

## Schmolz + Bickenbach Thermotur® 2999 Hot Work Die Steel

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

### Material Notes:

Description: Maximum high-temperature strength, good high-temperature wear resistance, excellent thermal shock resistance and thermal conductivity across the entire range of service temperatures Applications: Die inserts and high-speed forging tools exposed to severe wear stresses, heavy metal die casting, hot-work tool steels for use at highest temperatures. Hardening (Heat Treatment): 1070°C- 1100°C; Quenching: Oil or hot bath, 500-550°C; Hardness: 57 HRC Quenched Information provided by Schmolz + Bickenbach

Order this product through the following link:

[http://www.lookpolymers.com/polymer\\_Schmolz-Bickenbach-Thermotur-2999-Hot-Work-Die-Steel.php](http://www.lookpolymers.com/polymer_Schmolz-Bickenbach-Thermotur-2999-Hot-Work-Die-Steel.php)

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell C	46	46	
	@Treatment Temp. 650.0 °C	@Treatment Temp. 1202 °F	
	53	53	
	@Treatment Temp. 600.0 °C	@Treatment Temp. 1112 °F	
	54	54	
	@Treatment Temp. 200 °C	@Treatment Temp. 392 °F	
	54	54	
	@Treatment Temp. 300 °C	@Treatment Temp. 572 °F	
	55	55	
@Treatment Temp. 100 °C	@Treatment Temp. 212 °F		
55	55		
@Treatment Temp. 400 °C	@Treatment Temp. 752 °F		
56	56		
@Treatment Temp. 500 °C	@Treatment Temp. 932 °F		
57	57		
@Treatment Temp. 550.0 °C	@Treatment Temp. 1022 °F		

Thermal Properties	Metric	English	Comments
	11.3 µm/m-°C	6.28 µin/in-°F	

Thermal Properties	Metric	English	Comments
	@ Temperature 20.0 - 100 Â°C	@ Temperature 68.0 - 212 Â°F	
	11.9 Âµm/m-Â°C	6.61 Âµin/in-Â°F	
	@ Temperature 20.0 - 200 Â°C	@ Temperature 68.0 - 392 Â°F	
	12.2 Âµm/m-Â°C	6.78 Âµin/in-Â°F	
	@ Temperature 20.0 - 300 Â°C	@ Temperature 68.0 - 572 Â°F	
	12.6 Âµm/m-Â°C	7.00 Âµin/in-Â°F	
	@ Temperature 20.0 - 400 Â°C	@ Temperature 68.0 - 752 Â°F	
	13.0 Âµm/m-Â°C	7.22 Âµin/in-Â°F	
	@ Temperature 20.0 - 500 Â°C	@ Temperature 68.0 - 932 Â°F	
	13.3 Âµm/m-Â°C	7.39 Âµin/in-Â°F	
	@ Temperature 20.0 - 600.0 Â°C	@ Temperature 68.0 - 1112 Â°F	
	13.5 Âµm/m-Â°C	7.50 Âµin/in-Â°F	
	@ Temperature 20.0 - 700.0 Â°C	@ Temperature 68.0 - 1292 Â°F	
Thermal Conductivity	31.4 W/m-K	218 BTU-in/hr-ftÂ²-Â°F	Quenched and Tempered
	@ Temperature 20.0 Â°C	@ Temperature 68.0 Â°F	
	35.2 W/m-K	244 BTU-in/hr-ftÂ²-Â°F	Quenched and Tempered
	@ Temperature 350 Â°C	@ Temperature 662 Â°F	
	36.2 W/m-K	251 BTU-in/hr-ftÂ²-Â°F	Quenched and Tempered
	@ Temperature 700.0 Â°C	@ Temperature 1292 Â°F	
	37.8 W/m-K	262 BTU-in/hr-ftÂ²-Â°F	Annealed
	@ Temperature 20.0 Â°C	@ Temperature 68.0 Â°F	
	39.5 W/m-K	274 BTU-in/hr-ftÂ²-Â°F	Annealed
	@ Temperature 350 Â°C	@ Temperature 662 Â°F	
	39.5 W/m-K	274 BTU-in/hr-ftÂ²-Â°F	Annealed
	@ Temperature 700.0 Â°C	@ Temperature 1292 Â°F	

Component Elements Properties	Metric	English	Comments
Carbon, C	0.45 %	0.45 %	
Chromium, Cr	3.0 %	3.0 %	
Iron, Fe	89.95 %	89.95 %	
Manganese, Mn	0.30 %	0.30 %	
Molybdenum, Mo	5.0 %	5.0 %	
Silicon, Si	0.30 %	0.30 %	
Vanadium, V	1.0 %	1.0 %	

Processing Properties	Metric	English	Comments
Annealing Temperature	399 - 427 Â°C	750 - 800 Â°F	Soft; Cooling: Furnace; <230 HB

## Contact Songhan Plastic Technology Co.,Ltd.

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