

Applications: mould release, non-stick, low friction, low wear, hydrophobicity

100% fluoropolymer - no primers, solvents, or binders

Single-step, dry, room temperature application

ENBIO applies PTFE, FEP and PFA using CoBlast to produce fluoropolymer (FP) coatings with unique properties. Like conventional FP coatings, they can improve mould release and non-stick properties, reduce friction and wear, and increase hydrophobicity. Unlike conventional FP's, ENBIO applies them without any primers, solvents, binders, or other additives, maximising the FP properties of the surface. The coatings are typically just 2-5 microns thick and very resistant to damage due to the integration with the substrate created by the CoBlast process.

### Customised surface finish

The surface texture of CoBlast FP coatings can be tailored by selecting the abrasive and process parameters used. Roughness (Ra) values between 1 and 5 microns are typical, and other values may be available by request. This feature is particularly useful where, for example moulded parts require a specific surface texture or appearance.

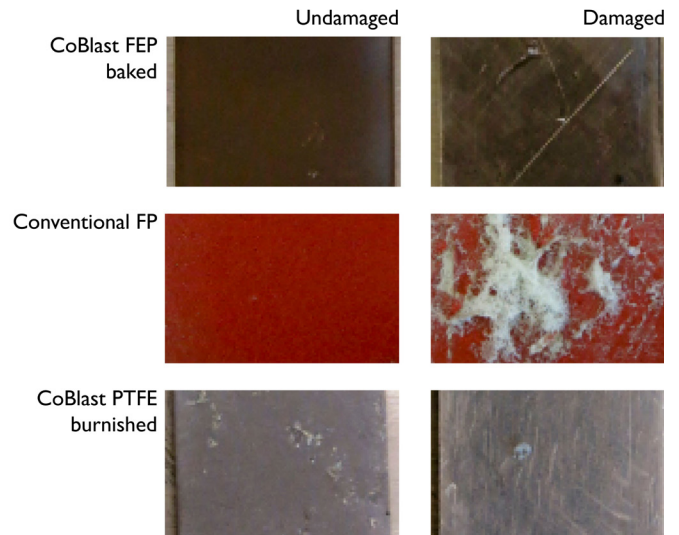
### Room temperature application

CoBlast FP's are applied in a single step at room temperature and can be used without any further treatment for lubrication and some mould release or non-stick applications. Metals that would be damaged by the conventional FP baking process, such as nitinol and many aluminium alloys, can be safely treated. These CoBlast FP coatings are relatively porous, and a subsequent room temperature burnishing process may be recommended to reduce porosity for more demanding mould release applications.

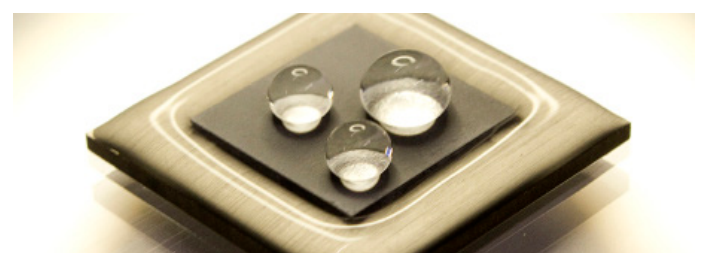
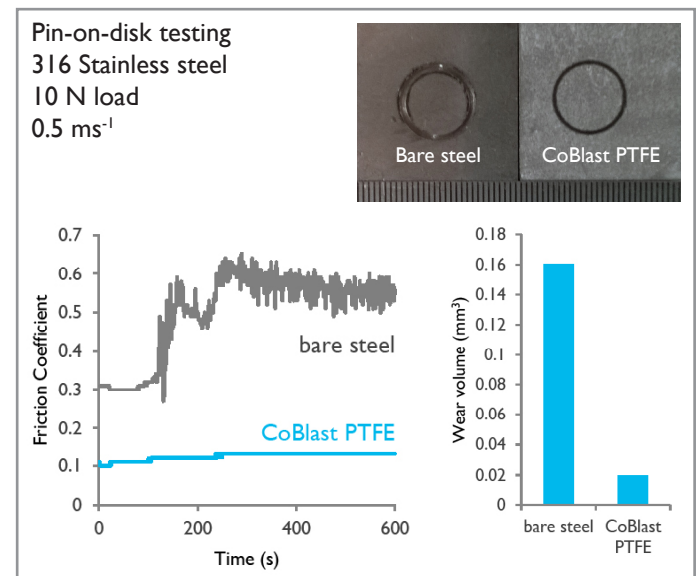
### Optional baking or top-coat

CoBlast FP's can be baked at similar conditions to conventional FP's to reduce porosity and provide a smooth, glossy surface. Where the substrate can tolerate the baking step - approximately 390°C for 20 minutes - this option is recommended for maximum release properties or where any loose particles must

be eliminated from the surface. This also allows a glossy finish to be transferred to moulded parts. Where a complete barrier coating is needed, a conventional FP top-coat is required as CoBlast FP's do not produce a complete barrier. However, CoBlast FP's can act as excellent primers for these top-coats, potentially replacing undesirable primers such as PFOA with a CoBlast layer of the FP used in the top-coat.



Polyurethane adhesion tests on CoBlast and conventional FP coatings, before and after simulating damage that might occur in use. The CoBlast coatings are highly damage tolerant.



Hydrophobic PTFE coated stainless steel plate

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