



Material safety data sheet for Swebor high strength low alloy steel plates

1 Steel plate

1.1 Manufacturer

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1.2 Product

High strength low alloy steel plates with registered trademark "Swebor"

1.3 Chemical composition

Maximum values (% of weight) for all our product range are listed below.
Specific values are stated in our material certificates:

C ≤ 0.5
Si ≤ 0.8
Mn ≤ 1.8
P ≤ 0.05
S ≤ 0.05
Cr ≤ 1.2
Ni ≤ 3.3
Mo ≤ 0.8
V ≤ 0.2
Ti ≤ 0.1
Cu ≤ 0.5
Al ≤ 0.1
Nb ≤ 0.06
B ≤ 0.01
N ≤ 0.02
Ca ≤ 0.01

1.4 Physical Properties

Physical form: Solid Metal
Odor: None
Melting point: 1425^o-1531^oC
Density: 7.85 kg/dm³

1.5 Fire or Explosion Hazard

None or negligible.

Fire fighting: Avoid exposure to combustion by-products of coating material. Stay up-wind and use breathing apparatus as appropriate.



1.6 Stability and Reactivity

Steel plates are stable and non-reactive at a wide range of temperatures and under normal conditions.

Incompatibilities: Strong oxidizing agents, strong acids, may produce exothermic reactions.

1.7 Toxicological properties

Warning: Exposure to high concentrations of dust or fume during welding, burning, melting, cutting, brazing, grinding, and possibly machining, etc., may produce immediate or delayed damage to lung or other organs. These products may be coated with materials that could result in skin irritation with prolonged contact.

Precautions: Avoid breathing or ingesting dust or fume. Adequate ventilation is required while welding, burning, grinding, melting, cutting, brazing and machining. Avoid skin contact if material is coated.

First Aid: For overexposure to airborne dust or fume, remove exposed person to fresh air. If breathing is difficult or has stopped, administer artificial respiration or oxygen as indicated. Seek medical attention promptly. If a product is coated and excessive skin contact occurs, wash with soap and water. If irritation develops, seek medical attention.

Protection: Approved respirators and safety glasses should be used during welding, burning, melting, cutting, brazing, grinding, and machining, etc. Protective clothing may be needed depending on operations.

1.8 Handling

Individual plates can weigh up to 6 tons. Hoists, cranes, grips and other handling equipment, must be load rated accordingly. In addition, some of our steel grades because of great surface hardness, are not suited for plate grips or clamps. Ensure that our recommendations are adhered to when refinement processing. Extra precaution must be taken when bending high strength steel plates with a hardness level larger than 360 HBW, or plates with corresponding strength levels. Cracking can be sudden, and release great amounts of energy.

1.9 End of Life Vehicles Directive

The steel plates are in conformity with the requirements of the End of Life Vehicles Directive (2000/53/EC) regarding lead, mercury, cadmium and hexavalent chromium, as further specified in Commission Decision 2002/525/EC and the amended Annex II to the Directive included therein.

1.10 General Information

The data in this MSDS relates only to the specific material designated herein and does not relate to use in combination with any other material or in any process. Processors and fabricators must possess professional expertise, and provide safety devices for machinery in accordance with good shop practice, and all local rules and regulations. The options expressed herein are those of qualified experts within Swebor. We believe that the information is current as to date of issue of this MSDS. Since the use of this information and these opinions and the conditions of use of the product are not within the control of Swebor, it is the user's obligation to determine the conditions of safe use of this product.