



Section 1- PRODUCT IDENTIFICATION

Material	HOT ROLLED SHEET STEEL		WHMIS Class D2A, D2B
Synonyms	Carbon Sheet Steel, Dofascoloy, Hot Band, Pickled & Oiled Steel		
Manufacturer	Dofasco Inc., P.O. Box 2460, Hamilton, Ontario, Canada L8N 3J5		
Telephone No.	(905) 548-7200	Material Use	

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:

(No Coating Applied)

Surface Treatments:

(Constitutes less than 0.1% of total steel weight)

1. Dry Lube (Gilcote 2500, Detrex 226S)
100% mixture of Borax and carbonate soaps
Dried material has a typical surface coating of 2.2 to 6.5 g/m²
2. Pre-lube (Montgomery DA-4300, Ferrocote 61 MAL HCL-1G, Ferrocote 61-AUS)
Hydrotreated naphthenic mineral oils or petroleum hydrocarbon based lubricating oils containing petroleum sulphonates and anti-oxidants.
Oil coating weights range from 1.1. to 5.4 g/m² per side.

Note: Supplier MSDS for surface treatment oils are available. Please contact Dofasco's Technical Service Manager. Dofasco Steel products do not contain and are not manufactured with any Class I or Class II ozone depleting substances. Dofasco Hot Rolled Sheet Steel Products meet the specific requirements of the Global Automotive Stakeholder Group (GADSL V1.0, 2005-01-25), European End-of-Life-Vehicle Directive (ELV2000/53EC), US Toxics in Packaging (Meet the 100 ppm combined total for Mercury, Cadmium, Lead and Hexavalent Chromium), European Packaging and Packaging Wastes Directive (94/62/ec), European Waste Electrical and Electronic Equipment Directive (Restriction of Hazardous Substances (RoHS) List (WEEE2002/96/EC)) All automotive products are listed within International Material Data System (IMDS).

Legend: U = Unknown NA = Not Applicable



Material: HOT ROLLED 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 Dofasco Health and Safety Department	PHONE (905) 548-7200	DATE PREPARED June 1, 2005
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Legend: U = Unknown NA = Not Applicable



Section 1- PRODUCT IDENTIFICATION

Material	COLD ROLLED SHEET STEEL		WHMIS Class D2A, D2B
Synonyms	Cold Rolled Carbon Sheet Steel, Dofascology		
Manufacturer	Dofasco Inc., P.O. Box 2460, Hamilton, Ontario, Canada L8N 3J5		
Telephone No.	(905) 548-7200	Material Use	

Section 2 - HAZARDOUS INGREDIENTS

Hazardous Ingredients	Weight %	CAS No.	LD50	Exposure Limit (mg/m³)
Steel:				
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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:

(No Coating Applied)

Surface Treatments:

(Constitutes less than 0.1% of total steel weight)

- Oils (PL-7105-A, Ferrocote 61-AUS, Ferrocote 61 MAL HCL-1G)
Hydrotreated naphthenic mineral oils or petroleum based lubricating oil containing petroleum sulphonates and anti-oxidants.
Oil Coating weights range from 1.1 to 5.4 g/m² per side.
- Pre Temper solution (Qwerl 599)
Water based solution of sodium nitrite and surfactants. Trace quantities remain after drying.

Note: Supplier MSDS for surface treatment oils are available. Please contact Dofasco's Technical Service Manager. Dofasco Steel products do not contain and are not manufactured with any Class I or Class II ozone depleting substances. Dofasco Cold Rolled Sheet Steel Products meet the specific requirements of the Global Automotive Stakeholder Group (GADSL V1.0, 2005-01-25), European End-of-Life-Vehicle Directive (ELV2000/53EC), US Toxics in Packaging (Meet the 100 ppm combined total for Mercury, Cadmium, Lead and Hexavalent Chromium), European Packaging and Packaging Wastes Directive (94/62/ec), European Waste Electrical and Electronic Equipment Directive (Restriction of Hazardous Substances (RoHS) List (WEEE2002/96/EC)) All automotive products are listed within International Material Data System (IMDS).



Material: COLD ROLLED SHEET STEEL

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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
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ADDITIONAL INFORMATION

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Section 9 – PREPARATION DATE

PREPARED BY Dofasco Health and Safety Department	PHONE (905) 548-7200	DATE PREPARED June 1, 2005
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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.

DOFASCO

Our Product Is Steel Our Strength Is People

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Hamilton, Ontario L8N 3J5
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APPENDIX 1. DOFASCO Inc. Compliance with Restricted Substances List(s)

Agency	Compliance Statement
Global Automotive Stakeholder Group (includes North American, European and Asian Manufacturers)	Dofasco sheet steel and tubular products meet the specific requirements of the GADSL V1.0, 2005-01-25. All automotive products are listed within International Material Data System (IMDS).
European End-of-Life-Vehicle Directive (ELV2000/53EC)	Dofasco sheet steel and tubular products meet the specific requirements of the (ELV2000/53EC) All automotive products are listed within International Material Data System (IMDS).
US Toxics in Packaging (Model Legislation)	Dofasco sheet steel products meet the 100 ppm combined total for Mercury, Cadmium, Lead and Hexavalent Chromium.
European Packaging and Packaging Wastes Directive (94/62/EC)	Dofasco sheet steel products meet the specific requirements of the (94/62/ec)
European Waste Electrical and Electronic Equipment Directive (WEEE2002/96/EC)	Dofasco sheet steel and tubular products meet the specific requirements of the Restriction of Hazardous Substances (RoHS) List (WEEE2002/96/EC)

Hexavalent Chromium is not present unless:

- a) Specifically ordered as a corrosion prevention surface coating (passivation coatings) for Zinc Coated Products and Tin Plated Products, acrylic coating for Galvalume Plus; or,
- b) Prepainted Products - Hexavalent Chromium is used in the paint pretreatment system and may also be an ingredient of paint primers or paint coloring pigments that are used.

In both cases, the actual concentration of hexavalent chromium present varies with steel gauge, coating and surface coating thickness.

Refer to specific Dofasco Steel Material Safety Data Sheet for additional information.