

Material Safety Data Sheet

Material: ZINC COATED SHEET STEEL

Section 3 – PHYSICAL DATA	Section 4 – FIRE AND EXPLOSION DATA
Silver Grey Metallic Solid Boiling Pt. (°C) - N.A. Melting Pt. (°C) - 1530 Specific Gravity - 7.5 to 8	Non – Flammable. Will not support combustion
Section 5 – REACTIVITY DATA	
	Stable: Contact with strong mineral acids will release flammable hydrogen gas

Section 6 – TOXICOLOGICAL PROPERTIES

ROUTE OF ENTRY

None in its natural state. Operations such as welding, burning, grinding or machining may pose acute or chronic inhalation health effects. Skin or eye contact with coating oils may cause irritation with prolonged or repeated contact.

EFFECTS OF ACUTE EXPOSURE

None to sheet steel. Welding, burning, grinding or machining can generate metal particulate or elemental oxide fumes. Inhalation overexposure to manganese fume has been reported to cause "metal fume fever" characterized by fever and chills (i.e., flu-like symptoms). Such an overexposure is unlikely due to the small amount of manganese available. Fumes or mists of surface treatment oils may irritate the eyes and upper respiratory tract, and cause headache, dizziness and / or nausea if exposure is excessive.

EFFECTS OF CHRONIC EXPOSURE

None to sheet steel. Chronic inhalation overexposure to metal fume (i.e., iron oxide fume) may cause a benign pneumoconiosis (i.e., siderosis) with few or no symptoms. Repeated or prolonged contact to coating oils may cause skin irritation and dermatitis.

IRRITANCY None	Carcinogenicity- Chromium and Nickel (See Additional Information) Reproductive, Teratogenicity, Mutagenicity – no known effects	SYNERGISTIC MATERIALS U
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Section 7 – PREVENTATIVE MEASURES

Dependent upon the process being performed on the sheet steel material. Each operation must be addressed for suitable personal protective equipment required. General ventilation is normally adequate. Welding requires local exhaust ventilation or fume filter respirator, gloves and eyewear. Avoid prolonged or repeated skin contact, launder oil-contaminated clothing. Use oil impervious gloves if required to prevent contact. Avoid eye contact with oil contaminated hands.

Section 8 – FIRST AID MEASURES

Eyes - Flush with water
 Skin - Wash contact areas with soap and water
 Inhalation - For overexposure to metal fume, remove person to fresh air. Seek medical attention.

ADDITIONAL INFORMATION

IARC lists certain hexavalent chromium compounds under its Group 1 - "Confirmed Human Carcinogen". IARC lists certain nickel compounds under its Group 2A - "Suspected Human Carcinogen". Welding fume may also contain contaminants from fluxes and / or other welding consumables. Oil coatings should be removed prior to welding or grinding to minimize smoke generation.

Section 9 – PREPARATION DATE

PREPARED BY Cascadia Metals	PHONE (604) 946 - 3890	DATE PREPARED July 1, 2013
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Legend: U = Unknown NA = Not Applicable

STEEL

ACIER

REFER TO MATERIAL SAFETY DATA SHEET



CONSULTER LA FICHE SIGNALETIQUE

Overexposure to dusts or fumes generated during welding or burning steels, particularly those containing chromium or nickel, may cause respiratory disease.

High exposure to fumes during welding or burning of zinc coated products can cause reversible short-term flu-like symptoms.

Prolonged skin contact with coated steel may cause skin irritation in sensitive individuals.

LIMIT inhalation of dusts or fumes generated during processing.

LIMIT skin contact.

Overexposure to metal fumes: Move to fresh air. Seek medical attention if necessary.

Skin contact: Wash with soap and water.

Read the relevant Material Safety Data Sheet for more information

La surexposition aux poussières ou aux fumées générées lors du soudage, surtout des aciers contenant du chrome ou du nickel, pourrait provoquer des maladies respiratoires.

Une exposition intensive aux fumées lors du soudage des produits revêtus de zinc pourrait provoquer à court terme des symptômes réversibles de grippe.

Le contact avec la peau et les aciers revêtus pourrait provoquer une irritation de la peau chez certains individus.

LIMITER L'inhalation des poussières ou des fumées générées pendant la transformation.

LIMITER Le contact avec la peau

Si l'individu est surexposé aux fumées venant des métaux, emmenez la personne pour qu'elle puisse avoir de l'air frais. Demandez des soins médicaux si nécessaire.

S'il y a contact avec la peau, lavez la peau à l'eau et au savon.

Veillez consulter la fiche signalétique pertinente pour plus de renseignements.

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Section 1: IDENTIFICATION

1.1 PRODUCT IDENTIFIER

Product Name: TPO Direct Weld
Product Code: Not available.

1.2 RECOMMENDED USE OF CHEMICAL AND RESTRICTIONS ON USE

Use: Coating.

1.3 DETAILS OF THE SUPPLIER OF THE SAFETY DATA SHEET

Name/Address: Menzies Enterprises Ltd.
 19370 60th Avenue
 Surrey, BC V3S 3M2
Telephone Number: 604-530-0712
 Toll free: 1-800-665-8840

1.4 EMERGENCY TELEPHONE NUMBER

Emergency Telephone Number: 1-800-665-8840 (Monday to Friday, 7:00 a.m. - 4:00 p.m. PST, excluding Federal and Provincial holidays.)
Date of Preparation: October 17, 2012

Section 2: HAZARD(S) IDENTIFICATION

2.1 CLASSIFICATION OF THE CHEMICAL

Hazard class

This preparation is classified as not hazardous according to OSHA HazCom 2012.

2.2 LABEL ELEMENTS

Hazard Pictogram: Not applicable.
Signal Word: Not applicable.
Hazard Statement: Not applicable.
Prevention: Not applicable.
Response: Not applicable.
Storage: Not applicable.
Disposal: Not applicable.

2.3 ADDITIONAL INFORMATION

Hazards not otherwise classified: Not applicable.
 100 % of the mixture consists of ingredient(s) of unknown acute toxicity.

Section 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1 MIXTURES

Ingredient	CAS No	Wt. %
None by WHMIS/OSHA criteria.		

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Section 4: FIRST- AID MEASURES

4.1 DESCRIPTION OF THE FIRST AID MEASURE

Eye: None required.
Skin: None required.
Inhalation: None required.
Ingestion: None required.

4.2 MOST IMPORTANT SYMPTOMS AND EFFECTS, BOTH ACUTE AND DELAYED

Eye: No known adverse effects
Skin: No known adverse effects
Inhalation: No known adverse effects
Ingestion: No known adverse effects

4.3 INDICATION OF ANY IMMEDIATE MEDICAL ATTENTION AND SPECIAL TREATMENTS NEEDED

Note to Physicians: No specific treatment. Treat symptomatically.
Specific Treatments: In case of accident or if you feel unwell, seek medical advice.

Section 5: FIRE-FIGHTING MEASURES

5.1 FLAMMABILITY

Flammability: This product is not flammable by WHMIS/OSHA criteria.

5.2 EXTINGUISHING MEDIA

Suitable Extinguishing Media: Treat for surrounding material.
Unsuitable Extinguishing Media: Not applicable.

5.3 SPECIAL HAZARDS ARISING FROM THE CHEMICAL

Products of Combustion: May include, and are not limited to: oxides of carbon.

Explosion Data:

Sensitivity to Mechanical Impact: Not available.
Sensitivity to Static Discharge: Not available.

5.4 SPECIAL PROTECTIVE EQUIPMENT AND PRECAUTIONS FOR FIRE FIGHTERS

Keep upwind of fire. Wear full fire fighting turn-out gear (full Bunker gear) and respiratory protection (SCBA).

Section 6: ACCIDENTAL RELEASE MEASURES

6.1 PERSONAL PRECAUTIONS, PROTECTIVE EQUIPMENT AND EMERGENCY PROCEDURES

Not applicable.

6.2 METHODS AND MATERIALS FOR CONTAINMENT AND CLEANING - UP

Methods for Containment: Pick up large pieces, then place in a suitable container. Use appropriate Personal Protective Equipment (PPE).

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Methods for Cleaning-Up: Place material in suitable container for disposal in accordance with local and national regulations.

Section 7: HANDLING AND STORAGE

7.1 PRECAUTIONS FOR SAFE HANDLING

Handling: This product is safe under normal conditions of use. There are no specific handling precautions.

General Hygiene Advice: Handle according to established industrial hygiene and safety practices. Wash exposed skin prior to eating, drinking or smoking and at the end of each shift.

7.2 CONDITIONS FOR SAFE STORAGE, INCLUDING ANY INCOMPATIBILITIES

Storage: This product is safe under normal conditions of use. There are no specific storage conditions. (See section 10)

Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 CONTROL PARAMETERS

Exposure Guidelines

Occupational Exposure Limits		
Ingredient	OSHA-PEL	ACGIH-TLV
Not applicable.		

8.2 EXPOSURE CONTROLS

Engineering Controls: Ventilation is not normally required.

8.3 INDIVIDUAL PROTECTIVE MEASSURES

Personal Protective Equipment:

Eye/Face Protection: None necessary under normal conditions of use.

Skin Protection:

Hand Protection: None necessary under normal conditions of use.

Body Protection: Use personal protective equipment as required.

Respiratory Protection: Not normally required.

General Health AND Safety

Measures: This product is safe under normal conditions of use.

Section 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1 INFORMATION ON BASIC PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Not available.
Color: Various.
Odour: Not available.
Odour Threshold: Not available.
Physical State: Solid.
pH: Not available.

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Melting Point:	Not available.
Boiling Point:	Not available.
Flash Point:	Not available.
Evaporation Rate:	Not available.
Flammability:	Not Flammable.
Lower Flammability/Explosive Limit:	Not available.
Upper Flammability/Explosive Limit:	Not available.
Vapor Pressure:	Not available.
Vapor Density:	Not available.
Relative Density/Specific Gravity:	Not available.
Solubility:	Not available.
Partition coefficient: n-octanol/water:	Not available.
Auto-ignition Temperature:	Not available.
Decomposition Temperature:	Not available.
Viscosity:	Not available.
Explosive Properties:	Not available.
Oxidizing Properties:	Not available.

Section 10: STABILITY AND REACTIVITY

10.1 REACTIVITY

No dangerous reaction known under conditions of normal use.

10.2 CHEMICAL STABILITY

Stable under normal storage conditions.

10.3 POSSIBILITY OF HAZARDOUS REACTIONS

No dangerous reaction known under conditions of normal use.

10.4 CONDITIONS TO AVOID

Incompatible materials.

10.5 INCOMPATIBLE MATERIALS

None known.

10.6 HAZARDOUS DECOMPOSITION PRODUCTS

May include, and are not limited to: oxides of carbon.

Section 11: TOXICOLOGICAL INFORMATION

11.1 INFORMATION ON TOXICOLOGICAL EFFECTS

Likely Routes of Exposure: Skin Contact.

Symptoms related to physical/chemical/toxicological characteristics:

Eye: None under normal conditions of use.

Skin: None under normal conditions of use.

Ingestion: None under normal conditions of use.

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Inhalation: None under normal conditions of use.

Acute Toxicity:

Ingredient	IDLH	LC50	LD50
Not applicable.			
Calculated overall Chemical Acute Toxicity Values			
LC50 (inhalation)	LD50 (oral)	LD50 (dermal)	
Not available.	Not available.	Not available.	
Ingredient	Chemical Listed as Carcinogen or Potential Carcinogen (NTP, IARC, OSHA, ACGIH, CP65)*		
Not applicable.			

11.2 DELAYED, IMMEDIATE, AND CHRONIC EFFECTS OF SHORT- AND LONG-TERM EXPOSURE

Skin Corrosion/Irritation: Based on available data, the classification criteria are not met.

Serious Eye Damage/Irritation: Based on available data, the classification criteria are not met.

Respiratory Sensitization: Based on available data, the classification criteria are not met.

Skin Sensitization: Based on available data, the classification criteria are not met.

STOT-Single Exposure: Based on available data, the classification criteria are not met.

Chronic Health Effects:

Carcinogenicity: This product is not classified as a carcinogen.

Germ Cell Mutagenicity: This product is not classified as a mutagen.

Reproductive Toxicity:

Developmental: This product does not contain known reproductive or developmental toxins.

Teratogenicity: Not hazardous by WHMIS/OSHA criteria.

Embryotoxicity: Not hazardous by WHMIS/OSHA criteria.

Fertility: No known significant effects or critical hazards.

STOT-Repeated Exposure: Based on available data, the classification criteria are not met.

Aspiration Hazard: Based on available data, the classification criteria are not met.

Toxicologically Synergistic Materials: Not available.

Other Information: Not available.

Section 12: ECOLOGICAL INFORMATION

12.1 ECOTOXICITY

Acute/Chronic Toxicity: Not available.

12.2 PERSISTENCE AND DEGRADABILITY

Not available.

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12.3 BIOACCUMULATIVE POTENTIAL

Bioaccumulation: Not available.

12.4 MOBILITY IN SOIL

Not available.

12.5 OTHER ADVERSE EFFECTS

Not available.

Section 13: DISPOSAL CONSIDERATIONS

13.1 WASTE TREATMENT METHODS

Disposal Method: This material must be disposed of in accordance with all local, state, provincial, and federal regulations.

Other disposal recommendations: Not available.

Section 14: TRANSPORT INFORMATION

14.1 UN NUMBER

DOT

Not regulated.

TDG

Not regulated.

14.2 UN PROPER SHIPPING NAME

DOT

Not applicable.

TDG

Not applicable.

14.3 TRANSPORT HAZARD CLASS (ES)

DOT

Not applicable.

TDG

Not applicable.

14.4 PACKING GROUP

DOT

Not applicable.

TDG

Not applicable.

14.5 ENVIRONMENTAL HAZARDS

Not applicable.

14.6 TRANSPORT IN BULK ACCORDING TO ANNEX II OF MARPOL 73/78 AND THE IBC CODE

Not applicable.

14.7 SPECIAL PRECAUTIONS FOR USER

Not applicable.

Section 15: REGULATORY INFORMATION

15.1 SAFETY, HEALTH AND ENVIRONMENTAL REGULATIONS/ LEGISLATIONS SPECIFIC FOR THE CHEMICAL

Canadian: 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.

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US: MSDS prepared pursuant to the Hazard Communication Standard (CFR29 1910.1200) HazCom 2012

SARA Title III				
Ingredient	Section 302 (EHS) TPQ (lbs.)	Section 304 EHS RQ (lbs.)	CERCLA RQ (lbs.)	Section 313
Not applicable.				

State Regulations

California Proposition 65:

This product does not contain a chemical known to the State of California to cause cancer, birth defects or other reproductive harm.

Global Inventories

Ingredient	Canada DSL/NDSL	USA TSCA
All ingredients are on DSL/NDSL & TSCA inventories.		

NFPA - National Fire Protection Association:	
Health:	0
Fire:	1
Reactivity:	0

HMIS - Hazardous Materials Identification System	
Health:	0
Fire:	1
Reactivity:	0

Hazard Rating: 0 = minimal, 1 = slight, 2 = moderate, 3 = severe, 4 = extreme

WHMIS Classification(s):

Not controlled.

SOURCE AGENCY CARCINOGEN CLASSIFICATIONS:

CP65 California Proposition 65

OSHA (O) Occupational Safety and Health Administration.

ACGIH (G) American Conference of Governmental Industrial Hygienists.

- A1 - Confirmed human carcinogen.
- A2 - Suspected human carcinogen.
- A3 - Animal carcinogen.
- A4 - Not classifiable as a human carcinogen.
- A5 - Not suspected as a human carcinogen.

IARC (I) International Agency for Research on Cancer.

- 1 - The agent (mixture) is carcinogenic to humans.
- 2A - The agent (mixture) is probably carcinogenic to humans; there is limited evidence of carcinogenicity in humans and sufficient evidence of carcinogenicity in experimental animals.
- 2B - The agent (mixture) is possibly carcinogenic to humans; there is limited evidence of carcinogenicity in humans in the absence of sufficient evidence of carcinogenicity in experimental animals.
- 3 - The agent (mixture, exposure circumstance) is not classifiable as to its carcinogenicity to humans.
- 4 - The agent (mixture, exposure circumstance) is probably not carcinogenic to humans.

NTP (N) National Toxicology Program.

- 1 - Known to be carcinogens.
- 2 - Reasonably anticipated to be carcinogens.

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Section 16: OTHER INFORMATION

Date of Preparation: October 17, 2012

Expiry Date: October 17, 2015

Version: 1.0

Revision Date: October 17, 2012

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End of Safety Data Sheet