

## BACT DLC Diamond-Like Coating

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

### Material Notes:

DLC (a-C:H). This coating provides the highest hardness and abrasion resistance of the BACT products. Typical applications include high wear environments involving seals, molds, metal forming, and powder compaction. 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-DLC-Diamond-Like-Coating.php](http://www.lookpolymers.com/polymer_BACT-DLC-Diamond-Like-Coating.php)

Physical Properties	Metric	English	Comments
Thickness	0.100 - 4.00 microns	0.00394 - 0.157 mil	Coating Thickness

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell C	77 - 82	77 - 82	
Coefficient of Friction	0.10 - 0.20	0.10 - 0.20	Dry vs. Steel
K (wear) Factor	1.00 - 5.00 x 10 <sup>-8</sup> mm <sup>3</sup> /N-M	0.496 - 2.48 x 10 <sup>-10</sup> in <sup>3</sup> -min/ft-lb-hr	

Thermal Properties	Metric	English	Comments
Maximum Service Temperature, Air	300 °C	572 °F	

Electrical Properties	Metric	English	Comments
Electrical Resistivity	1.00e+6 - 1.00e+12 ohm-cm	1.00e+6 - 1.00e+12 ohm-cm	
Dielectric Strength	100 - 200 kV/mm	2540 - 5080 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	18 - 25 GPa	
Surface Energy	40 - 50 mN/m	

## Contact Songhan Plastic Technology Co.,Ltd.

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