Schematic family tree
of Steels for plastic molding

DEUTSCHE EDELSTAHLWERKE

Providing special steel solutions

Increasing corrosion resistance

2316 — X38CrMo16 — AISI 420 mod

500 / 1050				49 / 230 / MMM / XXX
C	Cr	Si	Mn	Ni
0.32 / 0.36	14.9 / 15.6	0.20	0.80 / 1.00	0.50 / 0.70

Corro Plast — – — AISI –

500 / 1040				35 / 230 / MHH / XXX
C	Cr	Si	Mn	Ni
0.04 / 0.05	12.5 / 12.9	0.20 / 0.50	1.20 / 1.35	0.20

2085 — (X33CrS16) — AISI~420FM

500 / 1050				48 / 230 / LMH / XXX
C	Cr	Si	Mn	Ni
0.31 / 0.36	15.5 / 16.3	0.20 / 0.40	1.10 / 1.30	0.40 / 0.60

PH X Supra — (X5CrNiCuNb15-5) — AISI –

500 / 1040				42 / 230 / HHM / XXX
C	Cr	Si	Mn	Ni
0.045	14.0 / 15.0	0.20 / 0.35	0.20 / 0.40	5.00 / 5.50

2361 — (X91CrMoV18) — AISI –

500 / 1050				59 / 265 / MLM / XXX
C	Cr	Si	Mn	Ni
0.85 / 0.95	17.0 / 19.0	1.00	1.00	0.30

2083 Supra — X40Cr14 — AISI 420

500 / 1050				56 / 230 / MMM / XXX
C	Cr	Si	Mn	S
0.38 / 0.45	12.5 / 13.5	1.00	1.00	0.03

2190 — (X37Cr13) — AISI 420 mod

650 / 1050				56 / 230 / HMM / XXX
C	Cr	Si	Mn	V
0.35 / 0.38	13.2 / 14.0	0.80 / 1.10	0.40 / 0.60	0.25 / 0.35

2738 — 40CrMnNiMo8-6-4 — AISI P20 + Ni

500 / 870				51 / 235 / MMM / XXX
C	Cr	Si	Mn	Ni
0.35 / 0.40	1.80 / 2.00	0.20 / 0.40	1.40 / 1.60	0.90 / 1.05

PH 42 Supra — (15NiCuAl12-10-10) — AISI –

500 / 1040				40 / 230 / HHM / XXX
C	Cr	Si	Mn	Ni
0.10 / 0.15	0.30	0.20 / 0.40	1.40 / 1.60	2.90 / 3.10

2343 Supra — X37CrMoV5-1 — AISI H11

500 / 1030				54 / 230 / HMM / XXX
C	Cr	Si	Mn	V
0.36 / 0.40	4.80 / 5.20	0.95 / 1.10	0.40 / 0.50	0.45 / 0.50

2344 Supra — X40CrMoV5-1 — AISI H13

500 / 1050				57 / 230 / MMM / XXX
C	Cr	Si	Mn	Mo
0.37 / 0.40	5.00 / 5.50	0.95 / 1.10	0.30 / 0.40	1.21 / 1.35

2764 — (X19NiCrMo4) — AISI~P21

550 / 810				62 / 250 / HMM / XXX
C	Cr	Si	Mn	Ni
0.16 / 0.22	1.10 / 1.30	0.15 / 0.30	0.35 / 0.45	3.80 / 4.30

2379 — X153CrMoV12 — AISI D2

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

3343 — HS6-5-2C — AISI M2

650 / 1230				66 / 300 / LLM / XXX
C	Cr	Mo	W	V
0.86 / 0.94	3.80 / 4.50	4.70 / 5.20	5.90 / 6.70	1.70 / 2.10

2711 — (55NiCrMoV7) — AISI P20HH

500 / 870				57 / 240 / MMM / XXX
C	Cr	Si	Mn	Ni
0.54 / 0.58	1.00 / 1.20	0.15 / 0.30	0.80 / 0.90	1.50 / 1.70

2709 — (X3NiCoMoTi18-9-5) — AISI 18 MAR 300

450 / 850				55 / 340 / HHM / XXX
C	Cr	Si	Co	Ni
0.012	0.50	0.20	9.50 / 10.5	17.0 / 18.5

2767 — 45NiCrMo16 — AISI 6F7

650 / 870				56 / 260 / MMM / XXX
C	Cr	Si	Mn	Ni
0.44 / 0.48	1.20 / 1.40	0.15 / 0.25	0.30 / 0.45	3.80 / 4.30

2162 — 21MnCr5 — AISI~P2

650 / 840				62 / 210 / HMH / XXX
C	Cr	Si	Mn	S
0.18 / 0.22	1.00 / 1.30	0.15 / 0.35	1.10 / 1.40	0.01 / 0.02

2311 — (40CrMnMo7) — AISI P20

550 / 870				51 / 235 / MMM / XXX
C	Cr	Si	Mn	Mo
0.35 / 0.40	1.80 / 2.00	0.20 / 0.40	1.40 / 1.60	0.15 / 0.20

2363 — (X100CrMoV5-1) — AISI A2

550 / 970				63 / 231 / MLM / XXX
C	Cr	Si	Mn	V
0.95 / 1.03	4.80 / 5.20	0.25 / 0.35	0.40 / 0.60	0.15 / 0.25

2990 — (X100CrMoV8-1-1) — AISI P20 + S

650 / 1080				64 / 250 / MLM / XXX
C	Cr	Si	Mo	V
0.95 / 1.10	7.40 / 8.30	0.85 / 1.05	1.00 / 1.65	1.50 / 1.70

2312 — 40CrMnNiMo8-6-4 — AISI P20 + S

500 / 870				51 / 235 / LMH / XXX
C	Cr	Si	Mn	Ni
0.38 / 0.43	1.80 / 2.00	0.35 / 0.45	1.40 / 1.60	0.35 / 0.50

2842 — 90MnCrV8 — AISI O2

650 / 820				64 / 220 / LLM / XXX
C	Cr	Si	V	S
0.85 / 0.95	0.20 / 0.50	1.20 / 2.20	0.05 / 0.20	0.03

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

** Min. 30 °C below tempering temperature

1.CCCC — ddddddddd — AISI destignation — XXX

a / b				e / f / g(123)
C	Cr	Mo	W	V
min. / max.				

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

XXX = Available from stock

Increasing hardness / Increasing abrasion wear resistance

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