

# Alu-zinc AZ185

Aluminium-zinc coated steel sheets

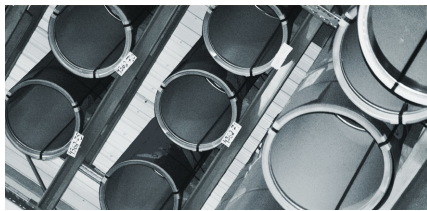
Very Good Flexibility

High Quality

100% Recyclable

Corrosive Class C4

20-years Quality Warranty



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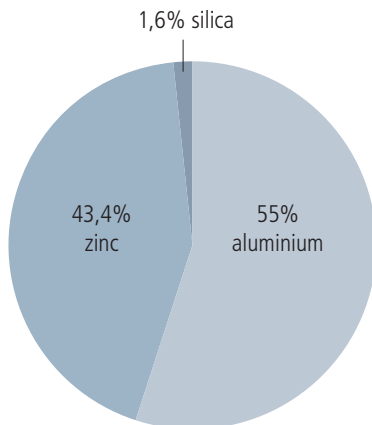
## Aluminium-zinc coated steel sheets



## Product specification

### PRODUCT DESCRIPTION

Alu-zinc is a aluminium-zinc coated steel sheet that can be used unpainted up to **corrosive class C4**. The coating alloy consists of:



The name AZ185 indicates the coat weight of 185 g/m<sup>2</sup> per double side.

The surface has been treated with SPT (Surface Protection Treatment) to prevent stains during handling and to ease shaping.

### APPEARANCE

The surface is initially glossy metal with a rose pattern but after some time it turns greyish, and eventually it becomes matt grey.

### TRIMMING EDGES

Normally, the trimmed edges do not need to be painted but in corrosive environments in which the trimmed edges are aesthetically prominent a protective paint is recommended to be applied.

### LIFETIME

It is customary to separate between the aesthetic and technical lifetime. The aesthetic lifetime is a measure of the time it takes for the top coat to change to such an extent that the appearance no longer meets the requirements.

The technical lifetime is the time it takes until the sheet no longer can protect the supporting constructions or foundations of the building. The layer of Alu-zinc has a thickness of approx. 25 µm (0.025 mm) per side for AZ185. The corrosive speed, i.e. how much of the coating that disappears each year, is a maximum of 0.2 µm in a normal environment (C2) in which Alu-zinc is freely exposed. In theory, it could therefore be evaluated that the lifetime in a normal environment exceeds 100 years. In tough marine environments, the corrosive speed can be up to 0.6 µm per year.

Due to corrosive and appearance related reasons, the following combinations should be avoided to prevent them from affecting the aesthetic and technical lifetime:

- Alu-zinc in combination with copper, brass or lead can cause galvanic corrosion. Avoid drainage from constructions and roofs that contain these metals. In particularly aggressive environments, even stainless steel and nickel can increase the corrosive speed of Alu-zinc.
- Alu-zinc in contact with highgrade woods, damp wood or wood with waterproofing containing copper can cause black rust or corrosion.
- Alu-zinc in combination with bitumen products without a UV stabiliser.
- Alu-zinc in combination with wet concrete, cement and plastering that are very alkaline can cause discolouration or black rust.

### CORROSION

Alu-zinc has an ability to repair itself which makes the material resistant to corrosion caused by scratches. The long lifetime is due to the fact that the aluminium-zinc coating provides the steel sheet with a double protection against corrosion. The first protection factor is the coating on the steel sheet that forms a passivating barrier against general corrosion. The other protection factor involves the formation of a galvanic element when the sheet is exposed to moisture (electrolyte), resulting in zinc ions flowing over and protecting the exposed steel against corrosion in scratches or trimmed edges.

Alu-zinc can be used in considerably more corrosive environments than for instance hot dip galvanised steel. Alu-zinc is the only metalcoated material that can be used in the corrosive classes C3 and C4. The standard EN ISO 12944-2 lists the corrosive classes C1–C5 along with different environments, in which C1 represents a very low influence and C5 represents a very high influence. Alu-zinc with a coat weight of AZ185 meets the requirements for corrosive class C4.

In accordance with the German standard DIN 55928-8, Alu-zinc is the only metal-coated sheet that can be used in Korrosionsschutzklasse III.

### PROPERTIES

Aluminium-zinc coated steel sheet AZ185	According to SS-EN 10327:2004
Thickness	0.50 ± 0.06 mm 0.60 ± 0.06 mm
Minimum bending radius	1T
Protection against corrosion on the edges	Very good
Fire Resistance Classification	A1 (EN 13501-1)
Reflection of solar heat	81% (new) 39% (aged)

### ENVIRONMENT

The long lifetime of Alu-zinc, in comparison with for instance hot dip galvanised sheets, entails major environmental benefits. There is a worldwide infrastructure for recycling steel that works well. Once steel is produced, it is part of a constant cycle as steel always contains recycled materials. Steel is always **100% recyclable**, the metal layer does not pose any problems for remelting.

### Corrosive classes in accordance with SS EN ISO 12944-2

Class	Environmental Corrosivity	Examples of typical outdoor environments in the temperate climate zone
C1	Very low	Interior environments. Heated buildings with clean atmospheres, e.g. offices, shops, schools, hotels.
C2	Low	Atmospheres with low level of pollution. Mostly rural areas.
C3	Measurable	Urban and industrial atmospheres, moderate sulfur dioxide pollution. Coastal areas with low salinity.
<b>C4</b>	<b>High</b>	<b>Industrial and coastal areas with moderate salinity.</b>
C5-I	Very high (industrial)	Industrial areas with high humidity and aggressive atmosphere.
C5-M	Very high (marine)	Coastal and offshore areas with high salinity.

Please contact your lokal sales representant for more information.

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