

# CASTING ALLOY SPECIFICATIONS

AA NUMBER	FORMER ASTM DESIGNATION	SI SILICON	Fe IRON	Pb LEAD	Cu COPPER	Ca CALCIUM	Mn MANGANESE	Mg MAGNESIUM	Cr CHROMIUM	Ni NICKEL	Sn TIN	Ti TITANIUM	Al ALUMINUM	Zn ZINC	TOTAL OTHERS	CAST-ABLE*	MACHIN-ABLE*	PLAT-ABLE*	CASTING TYPE	High Pressure Die Casting Alloys										Gravity Alloys											
																				518	Zinc #2	Zinc #3	Zinc #5	ZnA-12	ZnA-27	360.0	380.0	384.0	A384.0	390.0	A390.0	413.0	A413.0	C443.0	A443.0	357.0	A357.0	355.0	355.1	356.0	A356.0
343.0	X443Z	6.7-7.7	1.2	-	0.50-0.9	-	0.50	0.10	0.10	-	0.50	-	Balance	1.2-2.0	0.35	3	3	1	D	360.0	380.0	384.0	A384.0	390.0	A390.0	413.0	A413.0	C443.0	A443.0	357.0	A357	355.0	355.1	356.0	A356.0	357.0	A357	355.0	355.1	356.0	A356.0
343.1	X443Z	6.7-7.7	0.5-0.9	-	0.50-0.9	-	0.50	0.10	0.10	-	0.50	-	"	1.2-1.9	0.35	3	3	1	D	360.0	380.0	384.0	A384.0	390.0	A390.0	413.0	A413.0	C443.0	A443.0	357.0	A357	355.0	355.1	356.0	A356.0	357.0	A357	355.0	355.1	356.0	A356.0
355.0	355	4.5-5.5	0.60	-	1.0-1.5	-	0.50	0.40-0.6	0.25	-	-	0.25	"	0.35	0.15	1	3	4	SC-PM	360.0	380.0	384.0	A384.0	390.0	A390.0	413.0	A413.0	C443.0	A443.0	357.0	A357	355.0	355.1	356.0	A356.0	357.0	A357	355.0	355.1	356.0	A356.0
355.1	355	4.5-5.5	0.50	-	1.0-1.5	-	0.50	0.40-0.6	0.25	-	-	0.25	"	0.35	0.15	1	3	4	SC-PM	360.0	380.0	384.0	A384.0	390.0	A390.0	413.0	A413.0	C443.0	A443.0	357.0	A357	355.0	355.1	356.0	A356.0	357.0	A357	355.0	355.1	356.0	A356.0
356.0	356	6.5-7.5	0.60	-	0.25	-	0.35	0.20-0.45	-	-	-	0.25	-	0.35	0.15	1	3	4	SC-PM	360.0	380.0	384.0	A384.0	390.0	A390.0	413.0	A413.0	C443.0	A443.0	357.0	A357	355.0	355.1	356.0	A356.0	357.0	A357	355.0	355.1	356.0	A356.0
A356.0	A356	6.5-7.5	0.20	-	0.20	-	0.10	0.20-0.4	-	-	-	0.20	-	0.10	0.15	1	3	4	SC-PM	360.0	380.0	384.0	A384.0	390.0	A390.0	413.0	A413.0	C443.0	A443.0	357.0	A357	355.0	355.1	356.0	A356.0	357.0	A357	355.0	355.1	356.0	A356.0
357.0	357	6.5-7.5	0.15	-	0.05	-	0.03	0.45-0.6	-	-	-	0.20	-	0.05	0.15	1	3	4	SC-PM	360.0	380.0	384.0	A384.0	390.0	A390.0	413.0	A413.0	C443.0	A443.0	357.0	A357	355.0	355.1	356.0	A356.0	357.0	A357	355.0	355.1	356.0	A356.0
A357.0	A357	6.5-7.5	0.20	-	0.20	-	0.10	0.45-0.7	-	-	-	0.10-0.20	-	0.10	0.15	1	3	4	SC-PM	360.0	380.0	384.0	A384.0	390.0	A390.0	413.0	A413.0	C443.0	A443.0	357.0	A357	355.0	355.1	356.0	A356.0	357.0	A357	355.0	355.1	356.0	A356.0
360.0	360	9.0-10.0	2.0	-	0.6	-	0.35	0.4-0.6	-	-	0.50	-	-	0.5	0.25	2	3	1	D	360.0	380.0	384.0	A384.0	390.0	A390.0	413.0	A413.0	C443.0	A443.0	357.0	A357	355.0	355.1	356.0	A356.0	357.0	A357	355.0	355.1	356.0	A356.0
A360.0	A360	9.0-10.0	1.3	-	0.6	-	0.35	0.4-0.6	-	-	0.50	-	-	0.5	0.25	2	3	1	D	360.0	380.0	384.0	A384.0	390.0	A390.0	413.0	A413.0	C443.0	A443.0	357.0	A357	355.0	355.1	356.0	A356.0	357.0	A357	355.0	355.1	356.0	A356.0
380.0	380	7.5-9.5	2.0	-	3.0-4.0	-	0.50	0.10	-	-	0.50	-	-	3.0	0.50	2	2	1	D	360.0	380.0	384.0	A384.0	390.0	A390.0	413.0	A413.0	C443.0	A443.0	357.0	A357	355.0	355.1	356.0	A356.0	357.0	A357	355.0	355.1	356.0	A356.0
A380.0	A380	7.5-9.5	1.3	-	3.0-4.0	-	0.50	0.10	-	-	0.50	-	-	3.0	0.50	2	2	1	D	360.0	380.0	384.0	A384.0	390.0	A390.0	413.0	A413.0	C443.0	A443.0	357.0	A357	355.0	355.1	356.0	A356.0	357.0	A357	355.0	355.1	356.0	A356.0
384.0	384	10.5-12.0	1.3	-	3.0-4.5	-	0.50	0.10	-	-	0.50	-	-	3.0	0.50	1	2	2	D	360.0	380.0	384.0	A384.0	390.0	A390.0	413.0	A413.0	C443.0	A443.0	357.0	A357	355.0	355.1	356.0	A356.0	357.0	A357	355.0	355.1	356.0	A356.0
A384.0	384	10.5-12.0	1.3	-	3.0-4.5	-	0.50	0.10	-	-	0.50	-	-	3.0	0.50	1	2	2	D	360.0	380.0	384.0	A384.0	390.0	A390.0	413.0	A413.0	C443.0	A443.0	357.0	A357	355.0	355.1	356.0	A356.0	357.0	A357	355.0	355.1	356.0	A356.0
390.0	390	16.0-18.0	1.3	-	4.0-5.0	-	0.10	0.45-0.65	-	-	-	0.20	-	0.10	0.20	1	1	3	SC-PM-D	360.0	380.0	384.0	A384.0	390.0	A390.0	413.0	A413.0	C443.0	A443.0	357.0	A357	355.0	355.1	356.0	A356.0	357.0	A357	355.0	355.1	356.0	A356.0
A390.0	A390	16.0-18.0	0.50	-	4.0-5.0	-	0.10	0.45-0.65	-	-	-	0.20	-	0.10	0.20	1	1	3	SC-PM-D	360.0	380.0	384.0	A384.0	390.0	A390.0	413.0	A413.0	C443.0	A443.0	357.0	A357	355.0	355.1	356.0	A356.0	357.0	A357	355.0	355.1	356.0	A356.0
413.0	13	11.0-13.0	2.0	-	1.0	-	0.35	0.10	-	-	0.50	0.25	-	0.50	0.25	1	5	3	D	360.0	380.0	384.0	A384.0	390.0	A390.0	413.0	A413.0	C443.0	A443.0	357.0	A357	355.0	355.1	356.0	A356.0	357.0	A357	355.0	355.1	356.0	A356.0
A413.0	A13	11.0-13.0	1.3	-	1.0	-	0.35	0.10	-	-	0.50	0.25	-	0.50	0.25	1	5	3	D	360.0	380.0	384.0	A384.0	390.0	A390.0	413.0	A413.0	C443.0	A443.0	357.0	A357	355.0	355.1	356.0	A356.0	357.0	A357	355.0	355.1	356.0	A356.0
C443.0	43	4.5-6.0	0.80	-	0.6	-	0.50	0.05	0.25	-	-	-	-	0.50	0.35	3	5	2	SC-PM-D	360.0	380.0	384.0	A384.0	390.0	A390.0	413.0	A413.0	C443.0	A443.0	357.0	A357	355.0	355.1	356.0	A356.0	357.0	A357	355.0	355.1	356.0	A356.0
A443.0	43	4.5-6.0	0.80	-	0.30	-	0.50	0.05	0.25	-	-	-	-	0.50	0.35	3	5	2	SC-PM-D	360.0	380.0	384.0	A384.0	390.0	A390.0	413.0	A413.0	C443.0	A443.0	357.0	A357	355.0	355.1	356.0	A356.0	357.0	A357	355.0	355.1	356.0	A356.0
518	218	0.35	1.8	-	0.25	-	7.5-8.5	0.35	-	-	0.15	-	-	0.15	0.25	5	3	1	D	360.0	380.0	384.0	A384.0	390.0	A390.0	413.0	A413.0	C443.0	A443.0	357.0	A357	355.0	355.1	356.0	A356.0	357.0	A357	355.0	355.1	356.0	A356.0
Zinc #2	Zamak #2	-	.05	-	2.6-3.0	0.004	-	0.02-0.06	-	-	0.002	-	3.7-4.3	Balance	-	1	1	1	D	360.0	380.0	384.0	A384.0	390.0	A390.0	413.0	A413.0	C443.0	A443.0	357.0	A357	355.0	355.1	356.0	A356.0	357.0	A357	355.0	355.1	356.0	A356.0
Zinc #3	Zamak #3	-	0.0-0.10	0.005	0.0-0.25	0.004	-	0.02-0.05	-	-	0.003	-	3.5-4.3	"	0	1	1	1	D	360.0	380.0	384.0	A384.0	390.0	A390.0	413.0	A413.0	C443.0	A443.0	357.0	A357	355.0	355.1	356.0	A356.0	357.0	A357	355.0	355.1	356.0	A356.0
Zinc #5	Zamak #5	-	0.0-0.10	0.005	0.75-1.25	0.004	-	0.03-0.08	-	-	0.003	-	3.5-4.3	"	0.05	1	1	1	D	360.0	380.0	384.0	A384.0	390.0	A390.0	413.0	A413.0	C443.0	A443.0	357.0	A357	355.0	355.1	356.0	A356.0	357.0	A357	355.0	355.1	356.0	A356.0
ZnA-12	-	-	0.0-0.075	0.005	0.5-1.0	0.004	-	0.01-0.02	-	-	0.003	-	10.5-11.5	"	-	1	2	2	SC-PM-D	360.0	380.0	384.0	A384.0	390.0	A390.0	413.0	A413.0	C443.0	A443.0	357.0	A357	355.0	355.1	356.0	A356.0	357.0	A357	355.0	355.1	356.0	A356.0
ZnA-27	-	-	0.0-0.10	0.004	2.0-2.5	0.003	-	0.01-0.02	-	-	0.002	-	25.0-28.0	"	-	2-3	3	3	SC-PM-D	360.0	380.0	384.0	A384.0	390.0	A390.0	413.0	A413.0	C443.0	A443.0	357.0	A357	355.0	355.1	356.0	A356.0	357.0	A357	355.0	355.1	356.0	A356.0

Only composition limits which are identical to those listed herein or are registered with the Aluminum Association are designated as "AA" Alloys.

See reverse side for Alloy "Physical" Specifications chart.

**Castings Type:**  
**D** = Die Cast Alloys  
**SC** = Sand Cast Alloys  
**PM** = Permanent Mold Alloys

**Ratings:**  
**1** = Excellent  
**2** = Above Average  
**3** = Average  
**4** = Below Average  
**5** = Poor

**\*Definitions:**  
**Castable:** Ability of molten alloy to flow readily in die and to fill thin sections.  
**Machinable:** Composite rating based on ease of cutting, chip characteristics, quality of finish, and tool life.  
**Platable:** Ability of a die cast part to take and hold an electroplate applied by present standard methods. (Exclusive of anodizing appearance).



Die Casting & Machining, Inc. 1849 Oak St., Alameda, CA 94501 • Phone: 510.523.2541 • Fax: 510.523.5619 • Email: sales@sksdiecasting.com