorides may increase fluoride content of bones and teeth, and may result in fluorosis, with mottling of teeth (in children) and brittleness of bones.

**INHALATION:** High exposure to beryllium caused by dust and fumes inhalation may cause sensitization. Beryllium sensitization may result in a serious progressive chronic lung disease called Chronic Beryllium Disease (CBD) or berylliosis. This allergic condition in which the lung tissues become inflamed, may be accompanied with pulmonary fibrosis.

**MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE TO THE PRODUCT:** Not applicable

### CARCINOGENICITY / MUTAGENICITY / REPRODUCTIVE TOXICITY:

IARC lists beryllium as a group 1 – Known Human Carcinogen. NTP lists beryllium as reasonably anticipated to be a human carcinogen. ACGIH lists beryllium as an A1 – Confirmed Human Carcinogen.

(IARC=International Agency for Research on Cancer; NTP=National Toxicology Program [USA]; OSHA=Occupational Safety and Health Administration [USA])

### SUPPLEMENTARY INFORMATION:

Medical surveillance for beryllium is recommended for employees exposed to concentration higher than 0.1 µg/m<sup>3</sup>.

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## 12. ECOLOGICAL INFORMATION

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Avoid contaminating surface water, waterways or sewers leading to surface water.

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## 13. DISPOSAL CONSIDERATIONS

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

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## 14. TRANSPORT INFORMATION

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TDGR: not regulated CFR 49: not regulated IMO: not regulated ICAO: not regulated IATA: not regulated

[TMD = Reg. Transport des matières dangereuses (Canada). CFR 49 = Code of Federal regs. 49 (USA). OMI =Organisation maritime internationale. OACI = Organisation de l'aviation civile internationale. ATAI = Association du transport aérien international]

### Road Transport in the U.K.

Carriage of Dangerous Goods by Road and Rail (Classification, Packaging and Labelling) Regulations 1994, commonly referred to as CDG-CPL system, is not applied.

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## 15. REGULATORY INFORMATION

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**WHMIS CLASSIFICATION (CANADA):** D2B Toxic material causing other toxic effects.

**EUROPEAN UNION CLASSIFICATION:** Not applicable

**WARNING SYMBOL:** Not applicable

**WARNING WORD:** Not applicable

**RISK PHRASES:** Not applicable

**SAFETY PHRASES:** Not applicable

**Export and import of Hazardous Waste :** a notice shall be given by exporter or importer, in compliance with the Canadian Environmental Protection Act.

### **USA REGULATIONS :**

#### Supplier notification:

This product contains trace amounts of beryllium. Any process resulting in dust exposure may result in a daily dose of beryllium of over 0.1 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.

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## 16. OTHER INFORMATION

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### **ABBREVIATIONS:**

WHMIS = Working hazardous material information system. CAS number = Chemical Abstracts Service Registry Number.  
LD<sub>50</sub> = Lethal dose 50%; LC<sub>50</sub> = Lethal concentration 50%; LCL<sub>0</sub> = Lowest published lethal concentration. EU = European Union.

**\* 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. \***

Prepared by Rio Tinto Alcan Toxicology Service  
P.O. Box 1500, Jonquière (Quebec)  
Canada, G7S 4L2

Phone: 418-699-2707  
Fax: 418-699-2993  
E-mail: servicetoxico@alcan.com

**DATE OF THE PREVIOUS REVISION:** 2006-05-29

**REASON FOR REVISION:** MODIFICATION IN SECTION 1.