

Schematic family tree of Steels for plastic molding

Increasing corrosion resistance

500	2316					49
1050	X38CrMo16					230
AISI 420 mod XXX						
C	Cr	Si	Mn	Ni	MMM	
0.32	14.9		0.80	0.50		
0.36	15.6	0.20	1.00	0.70		

500	PH X Supra					42
1040	(X5CrNiCuNb15-5)					230
AISI - XXX						
C	Cr	Si	Mn	Ni	HMM	
0.045	14.0	0.20	0.20	5.00		
	15.0	0.35	0.40	5.50		

500	2361					59
1050	(X91CrMoV18)					265
AISI - XXX						
C	Cr	Si	Mn	Ni	MLM	
0.85	17.0					
0.95	19.0	1.00	1.00	0.30		

500	Corro Plast					35
1040	-					230
AISI - XXX						
C	Cr	Si	Mn	Ni	MHH	
0.04	12.5	0.20	1.20			
0.05	12.9	0.50	1.35	0.20		

500	2085					48
1050	(X33CrS16)					230
AISI~420FM XXX						
C	Cr	Si	Mn	Ni	LMH	
0.31	15.5	0.20	1.10	0.40		
0.36	16.3	0.40	1.30	0.60		

500	2083 Supra					56
1050	X40Cr14					230
AISI 420 XXX						
C	Cr	Si	Mn	S	MMM	
0.38	12.5					
0.45	13.5	1.00	1.00	0.03		

650	2190					56
1050	(X37Cr13)					230
AISI 420 mod XXX						
C	Cr	Si	Mn	V	HMM	
0.35	13.2	0.80	0.40	0.25		
0.38	14.0	1.10	0.60	0.35		

500	2738					51
870	40CrMnNiMo8-6-4					235
AISI P20 + Ni XXX						
C	Cr	Si	Mn	Ni	MMM	
0.35	1.80	0.20	1.40	0.90		
0.40	2.00	0.40	1.60	1.05		

500	PH 42 Supra					40
1040	(15NiCuAl12-10-10)					230
AISI - XXX						
C	Cr	Si	Mn	Ni	HMM	
0.10		0.20	1.40	2.90		
0.15	0.30	0.40	1.60	3.10		

500	2343 Supra					54
1030	X37CrMoV5-1					230
AISI H11 XXX						
C	Cr	Si	Mn	V	HMM	
0.36	4.80	0.95	0.40	0.45		
0.40	5.20	1.10	0.50	0.50		

500	2344 Supra					57
1050	X40CrMoV5-1					230
AISI H13 XXX						
C	Cr	Si	Mn	Mo	MMM	
0.37	5.00	0.95	0.30	1.21		
0.40	5.50	1.10	0.40	1.35		

550	2764					62
810	(X19NiCrMo4)					250
AISI~P21 XXX						
C	Cr	Si	Mn	Ni	HMM	
0.16	1.10	0.15	0.35	3.80		
0.22	1.30	0.30	0.45	4.30		

550	2311					51
870	(40CrMnMo7)					235
AISI P20 XXX						
C	Cr	Si	Mn	Mo	MMM	
0.35	1.80	0.20	1.40	0.15		
0.40	2.00	0.40	1.60	0.20		

650	2767					56
870	45NiCrMo16					260
AISI 6F7 XXX						
C	Cr	Si	Mn	Ni	MMM	
0.44	1.20	0.15	0.30	3.80		
0.48	1.40	0.25	0.45	4.30		

450	2709					55
850	(X3NiCoMoTi18-9-5)					340
AISI 18 MAR 300 XXX						
C	Cr	Si	Co	Ni	HMM	
0.012	0.50	0.20	9.50	17.0		
			10.5	18.5		

500	2711					57
870	(55NiCrMoV7)					240
AISI P20HH XXX						
C	Cr	Si	Mn	Ni	MMM	
0.54	1.00	0.15	0.80	1.50		
0.58	1.20	0.30	0.90	1.70		

650	2162					62
840	21MnCr5					210
AISI~P2 XXX						
C	Cr	Si	Mn	S	HMH	
0.18	1.00	0.15	1.10	0.01		
0.22	1.30	0.35	1.40	0.02		

700	2379					63
1050	X153CrMoV12					250
AISI D2 XXX						
C	Cr	Si	Mn	V	LLM	
1.50	11.0	0.25	0.30	0.80		
1.60	12.0	0.40	0.45	0.90		

650	3343					66
1230	HS6-5-2C					300
AISI M2 XXX						
C	Cr	Mo	W	V	LLM	
0.86	3.80	4.70	5.90	1.70		
0.94	4.50	5.20	6.70	2.10		

500	2312					51
870	40CrMnNiMo8-6-4					235
AISI P20 + S XXX						
C	Cr	Si	Mn	Ni	LMH	
0.38	1.80	0.35	1.40	0.35		
0.43	2.00	0.45	1.60	0.50		

550	2363					63
970	(X100CrMoV5-1)					231
AISI A2 XXX						
C	Cr	Si	Mn	V	MLM	
0.95	4.80	0.25	0.40	0.15		
1.03	5.20	0.35	0.60	0.25		

650	2990					64
1080	(X100CrMoV8-1-1)					250
AISI P20 + S XXX						
C	Cr	Si	Mo	V	MLM	
0.95	7.40	0.85	1.00	1.50		
1.10	8.30	1.05	1.65	1.70		

650	2842					64
820	90MnCrV8					220
AISI O2 XXX						
C	Cr	Si	V	S	LLM	
0.85	0.20	1.20	0.05			
0.95	0.50	2.20	0.20	0.03		

- a. Max. annealing temperature (°C)**
- b. Max. hardening temperature (°C)
- c. German material number
- d. Abbreviated name

a	1.CCCC					e
b	ddddddd					f
AISI designation XXX						
C	Cr	Mo	W	V	g(123)	
min.						
max.						

- e. Max. hardness (HRC)
- f. Max. annealed hardness (HB)
- g. Properties
 - 1. Polishability H: High / good
 - 2. Weldability M: Moderate
 - 3. Machinability L: Low

XXX = Available from stock

** Min. 30 °C below tempering temperature