

## 5XXX Series Aluminum Alloy

### Introduction

The **5xxx** series are aluminum-magnesium alloys that have moderate to high strength, non-heat treatable alloys that are strain hardenable, readily weldable and have excellent resistance to corrosion even in salt water, and are very tough even at cryogenic temperatures to almost absolute zero.

### Application

Architectural applications, Signage, Marine application, Rivets, Hanger, Welding rod, Core pulling nails, Hollow nails, Cowboy buttons, Strainers, Cable armouring, Zip Manufacturing..etc

### Chemical Composition

Aluminum Alloy Designation	% Chemical Composition										
	Si	Fe	Cu	Mn	Mg	Cr	Zn	Ti	Other Each	Other Total	AL
5005	0.30	0.70	0.20	0.20	0.50 - 1.10	0.10	0.25	-	0.05	0.15	REM
5050	0.30	0.70	0.20	0.10	1.10 - 1.80	0.10	0.25	-	0.05	0.15	REM
5052	0.25	0.40	0.10	0.10	2.20 - 2.80	0.15-0.35	0.10	-	0.05	0.15	REM
5154	0.50	0.50	0.10	0.50	3.10 - 3.90	0.25	0.20	0.20	0.05	0.15	REM
5754	0.65	0.40	0.10	0.50	2.60 - 3.60	0.30	0.20	0.15	0.05	0.15	REM

### Electrical & Mechanical Properties of Aluminum Alloy Wire & Wire Rods.

Aluminum Alloy Designation	Temper	Tensile strength (Mpa)		Elongation	Resistivity	Conductivity
		Min	Max	(%)	( $\mu\Omega\text{m}$ )	(%IACS)
5005	F	165	205	15.0	33.100	52.00
5050	F	165	-	15.0	-	-
	O	125	145	20.0	-	-
5052	F	235	-	14.0	50.831	33.92
5154	F	210	-	8.0	56.190	30.69
	O	-	285	25.0	51.000	33.80
5754	F	200	-	14.0	43.103	40.00

- 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.