

TI-3

List of anodisable aluminium alloys

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Below you will find a list of commonly used aluminium alloys and their suitability for the DC-Sulfuric-Acid method described by us. Some alloys may require specific pretreatments.

Aluminum alloys can be divided roughly into two classes:

- **Forging alloys** (marked with "F" in the table)
These are alloys mainly used for rolling, extrusion, etc. Virtually the entire bar stock, sheets and plates are from this class of alloys. One of the main aggregates of such alloys is magnesium. Generally one can say that these alloys can be better decorative anodised (= colorised) than casting alloys. Some alloys can even be cured.
- **Casting alloys** (marked with "C" in the table)
These alloys are mainly found in the area of casting (e.g. engine blocks). Due to the high admixture (up to 12% and more) of silicon these alloys are limited for using with decorative anodisation. Colorations are very dark especially when the alloy includes copper and so often only dark colors are recommended (e.g. deep black).

The classification was made according to a grading system. It ranges from *excellent* for excellent results over *good*, *satisfactory*, *fair*, *bad* to *very bad* for unsuitable alloys. In the "Anodising" column you will find the information of generating the anodic coating itself, the column "Colorising" stands for the classification of the alloy regarding the colorability for decorative purposes. A bad rating for colorising can also indicate that the layer has a natural color and can be colored only in certain dark (e.g. deep black) colors - but then these finishes may be very good.

The alloys are sorted in ascending order according to their (short) name.

<i>Alloy</i>	<i>Alloy No.</i>	<i>Euro code</i>	<i>Forging Casting</i>	<i>Anodising</i>	<i>Colorising</i>
Al99,5	3.0255	EN AW-1050A	F	excellent	good
Al99	3.0205	EN AW-1200	F	excellent	satisfactory
AlCu4Ti	3.1841	none	C	bad	very bad
AlCu4TiMg	3.1371	EN AC-21000	C	bad	very bad
AlCuBiPb	3.1655	EN AW-2011	F	very bad	very bad
AlCuMg1	3.1325	EN AW-2017A	F	good	very bad

<i>Alloy</i>	<i>Alloy No.</i>	<i>Euro code</i>	<i>Forging Casting</i>	<i>Anodising</i>	<i>Colorising</i>
AlCuMg2	3.1355	EN AW-2024	F	good	very bad
AlCuMgPb	3.1645	EN AW-2007	F	very bad	very bad
AlCuSiMn	3.1255	EN AW-2014	F	satisfactory	very bad
AlMg1	3.3315	EN AW-5005A	F	excellent	good
AlMg1SiCu	3.3211	EN AW-6061	F	excellent	satisfactory
AlMg2,5	3.3523	EN AW-5052	F	excellent	good
AlMg2,7Mn	3.3537	EN AW-5454	F	good	fair
AlMg2Mn0,3	3.3525	EN AW-5241	F	excellent	fair
AlMg2Mn0,8	3.3527	EN AW-5049	F	good	fair
AlMg3	3.3541	EN AC-51100	C	excellent	excellent
AlMg3	3.3535	EN AW-5754	F	excellent	good
AlMg3Si	3.3241	none	C	excellent	good
AlMg4,5Mn	3.3547	EN AW-5083	F	good	fair
AlMg5	3.3541	EN AC-51100	C	excellent	excellent
AlMg5	3.3555	EN AW-5019	F	excellent	satisfactory
AlMg5Si	3.3561	EN AC-51300	C	excellent	good
AlMgSi0,5	3.3206	EN AW-6060	F	excellent	excellent
AlMgSi0,7	3.3210	EN AW-6005A	F	excellent	good
AlMgSi1	3.2315	EN AW-6082	F	excellent	satisfactory
AlMgSiPb	3.0615	EN AW-5012	F	satisfactory	very bad
AlMn1	3.0515	EN AW-3103	F	excellent	fair
AlMn1Mg0,5	3.0525	EN AW-3005	F	excellent	fair
AlMn1Mg1	3.0526	EN AW-3004	F	excellent	fair
AlMnCu	3.0517	EN AW-3003	F	excellent	fair
AlSi10Mg	3.2381	none	C	satisfactory	fair
AlSi10MgCu	3.2383	none	C	fair	very bad
AlSi11	3.2211	EN AC-44000	C	fair	very bad
AlSi12	3.2373	EN AC-44200	C	bad	very bad
AlSi12Cu	3.2982	none	C	very bad	very bad
AlSi12Cu	3.2583	none	C	fair	very bad
AlSi5Mg	3.2341	none	C	good	fair
AlSi6Cu4	3.2151	EN AC-45000	C	very bad	very bad

<i>Alloy</i>	<i>Alloy No.</i>	<i>Euro code</i>	<i>Forging Casting</i>	<i>Anodising</i>	<i>Colorising</i>
AlSi7Mg	3.2371	EN AC-42100	C	fair	very bad
AlSi9Cu3	3.2163	EN AC-46000	C	very bad	very bad
AlSi9Mg	3.2373	EN AC-44200	C	fair	very bad
AlZn4,5Mg1	3.4335	EN AW-7020	F	good	satisfactory
AlZnMgCu0,5	3.4345	EN AW-7022	F	good	very bad
AlZnMgCu1,5	3.4365	EN AW-7075	F	satisfactory	very bad

Please note:

All details have been determined according to our own series of tests and feedback from our customers and compiled with the best of our knowledge. But, of course, nevertheless we assume no liability of its accuracy.

If you have further information and experiences, please do not hesitate to contact us. Gladly we will add them to the table.

Thank you for your cooperation!

Your Electronic Things team