SAFETY DATA SHEET

Cadmium

Issue Date: 17 - May - 2016 **Revision Date:**

1. Product and company identification

Product name : CADMIUM

Synonym : cadmium (pyrophoric); Cadmium fume (as Cd); Cadmium dust (as Cd); CADMIUM DUST; CADMIUM, ELEMENTAL

Material uses : Industrial applications: batteries, plastics, plating, pigments.
Other non-specified industry: ELECTRODEPOSITED AND DIPPED COATINGS ON METALS; BEARING AND LOW-MELTING ALLOYS; BRAZING ALLOYS; FIREPROTECTION SYSTEMS; NICKEL-CADMIUM STORAGE BATTERIES; POWER TRANSMISSION WIRE; TV PHOSPHORS; BASIS OF PIGMENTS USED IN CERAMIC GLAZES, MACHINERY ENAMELS, BAKING ENAMELS; WESTON STANDARD CELL; CONTROL OF ATOMIC FISSION IN NUCLEAR REACTORS; FUNGICIDE; PHOTOGRAPHY AND LITHOGRAPHY; SELENIUM RECTIFIERS; ELECTRODES FOR CADMIUM-VAPOR LAMPS AND PHOTO-ELECTRIC CELLS.

Manufacturer : Alchemy Extrusions Inc.
390 Millen road, Rear Unit
Stoney Creek, ON
L8E 2P7
(905)662 9143

Emergency Telephone Number (with hours of operation) INFOTRAC
North America: (800) 535-5053
International: (352) 323-3500

Product type : Solid.

2. Hazards identification

Emergency overview

Physical state : Solid.

Color : Blue. White. Grayish-white. Gray.

Odor : Odorless.

Signal word : DANGER!

Hazard statements : MAY BE FATAL IF INHALED. HARMFUL IF SWALLOWED. CAN CAUSE TARGET ORGAN DAMAGE. CANCER HAZARD - CAN CAUSE CANCER. REPRODUCTIVE HAZARD - CAN CAUSE ADVERSE REPRODUCTIVE EFFECTS IN MALES. REPRODUCTIVE HAZARD - CAN CAUSE ADVERSE REPRODUCTIVE EFFECTS IN FEMALES. CAN CAUSE HERITABLE GENETIC EFFECTS.

Precautionary measures : Do not handle until all safety precautions have been read and understood. Obtain special instructions before use. Do not ingest. Use only with adequate ventilation. Do not eat, drink or smoke when using this product. Keep container closed. Use personal protective equipment as required. Wash thoroughly after handling.

OSHA/HCS status : This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Potential acute health effects

Inhalation : Very toxic by inhalation.

2. Hazards identification

Ingestion : Toxic if swallowed.

Skin : No known significant effects or critical hazards.

Eyes : No known significant effects or critical hazards.

Potential chronic health effects

Chronic effects : Can cause target organ damage.

Carcinogenicity : Can cause cancer. Risk of cancer depends on duration and level of exposure.

Mutagenicity : Can cause heritable genetic effects.

Teratogenicity : No known significant effects or critical hazards.

Developmental effects : No known significant effects or critical hazards.

Fertility effects : Can impair male fertility. Can impair female fertility.

Target organs : Causes damage to the following organs: liver.
May cause damage to the following organs: blood, kidneys, lungs, upper respiratory tract, bones, prostate.

Over-exposure signs/symptoms

Inhalation : Adverse symptoms may include the following:
reduced fetal weight
increase in fetal deaths
skeletal malformations

Ingestion : Adverse symptoms may include the following:
reduced fetal weight
increase in fetal deaths
skeletal malformations

Skin : Adverse symptoms may include the following:
reduced fetal weight
increase in fetal deaths
skeletal malformations

Eyes : Adverse symptoms may include the following:
reduced fetal weight
increase in fetal deaths
skeletal malformations

Medical conditions aggravated by over-exposure : Pre-existing disorders involving any target organs mentioned in this MSDS as being at risk may be aggravated by over-exposure to this product.

See toxicological information (Section 11)

3. Composition/information on ingredients

United States

Name	CAS number	%
cadmium	7440-43-9	90 - 100

Canada

Name	CAS number	%
cadmium	7440-43-9	90 - 100

Mexico

	Classification

Name	CAS number	UN number	%	IDLH	H	F	R	Special

3. Composition/information on ingredients

cadmium	7440-43-9	Not regulated.	90 - 100	9 mg/m³	4	0	0	-

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

4. First aid measures

Eye contact : Check for and remove any contact lenses. Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical attention immediately.

Skin contact : In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse. Clean shoes thoroughly before reuse. Get medical attention immediately.

Inhalation : Call medical doctor or poison control center immediately. Move exposed person to fresh air. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention immediately.

Ingestion : Wash out mouth with water. Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical attention immediately.

Protection of first-aiders : No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

Notes to physician : No specific treatment. Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

5. Fire-fighting measures

Flammability of the product : No specific fire or explosion hazard.

Extinguishing media

Suitable : Use an extinguishing agent suitable for the surrounding fire.

Not suitable : None known.

Special exposure hazards : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

Hazardous thermal decomposition products : Decomposition products may include the following materials:
metal oxide/oxides

Special protective equipment for fire-fighters : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Special remarks on fire hazards : Some may burn but none ignite readily.
Some may polymerize (P) explosively when heated or involved in a fire.
Containers may explode when heated.
Some may be transported hot.

6. Accidental release measures

Personal precautions : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment (see Section 8).

Environmental precautions : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Methods for cleaning up

Small spill : Move containers from spill area. Avoid dust generation. Do not dry sweep. Vacuum dust with equipment fitted with a HEPA filter and place in a closed, labeled waste container. Dispose of via a licensed waste disposal contractor.

Large spill : Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Avoid dust generation. Do not dry sweep. Vacuum dust with equipment fitted with a HEPA filter and place in a closed, labeled waste container. Dispose of via a licensed waste disposal contractor. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

7. Handling and storage

Handling : Put on appropriate personal protective equipment (see Section 8). Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. Avoid exposure - obtain special instructions before use. Avoid exposure during pregnancy. Do not get in eyes or on skin or clothing. Do not ingest. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.

Storage : Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

8. Exposure controls/personal protection

United States

Ingredient	Exposure limits

cadmium	**OSHA PEL 1989 (United States, 3/1989).** TWA: 0.2 mg/m³, (as Cd) 8 hours. Form: Dust CEIL: 0.6 mg/m³, (as Cd) Form: Dust TWA: 0.1 mg/m³, (as Cd) 8 hours. Form: Fume CEIL: 0.3 mg/m³, (as Cd) Form: Fume TWA: 5 µg/m³ 8 hours. **OSHA PEL Z2 (United States, 2/2013).** TWA: 0.2 mg/m³ 8 hours. Form: Dust CEIL: 0.6 mg/m³ Form: Dust TWA: 0.1 mg/m³ 8 hours. Form: Fume CEIL: 0.3 mg/m³ Form: Fume **OSHA (United States, 0/1994).** TWA: 0.01 mg/m³ **OSHA (United States, 0/1993).** CEIL: 0.3 mg/m³

8. Exposure controls/personal protection

	ACGIH TLV (United States, 3/2015). TWA: 0.01 mg/m³, (as Cd) 8 hours. Form: Inhalable fraction TWA: 0.002 mg/m³, (as Cd) 8 hours. Form: Respirable fraction **OSHA (United States, 0/1992).** TWA: 5 µg/m³ **OSHA PEL (United States, 2/2013).** TWA: 5 µg/m³, (as Cd) 8 hours.

Canada

Occupational exposure limits		TWA (8 hours)			STEL (15 mins)			Ceiling			
Ingredient	List name	ppm	mg/m³	Other	ppm	mg/m³	Other	ppm	mg/m³	Other	Notations
cadmium, as Cd	US ACGIH 3/2015	-	0.01	-	-	-	-	-	-	-	[a]
		-	0.002	-	-	-	-	-	-	-	[b]
cadmium	AB 4/2009	-	0.01	-	-	-	-	-	-	-	
cadmium, as Cd	BC 5/2015	-	0.002	-	-	-	-	-	-	-	[c]
	BC 5/2015	-	0.01	-	-	-	-	-	-	-	
	ON 7/2015	-	0.01	-	-	-	-	-	-	-	[a]
		-	0.002	-	-	-	-	-	-	-	[b]
	QC 1/2014	-	0.025	-	-	-	-	-	-	-	
cadmium, measured as Cd	SK	-	0.002	-	-	0.006	-	-	-	-	[d]
	SK	-	0.01	-	-	0.03	-	-	-	-	[e]

Form: [a]Inhalable fraction [b]Respirable fraction [c]Respirable [d]respirable fraction [e]total fraction

Mexico

Occupational exposure limits

Ingredient	Exposure limits
cadmium	**NOM-010-STPS (Mexico, 9/2000).** LMPE-PPT: 0.002 mg/m³, (as Cd) 8 hours. Form: breathable powder LMPE-PPT: 0.01 mg/m³, (as Cd) 8 hours. Form: total powder

Consult local authorities for acceptable exposure limits.

Recommended monitoring procedures : If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. Reference should be made to appropriate monitoring standards. Reference to national guidance documents for methods for the determination of hazardous substances will also be required.

Engineering measures : Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

Hygiene measures : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Personal protection

Respiratory : Use a properly fitted, particulate filter respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

8. Exposure controls/personal protection

Hands : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

Eyes : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with side-shields.

Skin : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Environmental exposure controls : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

9. Physical and chemical properties

Physical state : Solid.

Flash point : [Product does not sustain combustion.]

Color : Blue. White. Grayish-white. Gray.

Odor : Odorless.

Molecular formula : Cd

Solubility : Insoluble in the following materials: cold water, hot water, methanol, diethyl ether and n-octanol.

10. Stability and reactivity

Chemical stability : The product is stable.

Conditions to avoid : No specific data.

Incompatible materials : No specific data.

Hazardous decomposition products : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Possibility of hazardous reactions : Under normal conditions of storage and use, hazardous reactions will not occur.

11. Toxicological information

United States

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
cadmium	LD50 Oral LD50 Oral LD50 Oral LDLo Oral	Mouse Rat Rat Rabbit	890 mg/kg 2330 mg/kg 2330 mg/kg 70 mg/kg	- - - -

Conclusion/Summary : Not available.

Chronic toxicity

Conclusion/Summary : Not available.

Irritation/Corrosion

Conclusion/Summary : Not available.

11. Toxicological information

Sensitizer

Conclusion/Summary : Not available.

Carcinogenicity

Conclusion/Summary : An allergen. Animal: embryotoxic, passes through the placental barrier. Overexposure to dust and fumes may result in lung and kidney damage.

Classification

Product/ingredient name	OSHA	IARC	NTP	ACGIH	EPA	NIOSH
cadmium	+	1	Known to be a human carcinogen.	A2	-	+

Mutagenicity

Conclusion/Summary : Not available.

Teratogenicity

Conclusion/Summary : Not available.

Reproductive toxicity

Conclusion/Summary : Not available.

Canada

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
cadmium	LD50 Oral LD50 Oral LD50 Oral LDLo Oral	Mouse Rat Rat Rabbit	890 mg/kg 2330 mg/kg 2330 mg/kg 70 mg/kg	- - - -

Conclusion/Summary : Not available.

Chronic toxicity

Conclusion/Summary : Not available.

Irritation/Corrosion

Conclusion/Summary : Not available.

Sensitizer

Conclusion/Summary : Not available.

Carcinogenicity

Conclusion/Summary : An allergen. Animal: embryotoxic, passes through the placental barrier. Overexposure to dust and fumes may result in lung and kidney damage.

Classification

Product/ingredient name	ACGIH	IARC	EPA	NIOSH	NTP	OSHA
cadmium	A2	1	-	+	Known to be a human carcinogen.	+

Mutagenicity

Conclusion/Summary : Not available.

Teratogenicity

Conclusion/Summary : Not available.

Reproductive toxicity

Conclusion/Summary : Not available.

Mexico

Acute toxicity

11. Toxicological information

Product/ingredient name	Result	Species	Dose	Exposure
cadmium	LD50 Oral LD50 Oral LD50 Oral LDLo Oral	Mouse Rat Rat Rabbit	890 mg/kg 2330 mg/kg 2330 mg/kg 70 mg/kg	- - - -

Conclusion/Summary : Not available.

Chronic toxicity

Conclusion/Summary : Not available.

Irritation/Corrosion

Conclusion/Summary : Not available.

Sensitizer

Conclusion/Summary : Not available.

Carcinogenicity

Conclusion/Summary : An allergen. Animal: embryotoxic, passes through the placental barrier. Overexposure to dust and fumes may result in lung and kidney damage.

Classification

Product/ingredient name	ACGIH	IARC	EPA	NIOSH	NTP	OSHA
cadmium	A2	1	-	+	Known to be a human carcinogen.	+

Mutagenicity

Conclusion/Summary : Not available.

Teratogenicity

Conclusion/Summary : Not available.

Reproductive toxicity

Conclusion/Summary : Not available.

IDLH : 9 mg/m^3

Other information : To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

12. Ecological information

Ecotoxicity : No known significant effects or critical hazards.

United States

Aquatic ecotoxicity

12. Ecological information

Product/ingredient name	Result	Species	Exposure
cadmium	Acute EC50 97 µg/l Fresh water	Algae - Pseudokirchneriella subcapitata - Exponential growth phase	72 hours
	Acute EC50 0.095 mg/l Marine water	Algae - Ulva pertusa	96 hours
	Acute EC50 200 µg/l Fresh water	Aquatic plants - Lemna minor	4 days
	Acute LC50 0.072 µg/l Marine water	Crustaceans - Amphipoda - Adult	48 hours
	Acute LC50 24 µg/l Fresh water	Daphnia - Daphnia magna	48 hours
	Acute LC50 1 µg/l Fresh water	Fish - Pimephales promelas - Juvenile (Fledgling, Hatchling, Weanling)	96 hours
	Chronic NOEC 2 µg/l Fresh water	Algae - Parachlorella kessleri - Exponential growth phase	72 hours
	Chronic NOEC 0.02 µg/l Fresh water	Fish - Cyprinus carpio	4 weeks

Conclusion/Summary : Not available.

Persistence/degradability

Conclusion/Summary : Not available.

Canada

Aquatic ecotoxicity

Product/ingredient name	Result	Species	Exposure
cadmium	Acute EC50 97 µg/l Fresh water	Algae - Pseudokirchneriella subcapitata - Exponential growth phase	72 hours
	Acute EC50 0.095 mg/l Marine water	Algae - Ulva pertusa	96 hours
	Acute EC50 200 µg/l Fresh water	Aquatic plants - Lemna minor	4 days
	Acute LC50 0.072 µg/l Marine water	Crustaceans - Amphipoda - Adult	48 hours
	Acute LC50 24 µg/l Fresh water	Daphnia - Daphnia magna	48 hours
	Acute LC50 1 µg/l Fresh water	Fish - Pimephales promelas - Juvenile (Fledgling, Hatchling, Weanling)	96 hours
	Chronic NOEC 2 µg/l Fresh water	Algae - Parachlorella kessleri - Exponential growth phase	72 hours
	Chronic NOEC 0.02 µg/l Fresh water	Fish - Cyprinus carpio	4 weeks

Conclusion/Summary : Not available.

Persistence/degradability

Conclusion/Summary : Not available.

Mexico

Aquatic ecotoxicity

Product/ingredient name	Result	Species	Exposure
cadmium	Acute EC50 97 µg/l Fresh water	Algae - Pseudokirchneriella subcapitata - Exponential growth phase	72 hours
	Acute EC50 0.095 mg/l Marine water	Algae - Ulva pertusa	96 hours
	Acute EC50 200 µg/l Fresh water	Aquatic plants - Lemna minor	4 days
	Acute LC50 0.072 µg/l Marine water	Crustaceans - Amphipoda - Adult	48 hours
	Acute LC50 24 µg/l Fresh water	Daphnia - Daphnia magna	48 hours
	Acute LC50 1 µg/l Fresh water	Fish - Pimephales promelas - Juvenile (Fledgling, Hatchling, Weanling)	96 hours
	Chronic NOEC 2 µg/l Fresh water	Algae - Parachlorella kessleri - Exponential growth phase	72 hours
	Chronic NOEC 0.02 µg/l Fresh water	Fish - Cyprinus carpio	4 weeks

12. Ecological information

Conclusion/Summary : Not available.

Persistence/degradability

Conclusion/Summary : Not available.

Toxicity of the products of biodegradation : The products of degradation are as toxic as the original product.

Other adverse effects : No known significant effects or critical hazards.

13. Disposal considerations

Waste disposal : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Disposal should be in accordance with applicable regional, national and local laws and regulations.

Refer to Section 7: HANDLING AND STORAGE and Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION for additional handling information and protection of employees.

14. Transport information

Regulatory information	UN number	Proper shipping name	Classes	PG*	Label	Additional information
DOT Classification	Not regulated.	-	-	-		
TDG Classification	Not regulated.	-	-	-		-
Mexico Classification	Not regulated.	-	-	-		-
ADR/RID Class	Not regulated.	-	-	-		-
IMDG Class	Not regulated.	-	-	-		-
IATA-DGR Class	Not regulated.	-	-	-		-

PG* : Packing group

15. Regulatory information

United States

HCS Classification : Target organ effects

U.S. Federal regulations : **TSCA 8(a) CDR Exempt/Partial exemption**: Not determined

This material is listed or exempted.

Clean Water Act (CWA) 307: cadmium

15. Regulatory information

Clean Air Act Section 112 (b) Hazardous Air Pollutants (HAPs) : Listed

Clean Air Act Section 602 Class I Substances : Not listed

Clean Air Act Section 602 Class II Substances : Not listed

DEA List I Chemicals (Precursor Chemicals) : Not listed

DEA List II Chemicals (Essential Chemicals) : Not listed

SARA 302/304

Composition/information on ingredients

No products were found.

SARA 304 RQ : Not applicable.

SARA 311/312

Classification : Fire hazard
Immediate (acute) health hazard
Delayed (chronic) health hazard

Composition/information on ingredients

Name	%	Fire hazard	Sudden release of pressure	Reactive	Immediate (acute) health hazard	Delayed (chronic) health hazard
cadmium	90 - 100	Yes.	No.	No.	Yes.	Yes.

SARA 313

	Product name	CAS number	%
Form R - Reporting requirements	cadmium	7440-43-9	90 - 100
Supplier notification	cadmium	7440-43-9	90 - 100

SARA 313 notifications must not be detached from the MSDS and any copying and redistribution of the MSDS shall include copying and redistribution of the notice attached to copies of the MSDS subsequently redistributed.

State regulations

Massachusetts : This material is listed.

New York : This material is listed.

New Jersey : This material is listed.

Pennsylvania : This material is listed.

California Prop. 65

WARNING: This product contains a chemical known to the State of California to cause cancer and birth defects or other reproductive harm.

Ingredient name	Cancer	Reproductive	No significant risk level	Maximum acceptable dosage level
cadmium	Yes.	Yes.	0.05 µg/day (inhalation)	4.1 µg/day (ingestion)

15. Regulatory information

United States inventory (TSCA 8b) : This material is listed or exempted.

Canada

WHMIS (Canada) : Class D-1A: Material causing immediate and serious toxic effects (Very toxic).
Class D-2A: Material causing other toxic effects (Very toxic).

Canadian lists

Canadian NPRI : This material is listed.

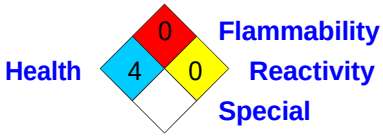
CEPA Toxic substances : This material is not listed.

Canada inventory : This material is listed or exempted.

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations.

Mexico

Classification :



International regulations

International lists : **Australia inventory (AICS)**: This material is listed or exempted.
China inventory (IECSC): This material is listed or exempted.
Japan inventory (ENCS): Not determined.
Japan inventory (ISHL): Not determined.
Korea inventory: This material is listed or exempted.
Malaysia Inventory (EHS Register): This material is listed or exempted.
New Zealand Inventory of Chemicals (NZIoC): This material is listed or exempted.
Philippines inventory (PICCS): This material is listed or exempted.
Taiwan Chemical Substances Inventory (TCSI): This material is listed or exempted.
Turkey inventory: Not determined.

Chemical Weapons Convention List Schedule I Chemicals : Not listed

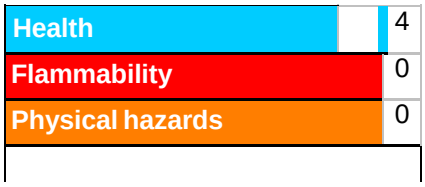
Chemical Weapons Convention List Schedule II Chemicals : Not listed

Chemical Weapons Convention List Schedule III Chemicals : Not listed

16. Other information

Label requirements : MAY BE FATAL IF INHALED. HARMFUL IF SWALLOWED. CAN CAUSE TARGET ORGAN DAMAGE. CANCER HAZARD - CAN CAUSE CANCER. REPRODUCTIVE HAZARD - CAN CAUSE ADVERSE REPRODUCTIVE EFFECTS IN MALES. REPRODUCTIVE HAZARD - CAN CAUSE ADVERSE REPRODUCTIVE EFFECTS IN FEMALES. CAN CAUSE HERITABLE GENETIC EFFECTS.

Hazardous Material Information System (U.S.A.) :



16. Other information

Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks Although HMIS® ratings are not required on MSDSs under 29 CFR 1910. 1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered mark of the National Paint & Coatings Association (NPCA). HMIS® materials may be purchased exclusively from J. J. Keller (800) 327-6868.

The customer is responsible for determining the PPE code for this material.

National Fire Protection Association (U.S.A.) :

Reprinted with permission from NFPA 704-2001, Identification of the Hazards of Materials for Emergency Response Copyright ©1997, National Fire Protection Association, Quincy, MA 02269. This reprinted material is not the complete and official position of the National Fire Protection Association, on the referenced subject which is represented only by the standard in its entirety.

Copyright ©2001, National Fire Protection Association, Quincy, MA 02269. This warning system is intended to be interpreted and applied only by properly trained individuals to identify fire, health and reactivity hazards of chemicals. The user is referred to certain limited number of chemicals with recommended classifications in NFPA 49 and NFPA 325, which would be used as a guideline only. Whether the chemicals are classified by NFPA or not, anyone using the 704 systems to classify chemicals does so at their own risk.

References : -ACGIH, Threshold Limit Values, 1994-1995. -Canada Gazette Part II, Vol. 122, No. 2 Registration SOR/88-64 31 December, 1987 Hazardous Products Act "Ingredient Disclosure List". -CFR29, OSHA's Permissible Exposure Limits, revision July, 1993. -CFR29, part 1910.1200, Hazard Communication. -CHEMTOX database -Components' manufacturer's Material Safety Data Sheet. -CRC Handbook of chemistry and physics, 67 th edition, CRC Press inc., Boca Raton, Florida. -CSST (Comission de Santé et Sécurité au Travail), document #RT-12: Classification of Certain Chemical Substances. -IATA, Dangerous Goods Regulations, 37th edition (January 1, 1996) -NFPA, Fire Protection Guide to Chemical Hazards, 11th edition. -NIOSH, Pocket Guide to Chemical Hazards, revision June 1994. Sigma-Alrich handbook of fine chemicals, 1998 -TSCA (Toxic Substance Contral Act), Chemical Substance Inventory List, 1985.

Other special considerations : -ALL COMPONENTS WITH SUSCEPTIBLE HAZARDS THAT ARE PRESENT IN A CONCENTRATION GREATER THAN 1 % (GREATER THAN 0.1 % FOR CARCINOGENS) HAVE BEEN DISCLOSED IN THIS SAFETY DOCUMENT.

Date of printing : 05/17/2016

Date of issue : 05/17/2016

Date of previous issue : 05/17/2016

Version :

Prepared by :

Indicates information that has changed from previously issued version.

Notice to reader

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein.
Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.