

1

ALUMINIUM CLAD STEEL WIRE/STRAND & ALUMINIUM TUBE FOR OPGW

DEFINITION

The cladded aluminium steel wire, internationally known as Aluminium Clad Steel (ACS), is a high resistance wire produced by extrusion process.

ACS wire presents **EXCELLENT** properties against **CORROSION** if compared to standard galvanized steel wire.

Additionally, if combined with aluminium wires in ACSR conductors or OPGW, ACS wire prevents from galvanic corrosion. ACS wire offers material compatibility (Al-Al) when in contact with aluminium wires avoiding galvanic corrosion.

Thanks to the aluminium cladding ACS wire provides much **HIGHER CONDUCTIVITY**, compared to galvanized steel, which is multiplied by three (x3).

HIGH RATIO RESISTANCE WEIGHT: compared to galvanized steel wire, ACS is lighter (15% less) maintaining the same mechanical properties.



CLASS

	14 SA	20 SA	27 SA	30 SA	40 SA
IACS Conductivity %	14	20.3	27	30	40
Min. Thickness of aluminium (% of wire radius)	4.6	10	14	15	25
Density	7.29	6.59	5.91	5.61	4.64
Coefficient of linear expansion	11.9	13	13.4	13.8	15.5
Modulus of elasticity	174	162	140	132	109
Tensile strength grade	UHS, EHS	EHS, REGULAR	REGULAR	REGULAR	REGULAR

UHS.- Ultra High Strength EHS.- Extra High Strength

Continuous quality controls are performed all along the manufacturing process to achieve the highest quality standards. TREFINASA manufactures aluminium tube for OPGW conductors applying the same quality standards as for ACS wire.

