

# Material Safety Data Sheet

## Section 1 - PRODUCT IDENTIFICATION

<b>Material</b>	PRE-PAINTED SHEET STEEL	<b>WHMIS Class</b> NONE
<b>Synonyms</b>	PRE-PAINT, QC COATING	
<b>Manufacturer</b>		<b>MANUFACTURED ARTICLE</b>
<b>Telephone No.</b>	<b>Material Use</b> Manufacture of steel articles	

## Section 2 - HAZARDOUS INGREDIENTS

Hazardous Ingredients	Weight %	CAS No.	LD50	Exposure Limit (mg/m <sup>3</sup> )
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.)

### SUBSTRATE

1.	Galvanized Sheet Steel			
	Zinc (Zn)	99	7440-66-6	U
	(Z-coating. Coating weights range from 15 to 500 g/m <sup>2</sup> or up to 20% total steel weight)			
2.	Galvanneal Sheet Steel			
	Zinc (Zn)	88	7440-66-6	U
	Iron (Fe)	11	7439-89-6	U
	(Annealed Z-coating. Coating weights range from 20 to 100 g/m <sup>2</sup> or up to 10% total steel weight)			
3.	Galvalume			
	Aluminum (Al)	55	7429-90-5	U
	Zinc (Zn)	43	7440-66-6	U
	(AZ-coating. Coating weights range from 50 to 150 g/m <sup>2</sup> or up to 15% total steel weight)			
4.	Cold Rolled Sheet Steel			
	(No Coating applied)			

### PRE-PAINT COATINGS:

(Constitutes less than 0.5% of total weight. Coating 1 to 8 mil thick. Color as Customer Specified )

5. Polyester Paint Coatings – Dusts generated during mechanical abrasion (grinding, buffing, etc.) of the cured polyester coating would be considered nuisance particulate. Thermal decomposition products of the cured coating will yield small quantities of carbon monoxide, carbon dioxide and acetaldehyde at temperatures above 1000 °C (i.e. welding or thermal cutting operations). Prolonged exposure to temperatures of about 300 °C will yield mainly acetaldehyde and smaller quantities of carbon oxides (i.e. smouldering type fire).
6. Polyvinyl Chloride Resin Polymer (Plasitisol) - Dusts generated during mechanical abrasion (grinding, buffing, etc.) of the cured PVC coating would be considered nuisance particulate. Thermal decomposition products of the cured PVC coating will yield small quantities of hydrogen chloride, carbon monoxide, carbon dioxide and mixed hydrocarbons at temperatures of 300 to 600 °C. At temperatures above 600 °C thermal decomposition products will include small quantities of the above compounds and large quantities of smoke and/or soot.

**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	Section 4 - FIRE AND EXPLOSION DATA
Metallic Solid - Color as Customer Specified 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

<b>ROUTE OF ENTRY</b> None in its natural state. Operations such as welding, burning, grinding or machining may pose acute or chronic inhalation health effects.		
<b>EFFECTS OF ACUTE EXPOSURE</b>  None to sheet steel. Grinding or machining can generate paint dusts, metal particulate or elemental oxide fumes. Welding or thermal cutting operations may generate metal particulate, elemental metal oxides and paint coating decomposition products listed in Section 2. May cause irritation of the nose, throat and lungs. Inhalation overexposure to zinc oxide fume may cause "metal fume fever" characterized by fever and chills (i.e., flu-like symptoms).		
<b>EFFECTS OF CHRONIC EXPOSURE</b> 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.		
<b>IRRITANCY</b> None	<b>Carcinogenicity- Chromium and Nickel (See Additional Information)</b> <b>Reproductive, Teratogenicity, Mutagenicity - no known effects</b>	<b>SYNERGISTIC MATERIALS</b> 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 eyewear. Avoid prolonged or repeated skin contact.

## 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. Paint coatings should be removed prior to welding or grinding to minimize smoke generation.

## Section 9 - PREPARATION DATE

<b>PREPARED BY</b> Cascadia Metals	<b>PHONE</b> (604) 946 - 3890	<b>DATE PREPARED</b> July 1, 2013
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# 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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