

Industeel CREUSABRO® 4000 High Wear Resistant Steel

Category : Metal , Ferrous Metal , Carbon Steel , Medium Carbon Steel

Material Notes:

Description: CREUSABRO® 4000 is a high wear resistant steel, offering a 30 % extra in service life compared to a conventional 400 HB water quenched. Improved properties of CREUSABRO® 4000 result of the combination of an enriched analysis (chromium and molybdenum) and specific heat treatment procedures. More than hardness, the wear resistance of CREUSABRO® 4000 is based on :a very fine distribution of chromium and molybdenum microcarbides reinforcing the microstructure with the same principal as composite materials a very efficient work hardening capability in service, coming from a metallurgic effect called TRIP effect (Transformation Induced by Plasticity) Together with its high wear properties, CREUSABRO® 4000 exhibits very good aptitude to processing. Especially, the limited hardness in delivery condition, strongly facilitates processing operations like cutting, machining and forming. Application markets of CREUSABRO® 4000 are : mines, quarries, cement industries, tool making, public works. It can be used in all environments, sliding, impact abrasion, in dry, wet or hot conditions (350°C / 662°F max) Information provided by manufacturer.

Order this product through the following link:

http://www.lookpolymers.com/polymer_Industeel-CREUSABRO-4000-High-Wear-Resistant-Steel.php

Mechanical Properties	Metric	English	Comments
Hardness, Brinell	340 - 400	340 - 400	Typical
Tensile Strength, Ultimate	1200 MPa	174000 psi	Typical
Tensile Strength, Yield	900 MPa @Strain 0.200 %	131000 psi @Strain 0.200 %	Typical
Elongation at Break	12 %	12 %	Typical
Modulus of Elasticity	205 GPa	29700 ksi	Typical
Charpy Impact	>= 30.0 J	>= 22.1 ft-lb	
	@Temperature -20.0 °C	@Temperature -4.00 °F	
	45.0 J @Temperature -20.0 °C	33.2 ft-lb @Temperature -4.00 °F	Typical

Thermal Properties	Metric	English	Comments
CTE, linear	12.2 Åµm/m-Å°C	6.78 Åµin/in-Å°F	
	@Temperature 20.0 - 100 Å°C	@Temperature 68.0 - 212 Å°F	
	12.5 Åµm/m-Å°C	6.94 Åµin/in-Å°F	
	@Temperature 20.0 - 300 Å°C	@Temperature 68.0 - 572 Å°F	

Thermal Properties	12.8 Åµm/m-Å°C Metric	7.11 Åµin/in-Å°F English	Comments
	@Temperature 20.0 - 200 Å°C	@Temperature 68.0 - 392 Å°F	
	13.9 Åµm/m-Å°C	7.72 Åµin/in-Å°F	
	@Temperature 20.0 - 500 Å°C	@Temperature 68.0 - 932 Å°F	

Component Elements Properties	Metric	English	Comments
Carbon, C	<= 0.20 %	<= 0.20 %	
Chromium, Cr	>= 0.85 %	>= 0.85 %	
Iron, Fe	<= 97.9 %	<= 97.9 %	As remainder
Manganese, Mn	>= 0.90 %	>= 0.90 %	
Molybdenum, Mo	>= 0.15 %	>= 0.15 %	
Nickel, Ni	0.20 %	0.20 %	
Sulfur, S	<= 0.0050 %	<= 0.0050 %	

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