

Goodfellow Nanocrystalline Nickel

Category : Metal , Nonferrous Metal , Nickel Alloy , Pure Element

Material Notes:

Nickel with a grain size of the order of 5-30 nanometers can now be produced by a technologically advanced electroplating process, resulting in material of negligible porosity and greatly enhanced physical, mechanical and electrical properties. Hardness is increased fivefold, strength is tripled and wear resistance is increased by a factor of 150. The coefficient of friction is halved and electrical resistivity is increased threefold. Stress corrosion cracking is eliminated, and both hydrogen diffusivity and solubility are increased. However, density, tensile modulus, thermal expansion and saturation magnetization show very little change when compared with material of a larger grain size. The above properties lead to use as coatings on softer, less wear resistant materials. Superior electrocatalytic properties are produced and thus the material may be used as electrodes for hydrogen evolution. As the room temperature magnetization is unchanged, the higher hardness, electrical resistivity and corrosion performance lead to performance-enhanced soft magnets such as recording heads for magnetic data storage. Information provided by Goodfellow.

Order this product through the following link:

http://www.lookpolymers.com/polymer_Goodfellow-Nanocrystalline-Nickel.php

Component Elements Properties	Metric	English	Comments
Nickel, Ni	100 %	100 %	

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