Cryodur 2357

(50CrMoV13-15)

C 0.50 **Si** 0.30 **Mn** 0.70 **Cr** 3.35 **Mo** 1.60 **V** 0.25

Steel properties

High toughness and wear resistance, high compression strength combined with dimensional stability and good polishability.

Standards

AISI S7

Physical properties

Coefficient of thermal expansion

at °C	20 – 200	20 – 400
10^{-6} m/(m • K)	12.2	12.5

Thermal conductivity

at °C	20	200	400
W/(m • K)	28.9	30.0	31.0

Applications

Cold-work tool steel for punching tools, moulds, scrap shears, piercing dies, hobbers, coining dies, deburring tools, plastic moulds and pelleters.

Heat treatment

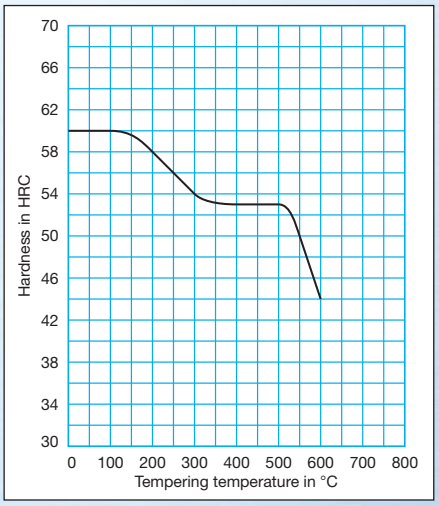
Soft annealing °C	**Cooling**	**Hardness HB**
610 – 650	Furnace	approx. 220

Stress-relief annealing °C	**Cooling**
approx. 600	Furnace

Hardening °C	**Quenching**	**Hardness after quenching HRC**
920 – 970	Air or oil	60 – 62

Tempering °C	100	200	300	400	500	550	600
HRC	60	58	54	53	53	50	44

Tempering diagram



Reference numbers in brackets are not standardized in EN ISO 4957.