Material Safety Data Sheet

Section 1- PRODUCT IDENTIFICATION

Material	**ZINC COATED SHEET STEEL**		***WHMIS Class*** **D2A, D2B**
Synonyms	Galvanized, Galvanneal, Galvalume, Galvalume Plus, Zincrometal		
Manufacturer			
Telephone No.	(604) 946 - 3890	***Material Use*** Manufacture of steel articles	

Section 2 – HAZARDOUS INGREDIENTS

Hazardous Ingredients	*Weight %*	*CAS No.*	*LD50*	*Exposure Limit (mg/m^3)*
Steel:				
Iron (Fe)	~ 95	7439-89-6	30 g/kg (rat-oral)	5 (Fume)
Manganese (Mn)	≤ 1.65	7439-96-5	9 g/kg (rat-oral)	0.2
Chromium (Cr)	≤ 1.1	7440-47-3	U	0.5
Nickel (Ni)	≤ 0.12	7440-02-0	U	1.5

(Hazardous Ingredients – lists components which meet the reporting requirements of the Hazardous Products Act.)

Coating:

1. Galvanized

Zinc (Zn)	99	7440-66-6	U	5 (Fume)

(Z-coating. Coating weights range from 15 to 500 g/m^2 or up to 20% total steel weight)

2. Galvanneal

Zinc (Zn)	88	7440-66-6	U	5 (Fume)
Iron (Fe)	11	7439-89-6	U	5 (Fume)

(Annealed Z-coating. Coating weights range from 20 to 100 g/m^2 or up to 10% total steel weight)

3. Galvalume, Galvalume Plus

Aluminum (Al)	55	7429-90-5	U	10
Zinc (Zn)	43	7440-66-6	U	5 (Fume)

(AZ-coating. Coating weights range from 50 to 150 g/m^2 or up to 15% total steel)

Surface Treatments:

(Constitutes less than 0.5% of total steel weight)

1. Passivation - Chromic acid solution leaving a chromium residual of 11 to 40mg/m^2 per side.
2. Slushing Oil - (Ferrocote 61 MAL HCL-1G, Ferrocote 61-AUS, PL-7105-A)
   Hydrotreated naphthenic oils or petroleum based lubricating oils containing sulphonates and anti-oxidants.
3. Vanishing Oil - (Rustilo DW 924) Mineral oil and isoparaffin petroleum distillate.
   Oil Coating weights range from1.1 to 5.4 g/m^2 per side.
4. Pre Temper - (Qwerl 266-LV) White petroleum mineral oil.
   Galvalume Plus – (Oakite PC4610) Acrylic coating of polystyrene-acrylate copolymers.

Note:

These products do not contain and are not manufactured with any Class I or Class II ozone depleting substances.
These products meet the Coalition of North Eastern governors' (CONEG) requirements for combined heavy metal content of less than 100 ppm.

Legend: ***U = Unknown*** ***NA = Not Applicable***

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Section 3 – PHYSICAL DATA

Silver Grey Metallic Solid
Boiling Pt. (°C) - N.A.
Melting Pt. (°C) - 1530
Specific Gravity - 7.5 to 8

Section 4 – FIRE AND EXPLOSION DATA

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		SYNERGISTIC MATERIALS
None	**Carcinogenicity-** Chromium and Nickel (See Additional Information) **Reproductive, Teratogenicity, Mutagenicity – no known effects**	U

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 eyeware. 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	PHONE	DATE PREPARED
Cascadia Metals	(604) 946 - 3890	April 19, 2022

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 poussieres ou aux fumees generees lors du soudage, surtout des aciers contentant du chrome ou du nickel, pourrait provoquer des maladies respiratoires.

Une exposition intensive aux fumees lors du soudage des produits revetus de zinc pourrait provoquer a court terme des symptomes reversibles de grippe.
Le contact avec la peau et les aciers revetus pourrait provoquer une irritation de la peau chez certains individus.

LIMITER L'inhalation des poussieres ou des fumees generees pendant la transformation.

LIMITER Le contact avec la peau
Si l'individu est surexpose aux fumees venant des metaux, emmenez la personne pour qu'elle puisse avoir de l'air frais. Demandez des soins medicaux si necessaire.
S'il y a contact avec la peau, lavez la peau a l'eau et au savon.

Veuillez consulter la fiche signaletique pertinente pour plus de renseignements.

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