

EDRO #7 Shock Resistant S7 Tool Steel

Category : Metal , Ferrous Metal , Chrome-moly Steel , Tool Steel , Shock-Resisting Steel

Material Notes:

EDRO #7™ is a chromium-molybdenum steel characterized by: high toughness, good wear resistance, high impact resistance, good through hardening properties, good machinability, and good dimensional stability during hardening. EDRO #7™ is suitable for plastic molding including injection, compression and transfer molds. EDRO #7™ has a favorable combination of toughness and wear resistance for heavy duty blanking and forming tools. It is ideally suited for shear blades and cropping tools, both hot and cold. Other applications include rivet punches, chisels, cold heading dies and forging tools. Information provided by EDRO

Order this product through the following link:

http://www.lookpolymers.com/polymer_EDRO-7-Shock-Resistant-S7-Tool-Steel.php

Physical Properties	Metric	English	Comments
Density	7.70 g/cc	0.278 lb/in ³	Hardened and tempered to 57 HRC
	@Temperature 399 °C	@Temperature 750 °F	
	7.75 g/cc	0.280 lb/in ³	Hardened and tempered to 57 HRC
	@Temperature 199 °C	@Temperature 390 °F	
	7.81 g/cc	0.282 lb/in ³	Hardened and tempered to 57 HRC
	@Temperature 20.0 °C	@Temperature 68.0 °F	

Mechanical Properties	Metric	English	Comments
Hardness, Brinell	200	200	Delivery condition (soft annealed)
Hardness, Rockwell C	42	42	Tempered twice for 2 hr at temperature
	@Treatment Temp. 621 °C	@Treatment Temp. 1150 °F	
	50	50	Tempered twice for 2 hr at temperature
	@Treatment Temp. 538 °C	@Treatment Temp. 1000 °F	
	55	55	Tempered twice for 2 hr at temperature
	@Treatment Temp. 316 °C	@Treatment Temp. 600 °F	
	58	58	Tempered twice for 2 hr at temperature
	@Treatment Temp. 149 °C	@Treatment Temp. 300 °F	
Hardness, Vickers	850	850	Tuffride process, 2 hr
	@Treatment Temp. 570 °C	@Treatment Temp. 1060 °F	

Mechanical Properties	¹⁰⁰⁰ Metric	¹⁰⁰⁰ English	Comments
	@Treatment Temp. 525 °C	@Treatment Temp. 977 °F	Marking in ammonia gas
Tensile Strength, Ultimate	1720 MPa	250000 psi	45 HRC
	2030 MPa	295000 psi	50 HRC
	2450 MPa	355000 psi	55 HRC
	2650 MPa	385000 psi	58 HRC
Tensile Strength, Yield	1380 MPa	200000 psi	45 HRC
	@Strain 0.200 %	@Strain 0.200 %	
	1650 MPa	240000 psi	50 HRC
	@Strain 0.200 %	@Strain 0.200 %	
	2030 MPa	295000 psi	55 HRC
	@Strain 0.200 %	@Strain 0.200 %	
	2070 MPa	300000 psi	58 HRC
	@Strain 0.200 %	@Strain 0.200 %	
Modulus of Elasticity	177 GPa	25700 ksi	
	@Temperature 399 °C	@Temperature 750 °F	
	192 GPa	27800 ksi	
	@Temperature 199 °C	@Temperature 390 °F	
	197 GPa	28600 ksi	
	@Temperature 20.0 °C	@Temperature 68.0 °F	

Thermal Properties	Metric	English	Comments
CTE, linear	12.1 µm/m-°C	6.70 µin/in-°F	
	@Temperature 20.0 - 199 °C	@Temperature 68.0 - 390 °F	
	12.4 µm/m-°C	6.90 µin/in-°F	
	@Temperature 20.0 - 399 °C	@Temperature 68.0 - 750 °F	
Specific Heat Capacity	0.460 J/g-°C	0.110 BTU/lb-°F	
	@Temperature 20.0 °C	@Temperature 68.0 °F	
Thermal Conductivity	29.1 W/m-K	202 BTU-in/hr-ft²-°F	
	@Temperature 20.0 °C	@Temperature 68.0 °F	

Thermal Properties	Metric	English	Comments
	@Temperature 199 °C	@Temperature 390 °F	
	31.0 W/m-K	215 BTU-in/hr-ft ² -°F	
	@Temperature 399 °C	@Temperature 750 °F	

Component Elements Properties	Metric	English	Comments
Carbon, C	0.50 %	0.50 %	
Chromium, Cr	3.3 %	3.3 %	
Iron, Fe	93.7 %	93.7 %	As Balance
Manganese, Mn	0.80 %	0.80 %	
Molybdenum, Mo	1.4 %	1.4 %	
Silicon, Si	0.30 %	0.30 %	

Descriptive Properties	Value	Comments
Color Code	Black	

Contact Songhan Plastic Technology Co.,Ltd.

Website : www.lookpolymers.com

Email : sales@lookpolymers.com

Tel : +86 021-51131842

Mobile : +86 13061808058

Skype : lookpolymers

Address : United North Road 215,Fengxian District, Shanghai City,China