Technical Data Sheet & Application Guide

BX520HT Clear Nano-Ceramic Primer

BX520HT is a High-Performance, High-Temperature Adhesion Promoting Primer, compatible with all nano ceramic coatings and a wide variety of substrates, and allows other Top Coats to be applied successfully.

For use on all surfaces, designed to create intrinsic bonding to the most "difficult of surfaces & products," can even create a bond to silicon surfaces, polyethylene (PEG) sheeting, and the like.

Can maintain adhesion at deep cryogenic temperatures to extreme heat and/or direct flame environments. A high temperature, single component, ambient curable, semi-clear product. Thermal Stability (cured) <982.2°C / 1,800°F.

BX520HT can add adhesion to questionable surfaces when applying high-temperature coatings or other materials. Ideal for use on buildings, commercial and extreme use surfaces on vehicle & aircraft surfaces, such as glass, plastics, silicones, acrylics, polyethylene (PEG) sheeting, and the like, metals, polished metal alloys, painted, powder coated, or Gel-coated®.

How high is "High Temperature"? as high as "high-performance exhaust temperatures" if needed.

It is recoatable and may be applied as often as desired between nano ceramic coatings without sanding or abrading the previous coat. Ideal for concrete and graffiti when you are unsure of the previous surface. For use on a wide variety of coatings to create better intra-coat adhesion.

BX520HT Properties

- Color: Colorless liquid
- Viscosity: 1.0 cps@23°C(74°F)(ASTM D1084B)
- Percent of Solids: <38
- Odor Liquid: Slight Solvent
- Odor Cured: None
- V.O.C.: Exempt per CFR 51.100/regulation 8
- RoHS: Compliant
- REACH: Compliant
- Thermal Stability (cured): <982.2°C (1800°F)
- Conical Bend (1/8 inch mandrel): Passed (ASTM D522-93a)
- Crosscut Adhesion: 5B (ASTM D3359)
- Specific Gravity: 0.810 (ASTM D891-09)
- Average Dry Film Thickness: 1 to 3 microns
- Estimated Coverage Rate (1-3 microns): 4500+ sq./ft. per gallon
- Dry time before top coat (@ Ambient 65-70°F) 5-10 minutes (average)
- Dry time (time @ 120F): 30 seconds

Technical Data Sheet & Application Guide

Application

The **BX520HT** was chemically designed to create a covalent bond to substrate materials, and allow for simple application methods, being applied as a thin film coating resulting in high performance properties. Even so, surface cleanliness is still of the utmost importance. Ensure surface is properly prepared, clean, dry, and free from oils and other containments.

On metal & alloy component surfaces, if it is possible to do so, it is always preferred to have a light blasted profile on the surface to aid in the coatings physical bond.

- The **BX520HT** covalently bonds well to all metal types, aluminum, titanium, stainless, metal oxides, most plastics, etc.
- On composite substrate surfaces, if it is possible to do so, it is also preferred to have a very light abraded profile on the surface to aid in the coatings physical bond.
- When applied to cloth or woven goods, a simple spray or dip application is acceptable, just enough to wet the surface that is to be bonded to.

Slightly mix or shake the **BX520HT** primer contents before applying; shaking by hand is acceptable.

- If spraying by HVLP-with a fine mist compatible with all - Nano-Ceramic Coatings, a fine spay tip (0.8) or similar is best, apply at 2 to 3 microns maximum dry film thickness.

- Same DFT applies to a wipe-on application. Wet a lint free application cloth, so that when lightly wiped over the substrate surface a very thin, 2-3 microns, film is left behind.
  - If it appears to be too thick, with the same cloth re-wipe and spread the **BX520HT** primer over a broader surface area

- Top coat within 10 minutes of application - sooner is better. Immediate or wet-on-wet is ok, best is to wait 20 seconds; if using a powder coat, wait 30-45 seconds till you have dry to the touch – this should allow the top coat material to bond well.
- If the primer dries longer than 10-minutes before top coating, re-apply the **BX520HT** as above, allowing the surface of the **BX520HT** to re-open-up again, thus allowing the top coat material to bond well.

The **BX520HT** primer may be applied directly to substrate surfaces where there are concerns of proper adhesion, due to potential contamination from silicones, hard anodizing processes, etc.

The **BX520HT** primer is designed for use on a wide variety of substrates and tightly bonded cured coatings, to achieve good intra-coat adhesion, where coating due to damage or similar is involved.

As with any new material, always test application and finished properties on a low value test article or panel before working on valuable surfaces.