




ArcelorMittal

Material Safety Data Sheet

COLD ROLLED SHEET STEEL

Section 1- PRODUCT IDENTIFICATION

| | | | |
|-----------------------------|--|-------------------------------|---|
| Material | COLD ROLLED SHEET STEEL | | WHMIS Class |
| Synonyms | Cold Rolled Carbon Sheet Steel, Dofascoloy | | D2A, D2B |
| Manufacturer | ArcelorMittal Dofasco Inc., P.O. Box 2460, Hamilton, Ontario, Canada L8N 3J5 | |  |
| General Information: | 1-905-548-7200 x 2595 | Material Use | |
| Emergency Contact: | 1-760-476-3962 Company Code: 333211 | Manufacture of steel articles | |

Section 2 – HAZARDOUS INGREDIENTS

| Hazardous Ingredients | Weight % | CAS No. | LD50 | Exposure Limit (mg/m³) |
|------------------------------|-----------------|----------------|--------------------|--|
| 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 | Unknown | 0.5 |
| Nickel (Ni) | ≤ 0.12 | 7440-02-0 | Unknown | 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 Ferrocote 61-AUS, Quaker 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 (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 ordered for automotive applications are produced in conformance with the End of Life Vehicle (ELV) Directive 2000/53/EC and Global Automotive Declarable Substance List (GADSL) Feb.1/2012. All ArcelorMittal Dofasco Cold Rolled products supplied to automotive are listed within International Material Data System (IMDS).



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| Section 3 – PHYSICAL DATA | Section 4 – FIRE AND EXPLOSION DATA |
|---|---|
| Silver Grey Metallic Solid Boiling Pt. (°C) – Not applicable 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. The health hazards associated with exposure to chromium are dependent upon its oxidation state. The metal form of chromium as it exists in this product is of very low toxicity. The hexavalent form is very toxic. Repeated or prolonged exposure to hexavalent chromium compounds may cause respiratory irritation, nosebleed, ulceration and perforation of the nasal septum. Industrial exposure to certain forms of hexavalent chromium has been related to an increased incidence of cancer. | | |
| IRRITANCY None | Carcinogenicity- Chromium and Nickel (See Additional Information) Reproductive, Teratogenicity, Mutagenicity – no known effects | SYNERGISTIC MATERIALS Unknown |

| Section 7 – PREVENTATIVE MEASURES |
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| 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 |
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| 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 Health and Safety Department | PHONE (905) 548-7200 Ext. 2595 | DATE PREPARED December 19, 2012 |

STEEL

ACIER

REFER TO MATERIAL SAFETY DATA SHEET



CONSULTER LA FICHE SIGNALÉTIQUE

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 ou brûlure des aciers, en particulier ceux contenant du chrome ou de nickel, pourrait causer 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.

Un contact prolongé avec de l'acier revêtu pourrait provoquer une irritation cutanée chez les personnes sensibles.

LIMITER l'inhalation des poussières ou des fumées générées pendant le traitement.

LIMITER Le contact avec la peau.

Si l'individu est surexposé aux fumées venant des métaux, emmenez la personne au grand air. Demandez des soins médicaux si nécessaire.

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

Lire la fiche signalétique pour plus d'information.



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Emergency Contact:

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