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

ASTM INTERNATIONAL 国材料与试验协会
GJB 国家军用标准
SAE INTERNATIONAL 动力机械工程师协会
EU 前欧洲标准化
AISI 美国钢铁学会
DIN 德国工业标准
AMS 国空航天材料规范
ISO 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
ASME 美国机械工程师协会
SS 瑞典标准
GB 国家标准
JIS 日本工业标准

DATA SHEET

DRX™

AISI S7

SHOCK RESISTING TOOL STEEL

TYPICAL APPLICATIONS

- Riveting Dies
- Powder Metal Dies
- Notching Dies
- Drills & Drill Plates
- Plastic Mold Dies
- Cold Forming Dies

GENERAL

Delivery Condition:
Annealed, EFVD, ESR or VAR

DRX™ is a high quality air-hardening tool steel with high impact and shock resistance. It also has good wear resistance at moderately high temperature.

DRX™ is 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.

DRX™ has an excellent combination of high strength and toughness added to size stability when air hardened.

Typical Chemical Analysis - % weight

C	Mn	Si	Cr	Mo	V
0.50	0.70	0.30	3.25	1.40	0.25

DRX™ is forged using a special densifying process which assures optimum consolidation of centers.

DRX™ is forged on our largest presses equipped with wide dies assuring maximum deformation during forging process.

DRX™ is characterized by :

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

DRX™ is 100 % ultrasonic tested to very stringent acceptance levels. It is defect free.

DATA SHEET

DRX™

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

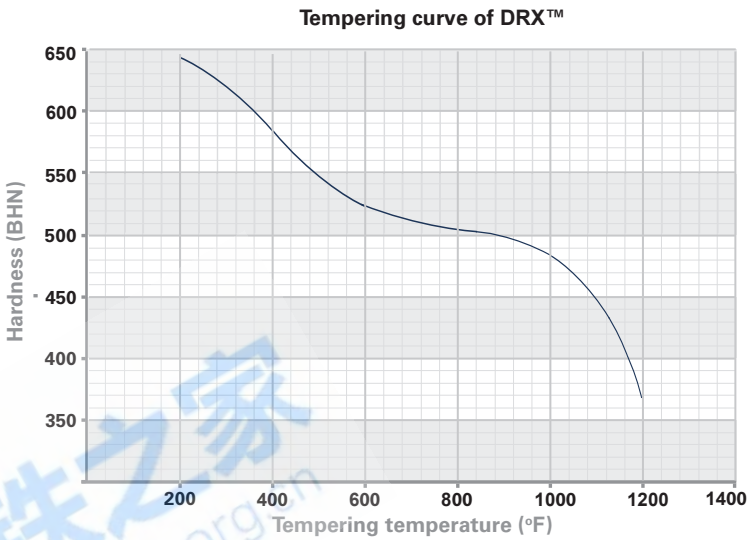
HARDENING

Rate of heating: slow
Preheat Temperature: 1200-1300°F (649-704°C)
Hardening Temperature: 1700-1750°F (927-954°C)
Time at temperature: 30-45 minutes
Quenching: Air (thickness up to 2.5" or 64.5 mm) or oil (thickness larger than 2.5" or 64.5 mm)

TEMPERING

Tempering Temperature: 400-1150°F (204-621°C)
(Do not temper below 400°F)
Approx tempered hardness: 45-57 HRC

The best combination of hardness and toughness is obtained by tempering at 400°F (204°C) for cold work applications. Tempering at 900-1000°F (482-538°C) is usually best for hot work applications.



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 DRX™
(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″