

BACT Dylyn® Diamond-Like Nanocomposite Coating

Category : Carbon , Diamond , Other Engineering Material , Ceramic/Metallic Coating

Material Notes:

a-C:H/a-Si:O nanocomposite. This coating provides the lowest friction of the BACT products, even in high humidity or wet environments. It offers an excellent combination of anti-stick and wear behavior. Typical applications include printer-copier equipment, biomedical, and others. Applied using a PACVD (plasma-assisted physical vapor deposition) coating method. Diamond-like coatings are amorphous carbon-based coatings that exhibit high hardness and low coefficients of friction. Their unique composition and structure result in excellent wear resistance and non-stick characteristics. These coatings are thin, chemically inert, corrosion resistant, have minimal particulate contamination, tailorable electrical resistivities, and have a very low surface roughness. Information provided by Bekaert Advanced Coating Technologies (BACT).

Order this product through the following link:

http://www.lookpolymers.com/polymer_BACT-Dylyn-Diamond-Like-Nanocomposite-Coating.php

Physical Properties	Metric	English	Comments
Thickness	0.100 - 6.00 microns	0.00394 - 0.236 mil	Coating Thickness

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell C	64 - 78	64 - 78	
Coefficient of Friction	0.050 - 0.10	0.050 - 0.10	Dry vs. Steel
K (wear) Factor	10.0 - 100 x 10 ⁻⁸ mm ³ /N-M	4.96 - 49.6 x 10 ⁻¹⁰ in ³ -min/ft-lb-hr	

Thermal Properties	Metric	English	Comments
Maximum Service Temperature, Air	400 °C	752 °F	

Electrical Properties	Metric	English	Comments
Electrical Resistivity	1.00e+8 - 1.00e+12 ohm-cm	1.00e+8 - 1.00e+12 ohm-cm	
Dielectric Strength	100 - 350 kV/mm	2540 - 8890 kV/in	Thickness up to 1 µm

Processing Properties	Metric	English	Comments
Processing Temperature	150 - 200 °C	302 - 392 °F	Coating Temperature

Descriptive Properties	Value	Comments
Microhardness	8 - 18 GPa	
Surface Energy	20 - 40 mN/m	

Descriptive Properties

Value

Comments

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