

## AK Steel DI-MAX® M-45 Nonoriented Electrical Steel

Category : Metal , Electronic/Magnetic Alloy

### Material Notes:

Nonoriented electrical steels are silicon steels in which magnetic properties are practically the same in any direction of magnetism in the plane of the material. Standard grades from M-15 to M-47 are available with the advantages of special DI-MAX® processing that enhance the magnetic properties. DI-MAX grades have superior permeability at high inductions, low average core loss and good gauge uniformity. In addition, cold finishing plus strip annealing produce a smooth surface and reduce buckles and waves, resulting in excellent flatness and a high stacking factor. AK Steel Nonoriented Electrical Steels are available both Fully Processed and Semi-Processed, depending on grade. Properties of Fully Processed material are developed completely by AK Steel. These materials are ready for use without any additional processing required. However, a low-temperature heat treatment may be employed by the user to eliminate stresses introduced by fabrication of the material into cores. AK Steel Fully Processed Nonoriented Electrical Steels meet all the requirements of ASTM Specification A 677. Semi-Processed steels are finished to final thickness and physical form by AK Steel, but are not fully annealed to develop final magnetic quality. With these materials, achievement of magnetic properties becomes the responsibility of the user. AK Steel Semi-Processed Nonoriented Electrical Steels meet all requirements of ASTM A 683. DI-MAX M-45 is Fully Processed Applications for M-43: Small Motors and Generators (

Order this product through the following link:

[http://www.lookpolymers.com/polymer\\_AK-Steel-DI-MAX-M-45-Nonoriented-Electrical-Steel.php](http://www.lookpolymers.com/polymer_AK-Steel-DI-MAX-M-45-Nonoriented-Electrical-Steel.php)

Electrical Properties	Metric	English	Comments
Electrical Resistivity	0.0000370 ohm-cm	0.0000370 ohm-cm	Fully Processed and Semi-Processed

Magnetic Properties	Metric	English	Comments
Core Loss	4.52 W/kg	2.05 W/lb	0.014" (29 gauge); ASTM A677
	@Magnetic Field 1.50 T, Frequency 60.0 Hz	@Magnetic Field 1.50 T, Frequency 60.0 Hz	
	5.29 W/kg	2.40 W/lb	
	@Magnetic Field 1.50 T, Frequency 60.0 Hz	@Magnetic Field 1.50 T, Frequency 60.0 Hz	0.0185" (26 gauge); ASTM A677
	6.06 W/kg	2.75 W/lb	0.025" (24 gauge); ASTM A677
	@Magnetic Field 1.50 T, Frequency 60.0 Hz	@Magnetic Field 1.50 T, Frequency 60.0 Hz	

Descriptive Properties	Value	Comments
Coercive Force (Oe)	0.50	B<sub>max</sub> = 10kG
Hysteresis loss (J/lb/cycle)	0.0083	B<sub>max</sub> = 10kG

Maximum Permeability Descriptive Properties	7200 Value	Comments
Saturation Induction Kilogausses	20.8	

## Contact Songhan Plastic Technology Co.,Ltd.

Website : [www.lookpolymers.com](http://www.lookpolymers.com)

Email : [sales@lookpolymers.com](mailto:sales@lookpolymers.com)

Tel : +86 021-51131842

Mobile : +86 13061808058

Skype : lookpolymers

Address : United North Road 215,Fengxian District, Shanghai City,China