

## Diamolith

A coating of extreme hardness and low friction produced by Plasma Enhanced Chemical Vapour Deposition (PECVD). The material contains carbon and hydrogen bonded in  $sp^3$  and  $sp^2$  structures resulting the excellent combination of mechanical properties.

The coating is a very dark grey to black colour and very smooth in texture. Deposition temperatures are low and the coating can be successfully applied to steel, aluminium and titanium alloy substrates.

## Typical Properties:

Coating Thickness	3 - 5um
Hardness	4500Hv
Coefficient of Friction	0.05 (self) 0.1 (steel)
Electrical Resistivity	$10^8$ ohm cm
Process Temperature	200 - 300° C
Max Operating Temp	400° C



## Applications

Tools for Forming and Punching

Wear Parts and Components

Plastic Moulding Tools

Biomedical Implants

Diamond-like Carbon Coatings (DLC) can be applied in a wide range of applications where the exciting combination of hardness and lubricity can extend life and improve performance.

For tooling the high abrasion resistance and low sticking properties can improve life and decrease production costs.

Many mechanical wear parts can benefit especially in low and marginal lubrication conditions.

The coating has good bio-compatibility with no inflammatory response and low platelet adherence. Making the process attractive for the coating of many types of biomedical implant.

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