8XXX Series Aluminum Alloy Wire & Wire Rods for Electrical Applications

Introduction

8000 series aluminum alloys have creep rates very similar to copper building wire, resulting in similar performance. 8000 has a higher strength-to-weight ratio than an equal ampacity copper wire. Since it is lighter, the pulling tension is lower. Lower pulling tension may decrease the chances of damaging the insulated wire in doing so. There is a wide range of strengths available from dead soft to mild steel, permitting a wide range of processing from wire drawing by rolling process to provide excellent ductility.

Application

Building Wires, Underground Cables, Service Cables, Braided cable, Armouring..etc.

Chemical Composition

Aluminum Alloy Designation	% Chemical Composition														
	Si	Fe	Cu	Mn	Mg	Cr	Zn	Ga	B	Ti	Va	Ti+Va	Other Each	Other Total	AL
8030	0.10	0.30 - 0.80	0.15 - 0.30	-	0.05		0.05		0.001 - 0.04		0.03		0.03	0.10	REM
8176	0.03 - 0.15	0.40 - 1.00					0.10	0.03					0.05	0.15	REM

Electrical & Mechanical Properties of Aluminum Alloy Rods.

Aluminum Alloy Designation	APAR Product Code	Temper	Diameter	Tensile strength (Mpa)		Elongation	Resistivity	Conductivity
			(mm)	Min	Max	(%)	(µΩm)	(%IACS)
8030	Are available in different sizes and subtypes on request							
8176	8176	F	9.50 ± 0.50	95	110	14.0	28.450	60.60
			12.00 ± 0.50	95	110	14	28.450	60.60
			15.00 ± 0.50	89	95	14.0	28.450	60.60

- We develop and manufacture a broad range of alloys.
- Wires available with different sizes as per customer requirement.
- Wire Rods can be supplied in Coils of maximum weight 2.0MT, Drawn wire 6.0mm up to 4.0mm in coils of maximum weight 1.0MT, Drawn wire below 4.0mm up to 3.0mm in coils of maximum weight 0.50MT,
- The table above shows some typical values but we can also produce according various international standards and tailor made customer specifications.