SECTION 1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

Trade name	Solder Paste
Product code	None
Product list	Solder paste : 40/60, 50/50 ; 95/5 ; 97/3.
Supplier	Xstrata Zinc, General Smelting Company of Canada, 1400 Norman Street, Lachine (Québec), Canada H8S 1A8
Information contact	Gino De Nobile, Chemist
Phone number (Business hours)	(514) 637-3591
Phone number (Emergency)	CANUTEC : (613) 996-6666
Synonym	Pâte à souder (brushon) (French)
Name / Chemical Formula	Not applicable
Chemical family	Inorganic product
Utilisation	Paste used in soldering applications.

SECTION 2. HAZARDS IDENTIFICATION

WHMIS (Canada)

CLASS B-2 : Flammable liquids
CLASS D-1B : Toxic material causing immediate and serious effects
CLASS D-2A : Very toxic material causing other toxic effects
CLASS E : Corrosive material

Hazard classes (categories)/Hazard statements

Zinc chloride : Acute toxicity (4) : H302-Harmful if swallowed. Corrosion (Skin) (1B) : H314- Causes severe skin burns and eye damage. STOT SE (3) : H335-May cause respiratory irritation. Aquatic acute (1) : H400-Very toxic to aquatic life. Aquatic chronic (1) : H410-Very toxic to aquatic life with long lasting effects.
Ethylene glycol : Acute toxicity (4) : H302- Harmful if swallowed.
Methanol : Flammable liquid (2) : H225- Highly flammable liquid and vapour. Acute toxicity (3) : H331-Toxic if inhaled Acute toxicity (3) : H311- Toxic in contact with skin. Acute toxicity (3) : H301-Toxic if swallowed. STOT SE (2) : H371-May cause damage to organs.

Hazards words: Danger

Fammable substance | Corrosive | Toxic | Sensitising,mutagen cancerogen, reprotoxic | Hazardous to the aquatic environment

Precautionary statements

P210-Keep away from heat/sparks/open flames/hot surfaces. — No smoking. P240-Ground/bond container and receiving equipment. P241-Use explosion-proof electrical/ventilating/lighting/…/ equipment. P242-Use only non-sparking tools. P243-Take precautionary measures against static discharge. P260-Do not breathe dust/fume/gas/mist/vapours/spray. P264-Wash (Hands, face, contaminated skin by the product) thoroughly after handling. P270-Do not eat, drink or smoke when using this product. P271-Use only outdoors or in a well-ventilated area. P273-Avoid release to the environment. P280-Wear protective gloves/protective clothing/eye protection/face protection.

Other hazards	Reactive with : Acids, oxidants, heat, moisture. Release of irritating, toxic and corrosive gases, hydrides, hydrogen (Flammable gas). Possibility of eye and skin irritation. Ingestion will nearly always cause acute gastro-intestinal irritation. Acute exposure : Possibility of other organs and body systems damages.
Environmental hazards	Toxic for aquatic life.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Name	CAS No	Percentage (%)	EC No	Hazard statements
Tin	7440-31-5	25-70	231-141-8	none
Lead	7439-92-1	0-45	231-100-4	None
Zinc chloride	7646-85-7	15-20	231-592-0	H302-H314-H335-H400-H410
Ethylene glycol	107-21-1	5-10	203-473-3	H302
Antimony	7440-36-0	0.5	231-146-5	None
Methanol	67-56-1	0-5	200-659-6	H225-H331-H311-H301-H371
Gum tragacanth	9000-65-1	0-5	232-552-5	none

SECTION 4. FIRST-AID MEASURES

Eye contact	P305+P351+P338-IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Skin contact	P303+P361+P353-IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. Wash with plenty of soap and water. P363-Wash contaminated clothing before reuse.
Inhalation	P304+P340- IF INHALED : Remove victim to fresh air and keep at rest in a position comfortable for breathing. If breathing is difficult, give oxygen. P309+P311-IF exposed or if you feel unwell: Call a POISON CENTER or doctor/physician. If breathing is difficult, give oxygen.

Ingestion P301+P310-IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician. P330-Rinse mouth. Induce vomiting. **UNCONSCIOUS** person : **DO NOT** induce vomiting or give any liquid.

SECTION 5. FIRE-FIGHTING MEASURES

Flash point Not available
Flammable limits Not available
Autoignition temperature Not available

Products of combustion Heated to decomposition : Emission of toxic chloride fumes (Cl^-) and metallic oxides.
Heating : Possibility of corrosive gas release.

Fire hazard Heated and on contact with acids or acid fumes, metals can release hydrogen and form **stibine**, (**Extremely** toxic gas).
Tin : Fine dust combustible when exposed to heat.
Lead : In contact with fire or heat source, it may melt, and then if in contact with water, will cause a violent reaction. Possibility of toxic lead vapours formation.
Zinc chloride : Mixtures of powdered chlorides and powdered zinc are flammable.
Ethylene glycol : Ignites on contact with chromium trioxide, potassium permanganate or sodium peroxide. Mixture of ethylene glycol with ammonium dichromate, silver chlorate or sodium chlorite may ignite when heated to 100°C.
Antimony : Spontaneously flammable in fluorine, chlorine, or bromine. With iodine : Reaction produces heat, which may cause flames or explosion if quantities are great enough. Dust or vapours exposed to heat or flame : Moderate fire or explosion hazard.
Methanol : Highly flammable with : Heat, sparks, flames. Fire will produce irritating, corrosive and toxic gases.

Explosion hazard Not explosive (Mechanical impact ; Static discharge). Dust : Slightly explosive to explosive in presence of open flames and sparks.
Ethylene glycol : Presents a moderate explosion hazard when exposed to flame. Mixture of phosphorus (V) sulfide, ethylene glycol and hexane may spontaneously overheat and explode.
Methanol : Vapours may form explosive mixtures with air.

Extinguishing media P370+P378-In case of fire: Use for extinction. ERG (Emergency Response Guide) : Guide 154
Small fire : Use dry chemical, CO_2, water spray.
Large fire: Use dry chemical, CO_2, alcohol-resistant foam, water spray. Move containers from area if you can do it without risk. Dike fire control water for later disposal. Do not scatter the material.

Protective equipment Firefighters must wear full protective clothing and self-contained breathing apparatus (SCBA).

SECTION 6. ACCIDENTAL RELEASE MEASURES

Measures P391-Collect spillage. Stop leak (or spill) if you can do it without risk. Prevent entry into waterways, sewers, basements or confined areas.

Methods Absorb or cover with dry earth, sand or other non-combustible material and transfer into suitable containers. Do not get water inside containers.

Protective equipment High concentrations of fumes or dust or risk of emission of toxic material (**Stibine**) : Use a positive-pressure, self-contained breathing apparatus (SCBA) to avoid inhalation of material. Low concentrations : Use a NIOSH/OSHA approved full face cartridge respirator or the equivalent. Full protective clothing. Work gloves and boots.

SECTION 7. HANDLING AND STORAGE

Handling **DO NOT** ingest or inhale dust. Avoid eyes and skin contact. Wear adequate protective clothing. Wear approved respirators if adequate ventilation cannot be provided. Ingestion or inhalation : Seek medical advice immediately and provide medical personnel with a copy of this SDS.
Heated and on contact with acids or acid fumes, metals (Aluminum, zinc, iron, etc.) can release hydrogen : Nascent hydrogen may form : Antimony hydride (**Stibine**) (**Extremely** toxic gas). If hydrides suspected in the area, the workplace must be **immediately** evacuated. Personnel entering this area **MUST** wear positive-pressure, self contained breathing apparatus (SCBA).

Conditions for storage P403+P233-Store in a well-ventilated place. Keep container tightly closed. P403+P235-Store in a well-ventilated place. Keep cool. P405-Store locked up. Well ventilated area. Avoid : Moisture, incompatible substances (Acids).

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

			Control parameters		
			ACGIH (U.S.) 2011	OSHA (U.S.)	QUEBEC (CA)
Name	CAS No	Percentage (%)	TLV-TWA (mg/m^3)	PEL-TWA (mg/m^3)	TWAEV (mg/m^3)
Tin	7440-31-5	25-70	2 (Sn)	2 (metal, compounds)	2 (metal)
Lead	7439-92-1	0-45	0.05 (Pb, inorganic compds Pb)	0.05 (Pb, Pb compds)	0.05 (Pb, inorganic compds)
Zinc chloride	7646-85-7	15-20	1 (fumes)	1 (fumes)	1 (fumes)
Ethylene glycol	107-21-1	5-10	100 (ceiling)	Not established	127 (ceiling)

			Control parameters		
			ACGIH (U.S.) 2011	OSHA (U.S.)	QUEBEC (CA)
Name	CAS No	Percentage (%)	TLV-TWA (mg/m^3)	PEL-TWA (mg/m^3)	TWAEV (mg/m^3)
Antimony	7440-36-0	0.5	0.5 (Sb, compds Sb)	0.5 (Sb, compds Sb)	0.5 (Sb, compds Sb)
Methanol	67-56-1	0-5	200 ppm	260 (200 ppm)	262 (200 ppm) (skin)
Gum tragacanth	9000-65-1	0-5	Not established	Not established	Not established

Note : **Tin :** ACGIH TLV TWA : Metal, oxide, inorganic compounds (Sn) except SnH_4. OSHA PEL-TWA : Metal, inorganic compounds (Sn) except oxides. NIOSH REL-TWA (≤10 hours) : 2 mg/m^3 (Except oxides) ; IDLH : 100 mg/m^3.

Lead : REL-TWA (≤10 hours) : 0.05 mg/m^3 ; REL also applies to other lead compounds (as Pb) ; IDLH : 100 mg/m^3 (Metal ; Compounds). OSHA PEL-TWA : PEL also applies to other lead compounds (as Pb).

Zinc chloride : ACGIH TLV-STEL (Fumes) : 2 mg/m^3. NIOSH REL-TWA (≤10 hours) : 1 mg/m^3 ; STEL (Fumes) : 2 mg/m^3 ; IDLH : 50 mg/m^3.

Glycol (Ethylene) : ACGIH TLV-CEILING : 100 mg/m^3 (Aerosol only). NIOSH CELING : 50 ppm. QUEBEC TLV-CEILING : 127 mg/m^3 (50 ppm) (Vapours, mist) (**RP :** A substance which may not be recirculated in accordance with section 108).

Antimony : ACGIH TLV-TWA : Elemental and compounds. NIOSH REL-TWA (≤10-hours) : 0.5 mg/m^3 ; IDLH : 50 mg/m^3.

Methanol : ACGIH TLV-STEL : 250 ppm. NIOSH REL-TWA (≤10 hours) : 200 ppm (260 mg/m^3) ; REL-STEL : 250 ppm (325 mg/m^3). IDLH : 6 000 ppm. QUÉBEC STEL (Ceiling) : 250 ppm (328 mg/m^3) (Skin).

Consult local authorities for acceptable exposure limits

Engineering controls Use process enclosures, local exhaust ventilation or other engineering controls to keep airborne levels below recommended exposure limits.

Individual protection Safety goggles. Coveralls. Work gloves and boots. Dust respirator. Be sure to use a NIOSH approved respirator or equivalent when concentrations exceed occupational exposure limits.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state and sppearance	Solid (Paste)	Odour	Slightly sweet
Molecular weight	Not applicable	Taste	Not applicable
pH (1% soln/water)	Acid	Colour	Grey
Boiling point	Not available	Volatility	Not available
Melting point	Not available	% Moisture specific	Not available
Critical temperature	Not available	Odour threshold	Not available
Gravity	Weighted average : 1.87 (Water = 1)	Water/Oil dist. coeff.	Not available
Vapour pressure	Not available	Ionicity (in water)	Not available
Vapour density	Not available	Dispersion	Easy (Acetone, acids). No (Water)
Solubility	Easy (Acetone, acids). No (Water).		

SECTION 10. STABILITY AND REACTIVITY

Stability Yes (Under normal conditions of ambiant temperature)

Reactivity Reactive or incompatible with : Acids.

Dangerous decomposition Metallic oxides, chloride (Cl^-)
Heated and on contact with acids or acid fumes, metals (Soft or galvanized metal, aluminum) can release hydrogen and form antimony hydride (**Stibine**) (**Extremely** toxic gas).

Conditions to avoid Acids, heat, ignition sources, moisture.

Dangerous polymerization No

Materials to avoid **Tin :** Reacts violently under certain conditions with : Chlorine, bromine, trifluoride (Chlorine, bromine), acids, oxidants. Can react with some extinguishing agents (Bicarbonate powder, carbon dioxide).

Lead : Violent reaction on ignition with : Chlorine trifluoride, concentrated hydrogen peroxide, ammonium nitrate, sodium acetylide. Other incompatibilities : Sodium nitrate, zirconium, disodium acetylide, oxidants.

Zinc chloride : Reacts with sulfuric acid to produce zinc sulfate. Potassium

Ethylene glycol : Sulfuric acid, oleum, chlorosulfonic ; Strong oxidizing agents.

Antimony : Possibility of violent reaction with : Ammonium nitrate, bromate trifluoride, halogens, chloric acid, chlorine trifluoride, nitric acid, potassium nitrate, potassium permanganate, dipotassium peroxide, sodium nitrate and oxidants.

Methanol : Violent reaction with strong oxidants.

NOTE : This list of products is not exhaustive. Verify technical documents to determine any incompatibilities with your process.

Corrosivity No

SECTION 11. TOXICOLOGICAL INFORMATION

Routes of entry

Ingestion. Inhalation. Eyes and skin contact.

Carcinogenicity

Lead : POSSIBLE (Group 2B, IARC) (EPA) ; CARCINOGEN (Animal, A3, ACGIH).
Ethylene glycol : INCLASSABLE (homme, A4, ACGIH).
Tin : NOT A CARCINOGEN (IARC, OSHA, NTP, ACGIH).
Antimony ; Gum tragacanth ; Methanol ; Zinc chloride (fumées) : NOT LISTED (IARC, ACGIH).

Mutagenicity

Lead : Cytogenetic analysis : 23 µg/m^3/16 week (Inhalation, Rat) ; DNA damage : 4.2 ng/l/6 year-intermittent (Inhalation, Human). (RTECS).
Zinc chloride : DNA damage : 2 mmol/l (Fibroblast, Human). DNA inhibition : 360 µmol/L (Lymphocyte, Human). Test (micronucleus) : 100 mg/l (Lymphocyte, Human). (RTECS).
Ethylene glycol : Cytogenetic analysis : 1200 mg/kg (Oral, Rat). DNA inhibition : 320 mmol/L (Lymphocyte, Human). Mutation (Mammalian somatic cells : 100 mmol/L (lymphocyte, Mouse). (RTECS).
Methanol : Cytogenetic analysis : 75mg/kg (Intraperitoneal) (Mouse). DNA damage (10 µmol/kg, oral, rat). DNA inhibition : 300 mmol/L (Lymphocyte, Human). Morphological transform: 0.1 mg/l/21 day (-enzymatic activation step), fibroblast (Mouse). (RTECS).

Teratogenicity

Lead : ORAL (LoTD) : 0.2 ppb (Multigeneration) Specific developmental abnormalities : Urogenital system ; 24 µg/kg (Multigeneration) Effects on newborn : Physical (Mouse). (RTECS).
Zinc chloride : ORAL (LoTD) : 186 mg/kg (98 day male/98 day prior copulation-3 week after birth) Effects on fertility : Female fertility index (# females pregnant per # sperm positive females ; # females pregnant per # females mated) ; Specific developmental abnormalities : Blood and lymphatic systems (including spleen and marrow ; Urogenital system) (Mouse). INTRAPERITONEAL (LoTD) : 12 500 µg/kg (11 day pregnant), Specific developmental abnormalities: Musculoskeletal system (Mouse). (RTECS).
Ethylene glycol : INHALATION (LoTC) : 1000 mg/m^3/6 hour (6-15 day pregnant) Effects on fertility : Post-implantation mortality (e.g., dead and/or resorbed implants per total number of implants ; Effects on embryo or fetus : Fetotoxicity (except death, e.g., stunted fetus ; Effects on newborn : Sex ratio (Mouse). ORAL (LoTD) : 7500 mg/kg (6-15 day pregnant) Effects on embryo or fetus : Fetotoxicity (except death, e.g., stunted fetus ; Specific developmental abnormalities : Musculoskeletal system, craniofacial (including nose and tongue) (Mouse). (RTECS).
Methanol : ORAL (LoTD) : 42 ml/kg (21 day after birth) Effects on newborn : Behavioral (Rat). INTRAPERITONEAL (LoTD) : 3 400 mg/kg (7 day pregnant) Specific developmental abnormalities : Musculoskeletal system (Mouse). INHALATION (LoTC) : 2 000 ppm/7 hours (6-15 day pregnant) Specific developmental abnormalities : Musculoskeletal system (Mouse). (RTECS).

Acute toxicity

Tin : UNREPORTED ROUTE acute (LoTD) : 250 mg/kg (Human). (RTECS).
Lead : ORAL acute (LoLD) : 155 mg/kg (Human) ; 0.2 mg/kg (Rat). INHALATION acute (LoTC) : 10 µg/m^3 (Human). INTRAPERITONEAL acute (LoLD) : 1 g/kg (Rat). (RTECS).
Zinc chloride : Zinc chloride : ORAL acute (LD50) : 350 mg/kg (Rat) ; 329 mg/kg (Mouse). INTRAPERITONEAL acute (LD50) : 58 mg/kg (Rat) ; 24 mg/kg (Mouse). (RTECS).
Ethylene glycol : ORAL acute (LD50) : 4 700 mg/kg (Rat) ; 5 500 mg/kg (Mouse) ; 6 600 mg/kg (Guinea pig). INHALATION acute (LC) : >200 mg/m^3/4 hours (Rat) ; >200 mg/m^3/2 hours (Mouse). INTRAVENOUS acute (LD50) : 3 260 mg/kg (Rat) ; 300 mg/kg (Mouse). (RTECS).
Antimony : ORAL acute (LD50) : 7 000 mg/kg (Rat). INTRAPERITONEAL acute (LD50) : 100 mg/kg (Rat) ; 80 mg/kg (Mouse). (RTECS).
Methanol : ORAL acute (LD50) : 5 600 mg/kg (Rat) ; 7 300 mg/kg (Mouse) ; 7 500 mg/kg (Rabbit). INTRAPERITONEAL acute (LD50) : 3 490 mg/kg (Rat) ; 1 826 mg/kg (Rabbit). INTRAVENOUS acute (LD50) : 2 131 mg/kg (Rat) ; 4 710 mg/kg (Mouse). (RTECS).

Acute Effects

Dangerous : Skin contact (Irritant), eye contact (Corrosive). Ingestion and inhalation (Irritant for the lungs). The amount of tissue damage depends on duration and extent of contact. Eye contact can provoke corneal damage or even blindness. Over-exposure by inhalation may cause respiratory irritation. Severe overexposure : Lung damage. Severe overexposure by inhalation or ingestion can be fatal.
Lead : Absorption is easier by inhalation and the symptoms develop more quickly than by ingestion. Symptoms : Loss of appetite, anemia, insomnia, headache, muscle and joint pain. Toxicity by ingestion, compared to those by inhalation, requires greater concentrations before symptom onset.
Zinc chloride ; Tin : Exposure to fumes may cause **metal fume fever**, a delayed, generally benign, transient, reversible flu-like condition.
Ethylene glycol : Cough, throat burning sensation ; Dizziness, headache. Ingestion : Abdominal pain, dullness, nausea, unconsciousness, vomiting. Dry skin. Eyes : Redness, pain
Methanol : Cough, dizziness, headache, nausea, weakness, visual disturbance ; Abdominal pain, shortness of breath, vomiting, convulsions, unconsciousness. Skin : Dry, redness. Eyes : Redness, pain.

Chronic Effects

Non-controlled repeated or prolonged exposure : Possibility of target organ damages (Blood, kidneys, liver, lungs ; nervous and reproductive systems). Possibility of irritation : Eye, skin damage, varying degree of respiratory irritation, lung damages (chronic respiratory irritation), dermatitis.

Tin : Low toxicity for humans. Chronic inhalation of oxide (Dust, fume) may cause stannosis (Benign pneumoconiosis) without any pulmonary functional impairment. Other sensitive organs : Kidneys, central nervous system.

Lead : Target organs for acute and chronic overexposure (NIOSH 90-117) : Blood, gingival tissues ; gastro-intestinal, central nervous, renal systems. Symptoms of acute overexposure often develop abruptly and resemble those of chronic overexposure : Anaemia, lassitude, weakness, nausea, vomiting, abdominal cramps, constipation, confusion, convulsions, muscular weakness, muscular and joint pains. Target organs (Chronic overexposure) : Blood, kidneys, digestive, nervous and reproductive systems.

Zinc chloride : Little information is available on the chronic effects. Repeated and prolonged exposure : May cause dermatitis. Short time exposure : Possible eyes, skin and upper respiratory tract irritation. Severe exposure : May cause pulmonary oedema or pneumonitis.

Ethylene glycol : Vapours : Possibility of central nervous system (CNS) abnormalities ; Lymphocytosis.

Antimony : The principal toxicological properties mimic those of arsenic such as : Abdominal cramps, nausea, vomiting, watery diarrhea which may be bloody. Possibility of dermatitis called **antimony spots** : Papules and pustules around sweat and sebaceous glands (Generally on the forearms) which resemble chicken pox and are transient in nature. Some people may develop an allergy to antimony metal. Inhalation (Antimony and compounds) : Possibility of pneumoconiosis which can lead to some obstructive lung disease. There is some evidence that antimony may have some effect on the heart.

Methanol : Skin contact : Dermatitis (Defatting) with dryness and cracking. Other symptoms : Eye, skin and respiratory tract irritation, headache, giddiness, insomnia, gastric disturbances, visual difficulties. Ingestion : Possibility of blindness and death. Effects can be delayed.

Gum tragacanth : Practically non-toxic. Mild Allergen. Irritant (Skin, eye).

Toxicity

Persons with the following pre-existing conditions warrant particular attention :
Tin : Respiratory system (Inorganic compounds).
Lead : Anaemia, pregnant or breast feeding women and women of child bearing age. Preferred method for biological monitoring : Blood lead levels (Pb blood) measurement (BEI 30 µg/100 ml) ; Sampling time : Not critical.
Zinc Chloride : Skin problems or respiratory disorders.
Antimony : Pulmonary and cardiac conditions.
Methanol : Skin, kidney, liver or eyes diseases.

Eating, drinking and smoking must be prohibited in areas where this material is handled and processed. Wash hands and face before eating, drinking and smoking.

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

Heavy metals : Harmful to aquatic life.

Toxicity to Animals

Tin : UNREPORTED ROUTE acute (LoTD) : 250 mg/kg (Human). (RTECS).
Lead : ORAL acute (LoLD) : 155 mg/kg (Human) ; 0.2 mg/kg (Rat). INHALATION acute (LoTC) : 10 µg/m^3 (Human). INTRAPERITONEAL acute (LoLD) : 1 g/kg (Rat). (RTECS).
Zinc chloride : Very toxic for aquatic organisms.
Antimony : ORAL acute (LD50) : 7 000 mg/kg (Rat). INTRAPERITONEAL acute (LD50) : 100 mg/kg (Rat) ; 80 mg/kg (Mouse). (RTECS).

Mobility (Soil)

Easy soil seeping under rain action
Metals : Soluble compounds produced by acidic conditions, becomes mobile in water and in soil (as zinc, lead).
Ethylene glycol : Leach into groundwater.

Persistence and degradability

Zinc : Indefinite persistence in cation form.

Bioaccumulation

Zinc : Accumulation in aquatic and terrestrial flora, in milk. Acid pHs augment zinc availability.
Ethylene glycol : Not to significantly bioaccumulate

Biodegradation products

Short term : Not anticipated. Long term possibility.
Ethylene glycol : Biodegradable

Biodegradation products (Toxicity)

Not available

Remarks on Environment

Due to the product's composition, particular attention must be taken.
Run-off water may become acidic and may be harmful to flora and fauna.

BOD5 and COD

Not available

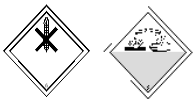
SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods

Recycle to process, if possible. P501-Dispose of contents/container in full compliance with Federal, Provincial and local regulations.

SECTION 14. TRANSPORT INFORMATION

TDG (Pictograms) CLASS 6.1 (8, 9) Toxic substances (Corrosives)
PIN UN 2923 CORROSIVE TOXIC SOLIDS N.O.S. PG : III
Special Provisions (Transport) **109** The consignor must determine legal limit.



SECTION 15. REGULATORY INFORMATION

Labelling (GHS)

Regulation (EC) No 1272/2008 CLP : Listed.
Zinc chloride : Index number : 030-003-00-2 ; EC Number 231-592-0
Ethylene glycol : Index number : 603-027-00-1 ; EC Number 203-473-3
Methanol : Index number : 603-001-00-X ; EC Number 200-659-6

Labelling (DSD)

EU (Regulation 67/548/EEC) : Listed.
Zinc chloride : C Corrosif ; N Dangereux pour l'environement
Annex I Index number : 030-003-00-2 ; EU Consolidated Inventories : EC Number 231-592-0
Classification : C: R34 ; Xn: R22 ; N: R50/53
R22, 34, 50/53 ; S26, 36/37/39, 45, 60, 61.
Ethylene glycol : Xn Harmful
Annex I Index number : 603-027-00-1 ; EU Consolidated Inventories : EC Number 203-473-3
Classification : Xn: R22
R22 ; S2
Methanol : F Highly flammable ; T toxic
Annex I Index number : 603-001-00-X ; EU Consolidated Inventories : EC Number 200-659-6
Classification : F: R11 ; T :R23/24/25, 39/23/24/25
R11, 23/24/25, 39/23/24/25 ; S7, 16, 36/37, 45

EU: Consolidated Inventories : Listed
Tin : EU Consolidated Inventories : EC Number 231-141-8
Lead : EU Consolidated Inventories : EC Number 231-100-4
Antimony : EU Consolidated Inventories : EC Number 231-146-5
Gum Tragacanth : EU Consolidated Inventories : EC Number 232-552-5
Not classified in the Annex I of Directive 67/548/EEC
Not listed in the Annex I of Council Regulation No (EC) 304/2003
Not listed in a priority list (as foreseen under Council Regulation (EEC) No 793/93

Risk Phrases (DSD)

R11-Highly flammable
R22- Harmful in case of ingestion
R23/24/25-Toxic by inhalation, in contact with skin and if swallowed
R39/23/24/25-Danger of very serious irreversible effects by inhalation, in contact with skin and if swallowed
R34-Causes burns
R50/53-Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
R68/20/21/22-Possible risk of irreversible effects by inhalation, contact with skin and if swallowed

Safety Phrases (DSD)

S7-Keep container tightly closed
S16 Keep away from sources of ignition - No smoking.
S26- In case of contact with eyes, rinse immediately with plenty of water and seek medical advice
S36/37/39- Wear suitable protective clothing, gloves & eye/face protection
S45-In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).
S60-This material and/or its container must be disposed of as hazardous waste.
S61-Avoid release to the environment. Refer to special instructions/Safety data sheets

CEPA DSL (CANADA)

CANADIAN ENVIRONMENTAL PROTECTION ACT (CEPA) : on the Domestic Substances List (DSL) ; acceptable for use under the provisions of CEPA.

Regulation (U.S.A.)

CERCLA Section 103 Hazardous substances (40 CFR 302.4) ; SARA 110 ATSDR CERCLA Priority List : Listed ; SARA Section 313, Toxic Chemicals (40 CFR 372.65) : Listed.
Lead (RQ) **:** *10 pounds (4.54 kg)
Antimony (RQ) **:** *5 000 pounds (2 270 kg)

CERCLA Section 103 Hazardous substances (40 CFR 302.4) ; SARA Section 313, Toxic Chemicals (40 CFR 372.65) : Listed.
Zinc chloride (RQ) **:** 1 000 pounds (454 kg)
Ethylene glycol (RQ) **:** 5 000 pounds (2 270 kg)

TSCA (EPA, Toxic Substance Control Act) Chemical Inventory (40 CFR710) : Listed.
Tin ; Lead ; Zinc chloride ; Ethylene glycol ; Antimony ; Methanol ; Gum Tradaganth.

*No declaration required if the diameter of the piece of solid metal released is equal to or exceeds 100 micrometers (0.004 inches).

Classifications HCS (U.S.A.) Toxic
Corrosive solid

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

Fire Hazard 1	Reactivity 2	Health 2	Special Hazard

SECTION 16. OTHER INFORMATION

References

- TLVs and BEIs (2011). Based on the Documentation of the Threshold Limit Values for Chemical Substances and Physical Agents & Biological Exposure Indices. ACGIH, Cincinnati, OH – http://www.acgih.org
- CCOHS (2011) - Canadian Centre for Occupational Health and Safety - http://www.ccohs.ca/
- CSST (2011) - Commission de la Santé et de la Sécurité du Travail (Québec). Service du répertoire toxicologique http://www.reptox.csst.qc.ca/
- ESIS : C&L (Classification and Labelling), substances ou préparations selon la Directive 67/548/EEC (substances) et 1999/45/EC (préparations).
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- ESIS : EINECS corrections publiées dans O.J. C 54/13 01.03.2002, 2002/C54/08.
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Glossary

CSST : Commission de la Santé et de la Sécurité du Travail (Québec).
HSDB : Hazardous Substances Data Bank.
IARC : International Agency for Research on Cancer.
NIOSH : National Institute of Occupational Safety and Health.
NTP : U.S. National Toxicology Program.
RTECS : Registry of Toxic Effects of Chemical Substances
STOT : Specific target organ toxicity

Note No specific studies have been performed on this mixture. For your protection, we suggest that you test it before using in your process.

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