

Schmolz + Bickenbach Cryodur® 2767 Cold Work Die Steel

Category : Metal , Ferrous Metal , Tool Steel , Cold Work Steel

Material Notes:

Description: High hardenability and toughness, highly suitable for polishing, texturing and EDM machining. We recommend the use of Cryodur® 2767 (ERS) for extreme demands Applications: Cutlery dies, cutting tools for thick material, billet-sheer blades, drawing jaws, massive embossing and bending tools, plastic moulds, reinforcements. Hardening (Heat Treatment): 840°C-870°C; Quenching: Air, oil or salt bath, 180-220°C; Hardness: 56 HRC Quenched Information provided by Schmolz + Bickenbach

Order this product through the following link:

http://www.lookpolymers.com/polymer_Schmolz-Bickenbach-Cryodur-2767-Cold-Work-Die-Steel.php

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell C	38	38	
	@Treatment Temp. 600.0 °C	@Treatment Temp. 1112 °F	
	42	42	
	@Treatment Temp. 500 °C	@Treatment Temp. 932 °F	
	46	46	
	@Treatment Temp. 400 °C	@Treatment Temp. 752 °F	
	50	50	
@Treatment Temp. 300 °C	@Treatment Temp. 572 °F		
54	54		
@Treatment Temp. 200 °C	@Treatment Temp. 392 °F		
56	56		
@Treatment Temp. 100 °C	@Treatment Temp. 212 °F		

Thermal Properties	Metric	English	Comments
CTE, linear	11.7 µm/m-°C	6.50 µin/in-°F	Annealed
	@Temperature 20.0 - 100 °C	@Temperature 68.0 - 212 °F	
	12.0 µm/m-°C	6.67 µin/in-°F	Quenched and Tempered
@Temperature 20.0 - 100 °C	@Temperature 68.0 - 212 °F		
	12.5 µm/m-°C	6.94 µin/in-°F	

Thermal Properties	Metric	English	Comments
	@Temperature 20.0 - 200 °C	@Temperature 68.0 - 392 °F	Quenched and Tempered
	12.6 µm/m-°C	7.00 µin/in-°F	Annealed
	@Temperature 20.0 - 200 °C	@Temperature 68.0 - 392 °F	
	13.0 µm/m-°C	7.22 µin/in-°F	Quenched and Tempered
	@Temperature 20.0 - 300 °C	@Temperature 68.0 - 572 °F	
	13.1 µm/m-°C	7.28 µin/in-°F	Annealed
	@Temperature 20.0 - 300 °C	@Temperature 68.0 - 572 °F	
Thermal Conductivity	27.7 W/m-K	192 BTU-in/hr-ft ² -°F	Quenched and Tempered
	@Temperature 100 °C	@Temperature 212 °F	
	29.0 W/m-K	201 BTU-in/hr-ft ² -°F	Quenched and Tempered
	@Temperature 150 °C	@Temperature 302 °F	
	29.7 W/m-K	206 BTU-in/hr-ft ² -°F	Quenched and Tempered
	@Temperature 200 °C	@Temperature 392 °F	
	30.5 W/m-K	212 BTU-in/hr-ft ² -°F	Quenched and Tempered
	@Temperature 250 °C	@Temperature 482 °F	
	31.0 W/m-K	215 BTU-in/hr-ft ² -°F	Quenched and Tempered
	@Temperature 300 °C	@Temperature 572 °F	
	38.2 W/m-K	265 BTU-in/hr-ft ² -°F	Annealed
	@Temperature 100 °C	@Temperature 212 °F	
	38.6 W/m-K	268 BTU-in/hr-ft ² -°F	Annealed
	@Temperature 150 °C	@Temperature 302 °F	
	38.9 W/m-K	270 BTU-in/hr-ft ² -°F	Annealed
	@Temperature 200 °C	@Temperature 392 °F	
	39.1 W/m-K	271 BTU-in/hr-ft ² -°F	Annealed
	@Temperature 250 °C	@Temperature 482 °F	
	39.6 W/m-K	275 BTU-in/hr-ft ² -°F	Annealed
	@Temperature 300 °C	@Temperature 572 °F	

Component Elements Properties	Metric	English	Comments
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Carbon C Component Elements Properties	0.45 % Metric	0.45 % English	Comments
Chromium, Cr	1.4 %	1.4 %	
Iron, Fe	93.35 %	93.35 %	
Manganese, Mn	0.35 %	0.35 %	
Molybdenum, Mo	0.20 %	0.20 %	
Nickel, Ni	4.0 %	4.0 %	
Silicon, Si	0.25 %	0.25 %	

Processing Properties	Metric	English	Comments
Annealing Temperature	600.0 - 650.0 °C	1112 - 1202 °F	Stress-relief; Cooling: Furnace
	610 - 650.0 °C	1130 - 1202 °F	Soft; Cooling: Furnace; <260 HB

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