

Special Metals NILOMAG® Alloy 77

Category: Metal, Electronic/Magnetic Alloy, Nonferrous Metal, Nickel Alloy, Superalloy

Material Notes:

A nickel-iron alloy with additions of copper and molybdenum. It is a low-loss, soft-magnetic alloy with a high initial permeability. Initial permeability 60,000; maximum permeability 300,000; saturation inductance 0.63 T; Remanence 0.39 T; coercivity 0.80 A/m. The alloy is particularly useful for applications in which power requirements must be minimized. Used for transformers, inductors, magnetic amplifiers, switching cores, magnetic shields, tape-recorder heads, and memory storage devices. Standard product forms are sheet and strip.Data provided by the manufacturer, Special Metals.

Order this product through the following link:

http://www.lookpolymers.com/polymer_Special-Metals-NILOMAG-Alloy-77.php

Physical Properties	Metric	English	Comments
Density	8.77 g/cc	0.317 lb/in³	

Mechanical Properties	Metric	English	Comments
Hardness, Brinell	124	124	Estimated from Vickers.
Hardness, Knoop	143	143	Estimated from Vickers.
Hardness, Rockwell A	43	43	Estimated from Vickers.
Hardness, Rockwell B	70	70	Estimated from Vickers.
Hardness, Vickers	125	125	Annealed
Tensile Strength, Ultimate	540 MPa	78300 psi	Annealed

Component Elements Properties	Metric	English	Comments
Carbon, C	0.020 %	0.020 %	
Copper, Cu	5.0 %	5.0 %	
Iron, Fe	13.5 %	13.5 %	
Molybdenum, Mo	4.2 %	4.2 %	
Nickel, Ni	77 %	77 %	

Electrical Properties	Metric	English	Comments
Electrical Resistivity	0.0000600 ohm-cm	0.0000600 ohm-cm	
Magnetic Permeability	60000	60000	Initial value
	<= 300000	<= 300000	



Electrical Properties Metric English Comments

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