

Alloy Specification Chart
(partial listing of most common alloys)

Alloy Types	Common Casting Specifications	RATING*								
		Castability	Machinability	Corrosion Resistance	Weldability	Harden by Heat Treat	Magnetic			
CARBON & LOW ALLOY STEELS	1020	MIL-S-81591	2	2	4	2	Yes	Yes		
	1090	SAE 1090	1	3	4	2	Yes	Yes		
	4130	AMS 5336	2	2	4	2	Yes	Yes		
	4140	AMS 5338	2	2	4	2	Yes	Yes		
	4340	IC 4340	2	2	4	2	Yes	Yes		
	4620	IC 4620	2	2	4	2	Yes	Yes		
	6150	IC 6150	1	2	4	2	Yes	Yes		
	8620	IC 8620	2	2	4	2	Yes	Yes		
	8740	IC 8740	3	3	4	2	Yes	Yes		
	52100	IC 52100	1	3	4	2	Yes	Yes		
COBALT ALLOYS	6	AMS 5387	1	4	1	3	No	No		
	21	AMS 5385	1	3	1	2	No	No		
	23	AMS 5375	1	4	1	3	No	No		
	25	L 605	1	3	1	2	No	No		
	31	AMS 5382	1	3	1	2	No	No		
ALUMINUM ALLOYS	355	QQ-A-601 (10)	1	1	2	3	Yes	No		
	356	AMS 4260	1	1	2	3	Yes	No		
	535	ASTM B-618	2	1	1	3	Yes	No		
	40 E	QQ-A-601 (17)	3	1	2	2	No	No		
COPPER ALLOYS	Mn Bronze	ASTM B-584	2	1	2	2	Yes	No		
	Tin Bronze	ASTM B-505	2	3	1	1	No	No		
	Si Bronze	QQ-C-593	1	2	2	2	No	No		
	AL Bronze	ASTM B-148	1	2	2	3	Yes	No		
	Red Brass	AMS 4890	2	2	1	2	No	No		
	Yellow Brass	MIL-B-17512	2	2	2	2	No	No		
NICKEL ALLOYS	Hastalloy-B	AMS 5396	1	3	1	2	No	No		
	Hastalloy-C	AMS 5388	1	3	1	2	No	No		
	Monel M-35-1	ASTM A-494 M35-1	1	3	1	2	No	No		
	Monel Comp.B	ALLOY 506	1	3	1	2	No	No		
	Monel Comp.D	ALLOY S	1	3	1	2	No	No		
	INCONEL	CIW-6MC	1	3	1	3	No	No		
	INCONEL	CIW-2M	1	2	1	2	No	No		
AUSTENITIC STAINLESS STEELS	302	AMS 5358	1	3	1	2	No	No		
	303	ASTM A-743	2	2	1	3	No	No		
	304	AMS 5370	1	3	1	1	No	No		
	310	AMS 5366	1	3	1	1	No	No		
	316	AMS 5360	1	3	1	2	No	No		
	330	ASTM A-297 GR HT	1	3	1	1	No	No		
	347	AMS 5362	1	3	1	1	No	No		
	CN7M	ASTM A-351	1	3	1	1	No	No		
	MARTENSITIC STAINLESS STEELS	17-4	AMS 5355	2	2	1	1	Yes	Yes	
		410	AMS 5350	2	2	3	3	Yes	Yes	
		416	AMS 5349	3	1	3	4	Yes	Yes	
		420	MIL-S-81591	2	2	3	3	Yes	Yes	
		431	AMS 5353	3	3	2	3	Yes	Yes	
440C		AMS 5352	1	3	3	4	Yes	Yes		
440A		IC 440A	1	3	3	4	Yes	Yes		
440F		IC 440F	1	2	3	4	Yes	Yes		
CA6NM		ASTM A-487	1	2	1	2	Yes	Yes		
CD-4MCu		ASTM A-744	1	2	1	2	Yes	Yes		
FERITIC		430	SAE 51340	3	3	2	3	No	Yes	
		TOOL STEELS	Water Hardening	S-2	IC GS-2	2	2	4	2	Yes
D-3				IC CD-3	1	3	3	4	Yes	Yes
O-1	IC O0-1			2	2	4	3	Yes	Yes	
Oil Hardening	O-2		IC CO-2	2	2	4	3	Yes	Yes	
	M-2		IC CM-2	2	3	4	3	Yes	Yes	
	Air Hardening		A-2	ASTM A-597 GR CA-2	1	3	4	4	Yes	Yes
			H-13	ASTM A-597 GR CA-13	2	3	4	4	Yes	Yes
H-43	UNS T20843	2	3	4	4	Yes	Yes			

REFERENCE RATING* 1 - Excellent 2 - Good 3 - Fair 4 - Poor

This Kovatch Castings, Inc. Alloys Selection Chart contains only a few of the most commonly specified casting alloys. Our metallurgical engineers welcome the opportunity to assist you in selection of the best metals to achieve the desired results with your metal parts.