

Symmco Typical Properties

Material Composition %

MATERIAL COMPOSITION	SINTERED BRONZE	SINTERED IRON-COPPER
Copper	Balance	18 - 22
Iron	1.0 Max	Balance
Tin	9.5 - 10.5	
Carbon/Graphite	0.3 Max	0.3 Max
Other elements	1.0 Max	2.0 Max

Physical & Mechanical Properties

MATERIAL COMPOSITION	SINTERED BRONZE	SINTERED IRON-COPPER
Density (g/cm³)	6.4 - 6.8	5.8 - 6.2
Porosity (% by volume)	19 Min.	19 Min.
App. Rockwell Hardness as Sintered (Ref. Only)	H-45	F-35
K-Strength Constant	26,500	30,000

Comparable Specifications

MATERIAL COMPOSITION	SINTERED BRONZE	SINTERED IRON-COPPER
ASTM	B438-13 CT-1000-K26 Previously Grade 1; Type 2	B-439-12 FC-2000-K30 Previously Grade 4
MPIF	CT-1000-K26	FC-2000-K30
SAE	AMS-4805-E Previously 841	Previously 863
Military	MIL-B-5687D Type 1; Grade 1	MIL-B-5687D Type 2; Grade 4
Symmco Designation	Sym 1	Sym 77
Overview	Standard high quality bearing material. Stocked in standard bearing sizes as well as bar and plate stock. Highly wear resistant, ductile and corrosion resistant.	More economical than bronze. Moderately higher strength rating. Lower PV value. Stocked in cored and solid bar stock.
Applications	Business machines, lawn & garden, home appliances, conveyors, water pumps, industrial motors, tool & hobby, motion controls, hydraulics, farm machinery, mining equipment	Farm machinery, ATV's, pulleys, sheaves, wheel bearings, machine tools

NOTE: This data is based on parts as manufactured by Symmco.