



Coupler:	Voor / pour MTL60<150
Equipotential bonding:	IEC61537
EC declaration:	EC directive 2006/95/EC (Low voltage) as modified by directive 93/68/EEC (CE marking)

### SS316

Stainless steel (1.4404) AISI 316L

Adding chrome(±13%) to the iron creates a certain sheen and the metal becomes more corrosion-resistant.

The advantage, compared to other protective coatings, is that it's not a one-off surface protection. In fact, the stainless steel (or rather the chrome) forms a thin, invisible layer of chromium oxide whenever it comes into contact with oxygen: the oxide film.

This thin layer protects the underlying stainless steel from further corrosion (oxidation). If the oxide film suffers damage, then the underlying stainless steel will be re-exposed to the oxygen in the air and the protective coat will re-form. In this way, it repairs itself whenever it gets damaged.

In certain circumstances or if the protective oxide film is damaged, the corrosion can be locally quite rapid. This is caused, among other things, by chlorides or other materials (usually iron) that lodge in the surface. Due to this contamination, pitting corrosion may occur that corrodes the stainless steel (SS). That's why, after the processing, the SS is treated, to remove all possible impurities. This is the 'pickling' stage.

As mentioned above, a passive chromium layer protects the steel and repairs itself automatically. There are, however, circumstances in which this repair does not happen. Certain process steps may disrupt the balance in such a way that the passive state disappears and an active layer is formed. This could occur during process steps such as welding, bending or machining (with removal of metal or wood), giving rise to oxygen-poor pockets and the repair fails to materialise. Consequently, the rustproof properties are lost and, if exposed to gases or liquids, corrosion will occur. To remedy this situation, the active layer is re-converted to a passive layer (this process is known as passivating). It is usually desirable to degrease the semi-finished products and, after that, to pickle them in a mixture of nitric acid (HNO<sub>3</sub>) and hydrogen fluoride (HF), in order to remove impurities from the metal surface. This may be necessary on welded surfaces or on rotated objects for which a coolant is used.

### Field of application according to resistance against corrosion:

Corrosion class	Atmospheric corrosion	Indoor environment	Outdoor environment	Surface treatments
<b>C1</b>	< 0,1µm	Heated buildings with neutral atmospheres: offices, shops, schools, hotels.		<b>Electro-galvanised (EG)</b> <b>EN ISO 2081</b>
<b>C2</b>	0,1 - 0,7µm	Unheated buildings where condensation may occur: sports halls, warehouses, shops.	Rural areas. Atmosphere with low impurities.	<b>Pre-galvanised (PG)</b> <b>EN 10327 - EN 10143</b>
<b>C3</b>	0,7 - 2µm	Production facilities with high moisture levels and some air impurities due to industrial processes: production plants.	City and industrial atmosphere, some impurities, coastal areas with low salt loads.	<b>Dipped-galvanised (DG)</b> <b>EN ISO 1461</b>
<b>C4</b>	2 - 4µm	Production facilities with high moisture levels and high air impurities due to industrial processes: swimming pools, Chemical industry.	Industrial areas and coastal areas with low salt load.	<b>Dipped-galvanised (DG)</b> <b>EN ISO 1461</b> <b>Polyester coating (CO)</b> <b>EN ISO 12944</b>
<b>C5-I</b>	4 - 8µm	Polyester coating (CO)	Industrial areas with high moisture level and aggressive atmosphere.	<b>Duplex (DU) (Dipped galvanised + Polyester coating)</b>
<b>C5-M</b>	4 - 8µm	EN ISO 12944	Coastal or offshore areas with salt load.	<b>Duplex (DU) (Dipped galvanised + Polyester coating)</b>