

## SELECTION GUIDE FOR ALUMINUM ALLOYS AND TEMPERS

ALLOY	TEMPER	RESISTANCE TO CORROSION		Working Cold	Machinability	Brazeability	WELDABILITY		
		General	Stress-Corrosion Cracking				Gas	Arc	Resistance Spot and Seam
1100	O	A	A	A	E	A	A	A	B
	H12	A	A	A	E	A	A	A	A
	H14	A	A	A	D	A	A	A	A
	H16	A	A	B	D	A	A	A	A
	H18	A	A	C	D	A	A	A	A
1350	O	A	A	A	E	A	A	A	B
	H18	A	A	B	D	A	A	A	A
2024	O	–	–	–	D	D	D	D	D
	T3, T4	D	C	C	B	D	C	B	B
	T6	D	D	C	B	D	D	C	B
3003	O	A	A	A	E	A	A	A	A
	H12	A	A	A	E	A	A	A	A
	H14	A	A	B	D	A	A	A	A
	H16	A	A	C	D	A	A	A	A
	H18	A	A	C	D	A	A	A	A
	H25	A	A	B	D	A	A	A	A
3004	O	A	A	A	D	B	B	A	B
	H32	A	A	B	D	B	B	A	A
	H34	A	A	B	C	B	B	A	A
	H36	A	A	C	C	B	B	A	A
	H38	A	A	C	C	B	B	A	A
3005	O	A	A	A	D	B	A	A	B
	H12	A	A	B	D	B	A	A	A
	H14	A	A	B	C	B	A	A	A
	H16	A	A	C	C	B	A	A	A
	H18	A	A	C	C	B	A	A	A
5005	O	A	A	A	E	B	A	A	B
	H12	A	A	A	E	B	A	A	A
	H14	A	A	B	D	B	A	A	A
	H16	A	A	C	D	B	A	A	A
	H18	A	A	C	D	B	A	A	A
	H32	A	A	A	E	B	A	A	A
	H34	A	A	B	D	B	A	A	A
	H36	A	A	C	D	B	A	A	A
H38	A	A	C	D	B	A	A	A	



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5050	O	A	A	A	E	B	A	A	B
	H32	A	A	A	D	B	A	A	A
	H34	A	A	B	D	B	A	A	A
	H36	A	A	C	C	B	A	A	A
	H38	A	A	C	C	B	A	A	A
5052	O	A	A	A	D	C	A	A	B
	H32	A	A	B	D	C	A	A	A
	H34	A	A	B	C	C	A	A	A
	H36	A	A	C	C	C	A	A	A
	H38	A	A	C	C	C	A	A	A
5056 & 5182	O	A	B	A	D	D	C	A	B
	H12, H32	A	B	B	D	D	C	A	A
	H14, H34	A	B	B	C	D	C	A	A
	H16, H36	A	B-C	B-C	C	D	C	A	A
	H18, H38	A	C	C	C	D	C	A	A
5657	H241	A	A	A	D	B	A	A	A
	H25	A	A	B	D	B	A	A	A
	H26	A	A	B	D	B	A	A	A
	H28	A	A	C	D	B	A	A	A
6061	O	B	A	A	D	A	A	A	B
	T4	B	B	B	C	A	A	A	A
	T6	B	A	C	C	A	A	A	A
7075	O	–	–	–	D	D	D	D	B
	T6	C	C	D	B	D	D	D	B

Corrosion ratings A through E are relative ratings in decreasing order of merit, based on exposures to sodium chloride solution by intermittent spraying or immersion. Alloys with A and B ratings can be used in industrial and seacoast atmospheres without protection. Alloys with C, D and E ratings generally should be protected at least on faying surfaces.

Stress-corrosion cracking ratings are based on service experience and on laboratory tests of specimens exposed to the 3.5% sodium chloride alternate immersion test.

- A = No known instance of failure in service or in laboratory tests.
- B = No known instance of failure in service; limited failures in laboratory tests of short transverse specimens.
- C = Service failures with sustained tension stress acting in short transverse direction relative to grain structure; limited failures in laboratory tests of long transverse specimens.
- D = Limited service failures with sustained longitudinal or long transverse stress.

Ratings A through D for Workability (cold), and A through E for Machinability, are relative ratings in decreasing order of merit.

Ratings A through D for Weldability and Brazeability are relative ratings defined as follows:

- A = Generally weldable by all commercial procedures and methods.
- B = Weldable with special techniques or for specific applications which justify preliminary trials or testing to develop welding procedure and weld performance.
- C = Limited Weldability because of crack sensitivity or loss in resistance to corrosion and mechanical properties.
- D = No commonly used welding methods have been developed.