

## AK Steel CARLITE® M-4 Grain Oriented Electrical Steel (Extended Electro-Magnetic Data)

Category : Metal , Electronic/Magnetic Alloy

### Material Notes:

Oriented Electrical Steels are iron-silicon alloys that were developed to provide the low core loss and high permeability required for efficient and economical electrical transformers. First produced commercially by AK Steel, these magnetic materials exhibit their superior magnetic properties in the rolling direction. This directionality occurs because the steels are specially processed to create a very high proportion of grains within the steel which have similarly oriented atomic crystalline structures relative to the rolling direction. In iron-silicon alloys, this atomic structure is cubic and the crystals are most easily magnetized in a direction parallel to the cube edges. By a combination of precise steel composition, rigidly controlled cold rolling and annealing procedures, the crystals of these oriented electrical steels are aligned with their cube edges nearly parallel to the direction in which the steel is rolled. Consequently, they provide superior permeability and lower core loss when magnetized in this direction. AK Steel's CARLITE grain Oriented Electrical Steels (GOES) products are supplied with CARLITE 3 insulative coating, an inorganic coating equivalent to ASTM A976 C-5. CARLITE 3 insulation is ideal for materials that will be used in the form of sheared laminations for power transformers and other apparatus with high volts per turn. In addition to supplying all the benefits of C-5 insulation, CARLITE 3 provides other important advantages which include: Potential for reduced transformer building factor from added resistance to elastic strain damage Potential for reduction of magnetostriction related transformer noise High stacking factor Easy assembly due to smoothness of coating (low coefficient of friction)Information provided by AK Steel

Order this product through the following link:

[http://www.lookpolymers.com/polymer\\_AK-Steel-CARLITE-M-4-Grain-Oriented-Electrical-Steel-Extended-Electro-Magnetic-Data.php](http://www.lookpolymers.com/polymer_AK-Steel-CARLITE-M-4-Grain-Oriented-Electrical-Steel-Extended-Electro-Magnetic-Data.php)

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