1. Name of product and company

Steel Sheet, hot rolled and cold reduced
DOMEX (Excluding DOMEX 1200)
DOCOL

Manufacturer/Supplier: SSAB Tunnplåt AB
Address: SE-781 84 Borlänge, Sweden
Phone: +46 243 70000
Date of issue: 2008-10-27

Responsible for the information:
SSAB Tunnplåt
SE-781 84 Borlänge, Sweden
Phone: +46 243 70000
E-mail: office@ssabtunnplat.com

Applications: Sheet for structures in the engineering industry and the transport sector

2. Hazards identification

Description of risks:
Not classified as harmful to health or environment in accordance with EC Directive 99/45/EC.

Dust and smoke can be generated during working, e.g. when welding, cutting or grinding. Overexposure to air pollutants caused by dust or fumes may affect health in the longer term and cause ailments such as chronic bronchitis.

Certain materials are treated with a thin coat of anti-corrosion oil. This should be taken into account when handling and working, such as welding. Welding of materials that are coated with anti-corrosion oils may give rise to irritating and harmful fumes. Repeated or extended contact of the skin with anti-corrosion oils may give rise to skin irritation.

3. Composition/Information on ingredients

Iron alloy with up to 1.5% carbon.
Other alloying elements:

<table>
<thead>
<tr>
<th>Ingridient</th>
<th>CAS-nr</th>
<th>Conc %</th>
<th>Symbols</th>
<th>Riskphrases</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manganese</td>
<td>7439-96-5</td>
<td>&lt;2.5</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Silicon</td>
<td>7440-21-3</td>
<td>&lt;2.5</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Chromium</td>
<td>7440-47-3</td>
<td>&lt;1.25</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Nickel</td>
<td>7440-02-0</td>
<td>&lt;1</td>
<td>T</td>
<td>R40 R43 R48/23</td>
</tr>
<tr>
<td>Molybdenum</td>
<td>7439-98-7</td>
<td>&lt;0.7</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Copper</td>
<td>7440-50-8</td>
<td>&lt;0.5</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

Comments on composition: Other elements that may occur as alloying elements in minor quantities are phosphorus, niobium, titanium, aluminium, vanadium, boron, nitrogen. The sheet may be coated with anti-corrosion oil in accordance with the customer specification. Traces of sheet rolling oil may remain on the sheet.

4. First aid measures

Inhalation:
Not applicable to steel in solid state. If dust and fumes are inhaled during working, ensure a supply of fresh air. If problems persist, seek medical attention.

Skin:
There are no specific symptoms associated with steel. Following contact with anti-corrosion oil, wash the skin with soap and water. Suitable medical attention should be obtained in the event of injury that affects the skin.

Eyes:
If the eyes are exposed to grinding dust/particles, rinse with water and seek medical attention if the irritation persists. Seek medical attention immediately if a metal chip has penetrated into the eye.

Ingestion:
Not applicable.

5. Fire fighting measures

Incombustible. Choose a fire extinguishing agent suitable for the surrounding fire and environment. Metal dust can form explosive and flammable mixtures with air.

6. Accidental release measures

Not applicable to steel in solid state. Finely divided particles should be removed by vacuuming or wet sweeping to prevent spreading of dust. Use protective equipment in accordance with section 8 in the safety data sheet.

7. Handling and storage

Care should be taken to avoid injury caused by products that are delivered bundled as cut-to-length sheet or in the form of strip coils that may have sharp edges. Certain products are held together with straps. The straps must not be used for lifting the products. Strip coils or bundled products can spring apart and cause injuries when the retaining straps are removed or fail. The outer turn of a coil of strip may be loose, which increases the risk of the straps failing. Suitable protective equipment, such as
gloves and protective goggles, should be used and work routines should be introduced, which take into account the risks that may arise if the straps should fail or when the straps are removed.

Store away from acids.

8. Exposure controls/Personal protection

Technical measures:
Dust and fumes may be generated during working, such as on welding, cutting or grinding. The fumes may contain dust and particles that are affected by exposure limits. Adequate ventilation and/or extraction should be provided in order to ensure that these limit values will not be exceeded. If the sheet has been coated with anti-corrosion oil, consider washing the sheet before working.

Personal protective equipment:
Respiratory protective equipment:
If the ventilation is inadequate, suitable approved respiratory protective equipment should be used during welding and mechanical working, and in other situations in which dust and particles may occur.
Eye protection:
Use protective goggles during welding and mechanical working and in other situations in which dust and particles may occur.
Skin protection:
Use protective gloves of a suitable material to protect against cutting injuries. Discard protective gloves that are contaminated with oil.

Occupasional exposure limits in Sweden (NGV Nivågränsvärde) and UK (WEL Workplace Exposure Limits) (mg/m³):

<table>
<thead>
<tr>
<th>Substance</th>
<th>Sweden</th>
<th>UK</th>
</tr>
</thead>
<tbody>
<tr>
<td>Iron oxide, fume (as Fe)</td>
<td>3.5 TD</td>
<td>8hTWA 5</td>
</tr>
<tr>
<td>Nickel, metal (as Ni)</td>
<td>0.5 TD</td>
<td></td>
</tr>
<tr>
<td>Nickel and its inorganic compounds (except nickel tetracarbonyl)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- watersoluble compounds (as Ni)</td>
<td>0.1 8hTWA</td>
<td></td>
</tr>
<tr>
<td>- waterinsoluble compounds (as Ni)</td>
<td>0.5 8hTWA</td>
<td></td>
</tr>
<tr>
<td>Manganese and its inorganic compounds (as Mn)</td>
<td>0.2 0.1 TD, 0.5 8hTWA</td>
<td></td>
</tr>
<tr>
<td>Chromium and its Cr(II) and Cr(III) compounds (as Cr)</td>
<td>0.5 TD</td>
<td></td>
</tr>
<tr>
<td>Chromium (VI) compounds (as Cr)**</td>
<td>0.005 TD, 0.015* TD</td>
<td></td>
</tr>
<tr>
<td>Molybdenum and its soluble compounds (as Mo)</td>
<td>5 TD</td>
<td></td>
</tr>
<tr>
<td>Molybdenum and its insoluble compounds (as Mo)</td>
<td>10 TD, 5 RD</td>
<td></td>
</tr>
<tr>
<td>Copper and its compounds (as Cu)</td>
<td>1 TD, 0.2 RD</td>
<td></td>
</tr>
<tr>
<td>Copper, fume (as Cu)</td>
<td>0.2 8hTWA</td>
<td></td>
</tr>
<tr>
<td>Copper, dust and mists (as Cu)</td>
<td>1.5 8hTWA</td>
<td></td>
</tr>
</tbody>
</table>

TD = Total dust, RD = Respirable dust, TWA = Time Weighted Average
* KTV = Korttidsvärde (Short-term value)
** Chromium does not occur in hexavalent form in the steel, although compounds containing hexavalent chromium may occur during welding or mechanical working.

9. Physical and chemical properties

Colour: Metallic grey
Odour: Odourless
Form/state: Solid
Density: 7700 -7870kg/m³
Melting point: 1460°C - 1530°C

10. Stability and reactivity

Stability:
Stable under normal conditions.

Reacts with:
Reacts with strong acids, during which substances such as e.g. hydrogen are emitted.

Other information:
Metal fumes may occur when the metal is heated to high temperatures, e.g. on cutting, welding and melting.

11. Toxicological information

General:
The steel contains small quantities of nickel. According to EC Directive 67/548/EC, nickel is classified as R 43 – May cause sensitization by skin contact, R40 – Limited evidence of a carcinogenic effect, and R48/23 - Toxic: danger of serious damage to health by prolonged exposure through inhalation. However, products with a specified content below 1% nickel are not classified as harmful according to EC Directive 99/45/EC.

Inhalation:
Not applicable to steel in the product forms in which it is delivered. On mechanical working, cutting or welding, steel may emit dust or fumes containing complex and mixed oxides of iron and alloying elements, some of which may be harmful to health or toxic. Several metal oxides may give rise to metal fume fever. Overexposure to air pollutants caused by dust or fumes may affect health in the longer term and cause ailments such as chronic bronchitis. Welding of materials that are coated with anti-corrosion oils may give rise to fumes that are irritating and harmful to health.
Skin:
Not applicable to steel in the product forms delivered. Repeated or extended contact of the skin with anti-corrosion oils may give rise to inflammation of the skin (dermatitis).

Eyes:
Not applicable to steel in the product forms that are delivered. On mechanical working, cutting or welding of steel, dust or fumes are formed, and these may cause eye irritations. Metal chips may cause injury with the risk of permanent vision impairment.

Ingestion:
Not applicable.

12. Ecological information
No eco-toxicological effects are known for the product as a whole. Hazardous compounds can be generated during working, e.g. when welding, cutting or grinding.

13. Disposal considerations
Steel scrap is a recyclable material. There are established routines for the handling and recycling of scrap. Contact an authorized recycling company.

14. Transport information
The products are heavy, and it is therefore important to provide the necessary securing of the load.

15. Regulatory information
Not classified as harmful to health or environment in accordance with EC Directive 99/45/EC.

Other information: Contains <1% nickel that may cause allergic reactions on contact with the skin.

16. Other information

Relevant risk phrases:
R40- Limited evidence of a carcinogenic effect
R43- May cause sensitization by skin contact
R48/23- Toxic: danger of serious damage to health by prolonged exposure through inhalation

References to EU-legislation:
- Regulation 1907/2006 on the registration, evaluation, authorization and restriction of chemicals, “REACH”
- Directive 67/548/EEC (with amendment 2008/58/EC) on the approximation of the laws, regulations and administrative provisions relating to the classification, packaging and labelling of dangerous substances
- Directive 99/45/EC concerning the approximation of the laws, regulations and administrative provisions of the Member States relating to the classification, packaging and labelling of dangerous preparations

Workplace exposure limits United Kingdom:
EH40/2005 Workplace exposure limits (consolidated with amendments October 2007)

General information:
The information in this safety data sheet is based on the knowledge and experience available today at SSAB Tunnplåt Borlänge. The safety data sheet describes the products with regard to safety aspects. SSAB Tunnplåt makes no warranty as to the absolute correctness or sufficiency of any of the foregoing or that additional or other measures may not be required under particular conditions.