



SBBT Surface Treatment

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As an alternative to the SSHT non-stick treatment for O rings and rotary shaft seals, Blue Diamond is introducing its innovative SBBT enhanced surface treatment. SBBT provides similar advantages of low start-up and running friction, with the added benefits of extending wear life, retarding ageing of rubber and improving corrosion resistance of metal substrates.

Whereas SSHT involves a molecular depth alteration in surface characteristics, SBBT bonds an ultra-thin PTFE coating to the base rubber or plastic component and can, in principle, also be applied to metal or wood.

Coating Thickness

Coating thickness is typically between 5 and 15 microns and can be up to 25 microns, reducing the static coefficient of friction to about 0.05 to 0.07. This means minimal energy loss in dynamic applications, and is particularly important for avoiding torque loss in low power drives.

Durability

SBBT has a longer wear life than pure PTFE coatings and can be applied with a much more uniform thickness of material, enhancing the surface with lower friction, improved corrosion resistance and good release properties.

The clean, dry film protects substrates from oils, alcohol, fuels, some inorganic acids and dirt and contaminants which might otherwise shorten the life of the product, retaining high flexibility over a wide temperature range. It does not deteriorate during storage or where components remain dormant for long periods between spasmodic operations. SBBT treated O rings and seals are easier to assemble, without a need for messy pregreasing operations.

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Customisable

The coatings are available in a range of attractive colours to enable quick differentiation between types or duties.

Benefits

The SBBT materials are a family of new phenolic resin bonded PTFE coatings which have excellent surface adhesion properties compared to earlier PTFE coatings giving the following benefits:

- Low coefficient of friction
- Excellent surface adhesion
- Ultra-Thin Coating
- Retarded ageing of rubber
- Corrosion resistance for metals
- Good release properties
- Flexibility over wide temperature range
- Extended seal wear life
- Unaffected by oils
- Alcohol & Gasoline resistant
- Resists some inorganic acids