

Meehanite GM-60 Flake Graphite Cast Iron

Category : Metal , Ferrous Metal , Cast Iron , Gray Cast Iron

Material Notes:

Type GM-60 possesses exceptionally high physical properties, including good impact strength and shock resistance. GM-60 responds well to heat treatment and surface hardening. Type GM machines to a very fine finish and is recommended for heavy section casting where pressure tightness is required. General Meehanite information - Meehanite metal is first melted to a definite degree of undercooling or constitution which is related to the section of the casting to be poured and the range of physical properties such as tensile strength and hardness required. Nucleation with patented mixtures of graphitizing agents results in the removal of undercooling, in the controlled precipitation of graphite and in a fine grained eutectic cell structure which determines the density and physical integrity of the casting. Ordinary cast irons made to chemical specifications which do not include the benefit of controlled undercooling are influenced by mass effect to a maximum degree and for this and other reasons cannot be considered an equivalent to Meehanite metal. Information provided by Meehanite Marketing Association.

Order this product through the following link:

http://www.lookpolymers.com/polymer_Meehanite-GM-60-Flake-Graphite-Cast-Iron.php

Physical Properties	Metric	English	Comments
Specific Gravity	7.34 g/cc	7.34 g/cc	

Mechanical Properties	Metric	English	Comments
Hardness, Brinell	230	230	Nominal
Tensile Strength, Ultimate	414 MPa	60000 psi	
Tensile Strength, Yield	172 MPa	25000 psi	.01% permanent set
Modulus of Elasticity	148 GPa	21500 ksi	
Modulus of Rupture	0.641 GPa	93.0 ksi	
Compressive Strength	1380 MPa	200000 psi	
Poissons Ratio	0.33	0.33	
Fatigue Strength	172 MPa	25000 psi	
Machinability	50 %	50 %	Dalcher
Shear Modulus	65.5 GPa	9500 ksi	
Shear Strength	365 MPa	53000 psi	
Izod Impact Unnotched	40.7 - 54.2 J	30.0 - 40.0 ft-lb	
	@Diameter 20.3 mm	@Diameter 0.798 in	

Thermal Properties	Metric	English	Comments
CTE, linear	12.7 $\mu\text{m}/\text{m}\cdot\text{Å}^\circ\text{C}$	7.05 $\mu\text{in}/\text{in}\cdot\text{Å}^\circ\text{F}$	
	@Temperature 37.8 - 538 $\text{Å}^\circ\text{C}$	@Temperature 100 - 1000 $\text{Å}^\circ\text{F}$	
Thermal Conductivity	51.2 W/m-K	355 BTU-in/hr-ft $\text{Å}^2\cdot\text{Å}^\circ\text{F}$	
	@Temperature 10.0 - 232 $\text{Å}^\circ\text{C}$	@Temperature 50.0 - 450 $\text{Å}^\circ\text{F}$	
Shrinkage	1.3 - 1.5 %	1.3 - 1.5 %	Patternmaker Shrinkage

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