


# Material Safety Data Sheet

## Section 1- PRODUCT IDENTIFICATION

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

## Section 2 – HAZARDOUS INGREDIENTS

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

- Oils ( PL-7105-A, Quaker Ferrocoate 61-AUS, Quaker Ferrocoate 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/m<sup>2</sup> per side.
- Pre Temper solution (Quaker Qwerl 599, Tempershield 6925)  
Water based solution of sodium nitrite and surfactants. Trace quantities remain after drying.

Note: Supplier MSDS for surface treatment oils are available from your ArcelorMittal Dofasco Technical Service Manager. ArcelorMittal Dofasco Steel products do not contain and are not manufactured with any Class I or Class II ozone depleting substances. ArcelorMittal Dofasco Cold Rolled sheet steel products meet the specific requirements of the Global Automotive Stakeholder Group (GADSL V2.0, 2006-01-10), 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 (WEEE2002/96/EC), Restriction of Hazardous Substances (RoHS) List (2000/95/EC). All ArcelorMittal Dofasco Cold Rolled products supplied to automotive are listed within International Material Data System (IMDS).

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

# Material Safety Data Sheet

## COLD ROLLED SHEET STEEL

| Section 3 – PHYSICAL DATA   | Section 4 – FIRE AND EXPLOSION DATA   |
|---|---|
| Silver Grey Metallic Solid<br>Boiling Pt. (°C) - N.A.<br>Melting Pt. (°C) - 1530<br>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><br>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.  |  |                                   |
| <b>EFFECTS OF ACUTE EXPOSURE</b><br>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. |  |                                   |
| <b>EFFECTS OF CHRONIC EXPOSURE</b><br>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.   |  |                                   |
| <b>IRRITANCY</b><br>None  | <b>Carcinogenicity-</b> Chromium and Nickel (See Additional Information)<br><b>Reproductive, Teratogenicity, Mutagenicity – no known effects</b> | <b>SYNERGISTIC MATERIALS</b><br>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, 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

|  |                                |  |
|--|--------------------------------|--|
| <b>PREPARED BY</b><br>Health and Safety Department | <b>PHONE</b><br>(905) 548-7200 | <b>DATE PREPARED</b><br>January 28, 2008 |
|--|--------------------------------|--|

**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.



**ArcelorMittal**

*ArcelorMittal Dofasco Inc.,  
P.O. Box 2460,  
Hamilton, Ontario L8N 3J5  
(905) 548-7200  
(800) DOFASCO*