# ALUMOSTEEL® WIRES AND CABLES - 20%IACS

AS20-3-7F

## Description

ALUMOSTEEL is a bimetallic conductor that combines the properties of steel and aluminum to form a material with the best of both metals.

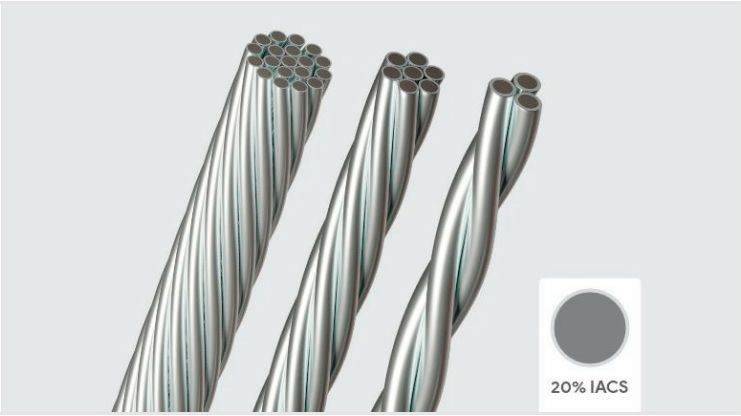
Obtained from a continuous extrusion process, ALUMOSTEEL can be manufactured with different proportions between the two metals, according to the application and the demands of mechanical strength and electrical conductivity, it can vary among 13%, 20%, 27%, 30% and 40% IACS.

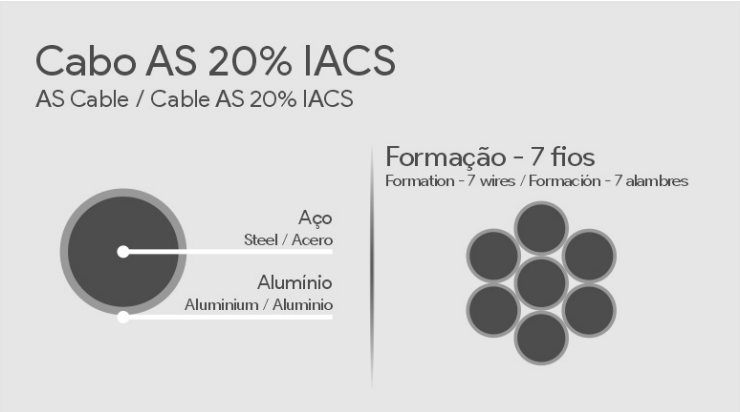
The 13% and 20% IACS versions, for example, are smartest choices to replace hot dip galvanized steel cables on applications such as support wire ropes, stays for towers or ACSR core (ACSR/AW).

**Used as CAA conductors core (ACSR/AW)**, ALUMOSTEEL has High mechanical strength, good electrical conductivity, excellent corrosion resistance and compatibility with solid aluminum wire, make the ALUMOSTEEL the most suitable material for core and reinforcement in CAA-RA conductors (ACSR/AW).

**Used as stay rope for towers and poles**, ALUMOSTEEL wire ropes provide high mechanical strength for power transmission and power distribution lines. The high breaking strength and corrosion ensures a better performance and durability in relation to other conventional stay cables.

**Used as wire ropes for telephone cables**, ALUMOSTEEL can be used to support telephone cables on overhead power distribution lines, ALUMOSTEEL cables for applications such as wire ropes ensure greater durability and corrosion resistance compared to hot dip galvanized steel.




## Datasheet

| | |
|---|---|
| **Nominal Cross Section (AWG/MCM)** | 3 |
| **Conductor Characteristics** | |
| Qty. Of Wires | 7 |
| Diameter of Wires (mm) | 2,30 |
| Diameter of Cable (mm) | 6,90 |
| Effective Cross Section (mm²) | 29,37 |
| **Physical Parameters** | |
| Aluminium Area (%) | 24 |
| Steel Area (%) | 76 |
| Specific Weight (g/cm³) | 6,56 |
| **Mechanical Characteristics** | |
| Nominal Weight (kg/km) | 194,00 |

| | |
|---|---|
| Elastic Modulus (GPa) | 169 |
| Coef. of Linear Thermal Expansion (1/°C) | 1,39 E-5 |
| Breaking Load - EHS (daN) | 3534 |
| **Electrical Characteristics** | |
| Coef. de Variação de Resistência (1/ºC) | 0,0036 |
| Inductive Reactance - 60Hz (ohms/km) | - |
| Capacitive Reactance - 60Hz (ohms/km) | - |
| Steady-State Current Capacity - 75ºC (A) | 102 |
| Current Capacity in DC - 50ms (A) | - |
| Current Capacity in DC - 100ms (A) | - |
| Current Capacity in DC - 0,5s (A) | - |
| Maximum Resistance to 20°C in DC (ohms/km) | 2,949 |
| **Package** | |
| Reel Type | - |
| Nominal Length (m) | - |
| Net Weight per Reel (kg) | - |
| Gross Weight per Reel With Packing (kg) | - |