

# ALUMINIUM ALLOYS FOR ELECTRICAL APPLICATIONS

## ALLOYS

At Lamifil we develop and manufacture a broad range of alloys. The tabel below shows some typical values but we could also produce according various international standards like EN573-3 or others such as AA, GOST, JIS, ... . Did you not find the alloy you are looking for? Contact us so we can see how we can support you.

CHEMICAL COMPOSITION EN 573-3													
	Si	Fe	Cu	Mn	Mg	Cr	Zn	V	Ti	B	Other		All
											each	total	
<b>1XXX SERIES</b>													
<b>EN AW-1350</b>	0,1	0,4	0,05	0,01	-	0,01	0,05	Sum 0,02		0,05	0,03	0,1	≥ 99,5
<b>EN AW-1370</b>	0,1	0,25	0,02	0,01	0,02	0,01	0,04	Sum 0,02		0,02	0,02	0,1	≥ 99,7
<b>5XXX SERIES</b>													
<b>EN AW-5005</b>	0,30	0,70	0,20	0,20	0,5 - 1,1	0,10	0,25	-	-	-	0,05	0,15	Remainder
<b>EN AW-5154 *</b>	0,5	0,5	0,1	0,5	3,1 - 3,9	0,25	0,2	-	0,2	-	0,05	0,15	Remainder
<b>6XXX SERIES</b>													
<b>EN AW-6101</b>	0,3 - 0,7	0,5	0,1	0,03	0,35 - 0,8	0,03	0,1	-	-	0,06	0,03	0,1	Remainder
<b>EN AW-6201</b>	0,5 - 0,9	0,5	0,1	0,03	0,6 - 0,9	0,03	0,1	-	-	0,06	0,03	0,1	Remainder
<b>8XXX SERIES</b>													
<b>EN AW-8030</b>	0,1	0,3 - 0,8	0,15 - 0,30	-	0,05	-	0,05	0,03	-	0,001 - 0,04	0,03	0,1	Remainder
<b>EN AW-8176 **</b>	0,03 - 0,15	0,4 - 1,0	-	-	-	-	0,1	-	-	-	0,05	0,15	Remainder

TYPICAL MECHANICAL AND ELECTRICAL PROPERTIES					
Temper	Tensile strength (Mpa)		Elongation	Resistivity	Conductivity
	min.	max.	%	nOhm.m	%IACS
<b>H15</b>	125	140	5 - 15	28,01	61,5
<b>H14</b>	115	130	5 - 15	28,01	61,5
<b>H13</b>	105	120	7 - 20	28,01	61,5
<b>H12</b>	95	110	10 - 30	28,01	61,5
<b>H11</b>	80	95	15 - 35	27,85	61,9
<b>O</b>	60	80	30 - 50	27,35	63
<b>H16</b>	165	205	20	33,10	52,0
<b>F</b>	210	280	16	52,00	33,1
<b>O</b>	210	275	20	51,00	33,8
<b>O3</b>	210	260	25	51,00	33,8
<b>T1</b>	Lamifil offers different subtypes. Values on request				
<b>T4</b>					
<b>T1</b>					
<b>T4</b>					
<b>O</b>	Values on request				
<b>H24</b>					
<b>O</b>					
<b>H24</b>					

AL59	TENSILE STRENGTH (MPA)		ELONGATION TYPICAL	RESISTIVITY	CONDUCTIVITY
	min.	max.	%	nOhm.m	%IACS
<b>AS 1531</b>	165	185	8	29,05	59,3
<b>&amp;SS 424 08 13</b>					
<b>&amp; SS 424 08 14</b>					

ALZR		TENSILE STRENGTH (MPA)		ELONGATION	RESISTIVITY	CONDUCTIVITY	MAX. OP. TEMP.
		min.	max.	%	nOhm.m	%IACS	°C
<b>ASTM B-941-05</b>	AT1, TAL	110	130	>8	28,50	60,50	150
<b>IEC 62004</b>	AT2, KTAL	185	-	>3	30,65	56,30	150
	AT3, ZTAL	125	160	>8	28,50	60,50	210
	AT4, XTAL	Not available as wire rod, only as final diameter					230