

Industeel CREUSABRO® 4800 Advanced Technology in Wear Steel

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

Material Notes:

Description: CREUSABRO® 4800(P) is a wear resistant steel offering up to 50% extra in service life compared with a 400 HB water quenched steel. CREUSABRO® 4800(P) combines several modern metallurgical concepts which, depending on thickness, use different combinations of an enriched chemical analysis (Cr, Mo, Ti) and controlled quenching rate. Creusabro® 4800(P) is designed to provide the optimum combination of wear resistance controlled hardness and ease of processing. Rather than using just a high hardness level, it achieves this aim by using proven and controlled metallurgical mechanisms, which are more complex but more efficient than the simple effect of hardness alone. Work-hardening and Cr Mo micro-carbides, the basic CREUSABRO® concept TRIP (Transformation Induced by Plasticity) effect originally developed with CREUSABRO® 8000 Reinforcement of the structure with Titanium carbides. The limited as delivered hardness of Creusabro® 4800(P) makes processing operations like cutting, machining and forming no more difficult than processing 400HB water quenched steel. Creusabro® 4800(P) is ideal for applications in mines and quarries, cement and the Steelmaking industries, public works and agricultural machinery. It is suitable for all types of abrasion, sliding or impact, dry or wet media including high temperature abrasion up to 350°C. Information provided by manufacturer.

Order this product through the following link:

http://www.lookpolymers.com/polymer_Industeel-CREUSABRO-4800-Advanced-Technology-in-Wear-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	131000 psi	Typical
Elongation at Break	12 %	12 %	Typical
Modulus of Elasticity	205 GPa	29700 ksi	Typical
Charpy Impact	45.0 J @Temperature -20.0 °C	33.2 ft-lb @Temperature -4.00 °F	Typical

Thermal Properties	Metric	English	Comments
CTE, linear	12.4 µm/m-°C	6.89 µin/in-°F	
	@Temperature 20.0 - 100 °C	@Temperature 68.0 - 212 °F	
	13.1 µm/m-°C	7.28 µin/in-°F	
	@Temperature 20.0 - 200 °C	@Temperature 68.0 - 392 °F	
	13.9 µm/m-°C	7.72 µin/in-°F	
	@Temperature 20.0 -	@Temperature 68.0 -	

Thermal Properties	300 Å°C Metric	572 Å°F English	Comments
	14.7 Åµm/m-Å°C	8.17 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	<= 1.9 %	<= 1.9 %	
Iron, Fe	95.477 - 99.8 %	95.477 - 99.8 %	As remainder
Manganese, Mn	<= 1.6 %	<= 1.6 %	
Molybdenum, Mo	<= 0.40 %	<= 0.40 %	
Nickel, Ni	0.20 %	0.20 %	
Phosphorous, P	<= 0.018 %	<= 0.018 %	
Sulfur, S	<= 0.0050 %	<= 0.0050 %	
Titanium, Ti	<= 0.20 %	<= 0.20 %	

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