



钢铁之家

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全球钢号百科!

Global Steel Grade Encyclopedia



涵盖的行业或国家与地区类别



国际材料与试验协会

GJB

国家军用标准



动力机械工程师协会

EU

前欧洲标准化

AISI

美国钢铁学会



德国工业标准

AMS

航空航天材料规范



国际标准

JASO

日本汽车标准组织

EN

欧洲标准

JB

中国机械行业标准

UNS

统一编号系统

UNI

意大利标准



美国机械工程师协会

SS

瑞典标准



国家标准



日本工业标准

Formadur 2738

40CrMnNiMo8-6-4

C 0.40 Mn 1.50 Cr 1.90 Ni 1.00 Mo 0.20

Steel properties

Pre-hardened plastic mould steel, hardness in as-delivered condition 280 to 325 HB. Good machinability, suitable for texturing, improved through hardening in comparison to Formadur 2711, good polishability.

Standards

AISI P20+Ni

Physical properties

Coefficient of thermal expansion

at °C	20 – 100	20 – 200	20 – 300	20 – 400	20 – 500	20 – 600	20 – 700
$10^{-6} \text{ m}/(\text{m} \cdot \text{K})$	11.1	12.9	13.4	13.8	14.2	14.6	14.9

Thermal conductivity

at °C	20	350	700
$\text{W}/(\text{m} \cdot \text{K})$	34.5	33.5	32.0

Applications

Large plastic moulds with deep engravings and intensive impacts on the core. Formadur 2738 is the logical development of Formadur 2311, a pre-hardened plastic mould steel for use in large moulds, which also have to display high core strength. The additional nickel content of 1 % increases through hardening. Formadur 2738 is a micro-alloyed, vacuum-degassed steel with the following excellent features: good machinability, outstanding polishability, good texturing properties.

Heat treatment

Soft annealing °C

710 – 740

Cooling

Furnace

Hardness HB

max. 235

Hardening °C

840 – 870

Quenching

Polymer or oil

Hardness after quenching HRC

51

Tempering °C

HRC

100

200

300

400

500

600

700

51

50

48

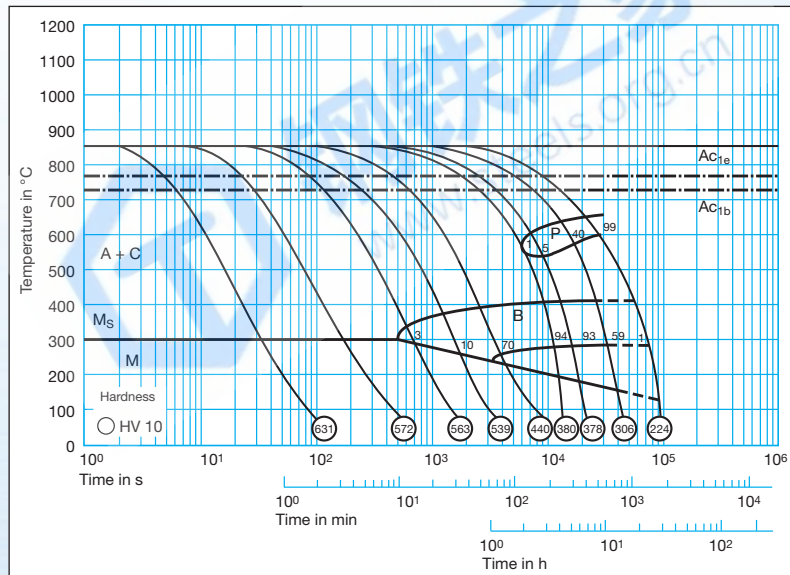
46

42

39

28

Time-temperature-transformation diagram



Tempering diagram

