



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

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

DATA SHEET

DC™ & DC™ Xtra

~AISI H13 - W.Nr. 1.2344 - X40CrMoV5-1

HOT WORK TOOL STEEL

TYPICAL APPLICATIONS

- Tooling for Aluminum Die Casting
- Aluminum and magnesium extrusion dies
- Die inserts and forging dies
- Plastic Mold Dies
- Cores, sleeves and slides

GENERAL

Delivery Condition:

Annealed, EFVD or VAR

Non-NADCA: **DC™ and DC™Xtra**

NADCA Grade A: **DC™ (Premium)**

NADCA Grade B: **DC™Xtra (Superior)**

DC™ and DC™Xtra are high quality tool steels with high impact and shock resistance. They also has good wear resistance at high temperature.

DC™ and DC™Xtra are suitable for many hot work and cold work applications like hot heading, hot forging, hot punching, hot piercing, hot trimming dies, heavy duty hot and cold shear blades, forming tools and bending tools.

DC™ and DC™Xtra has an excellent combination of high strength and toughness and can reach hardnesses typically in the 42 to 52 HRC with standard hardening procedures by most vacuum heat treating operations.

Typical Chemical Analysis - % weight

C	Mn	Si	Cr	Mo	V
0.38	0.35	1.00	5.25	1.50	1.00

DC™ and DC™Xtra are forged using a special densifying process which assures optimum consolidation of centers.

DC™ and DC™Xtra are forged on our largest presses equipped with wide dies assuring maximum deformation during forging process.

DC™ and DC™Xtra is characterized by :

- Improved wear resistance
- High temperature strength
- High impact resistance

DC™ and DC™Xtra are 100 % ultrasonic tested to very stringent acceptance levels. It is defect free.

DC™ and DC™Xtra can be supplied pre-certified to NADCA standard #207 on request.

DATA SHEET

DC™ & DC™ Xtra

HEAT TREATMENT

ANNEALING

Temperature: 1500-1550°F (816-843°C)
Rate of cooling: 25°F (14°C) max per hour Typical
annealed hardness: 187-223 BHN

Key parameter of the NADCA recommended procedure for hardening dies for die casting service are:

HARDENING

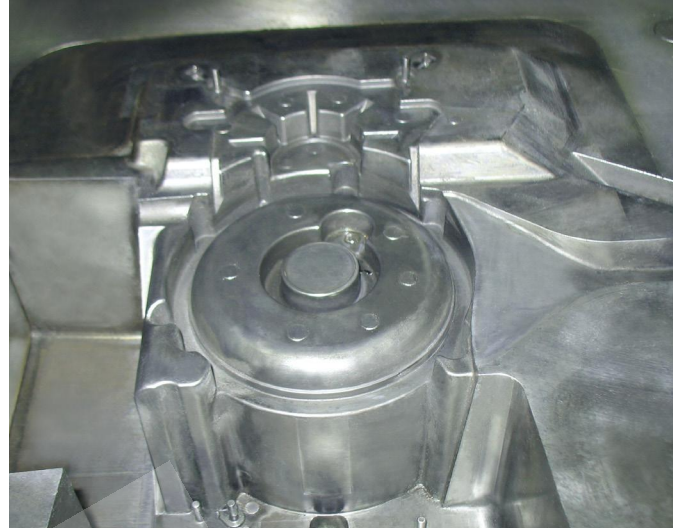
Rate of heating: slow
Preheat Temperature: 1200-1300°F (650-705°C)
Hardening Temperature: 1875-1895°F (1025-1035°C)
Time at temperature: 30-45 minutes
Quenching to 300°F (150°C)

TEMPERING

Tempering Temperature: 1050°F (565°C) minimum

STRESS RELIEVING

Temperature: 50-100°F (30-55°C) below final tempering temperature and slow cool to 875°F (470°C), then air cool.



Note: Provided technical data and information in this data sheet are typical values. Normal variations in chemistry, size and conditions of heat treatment may cause deviations from these values. We suggest that information be verified at time of enquiry or order. For additional data or metallurgical assistance, please contact us.

SIZE DC™

(Finished / approx.)

Max weight	16 330 kg	36 000 lbs
Max section	0.90 m ²	1 400 sq in
Max width	1 270 mm	50"
Max thickness	760 mm	30"