



XTC / XTC PRIMER

TDS/DIRECTIONS & APPLICATION INFORMATION



XTC is a high temperature/heat resistant coating formulated specifically to protect metal surfaces operating at temperatures from 500°F to 1200°F or 1500°F. With proper preparation, XTC (Xtreme Temperature Coating) provides outstanding adhesion, film integrity, corrosion, weathering and thermal shock-resistance throughout this entire temperature range, and is guaranteed not to burn off!

To achieve expert results, please take the time to carefully read and understand the following directions before you begin your restoration project. These directions are meant to be general guidelines only and do not cover every application or environmental situation. If you have remaining questions or concerns, please contact us for technical assistance.

ALWAYS WEAR PROTECTIVE GLOVES AND SAFETY GLASSES. ALWAYS WORK IN A WELL-VENTILATED AREA. Please heed all warning and caution notices on all KBS products.

RECOMMENDED USES:

Engines, Manifolds, Headers, Mufflers • Furnaces, Kilns, Ovens, Stoves • Compressors, Turbines • Stoves (wood, coal, pellet, gas, etc.) • Fireplace hoods, screens, & accessories

FEATURES:

Withstands continuous temperature of up to 1500°F (812°C) • Outstanding heat and weathering resistance • Will not peel, flake, or chalk • Long Lasting • Dries for handling in 15 mins • Once heat cured, is resistant to scratching & marring

NOT RECOMMENDED FOR:

Parts that will be immersed • Direct contact with open flame • Cooking surfaces

SURFACE PREPARATION:

Surface to be primed and painted must be dry and free from dirt, oils, rust, and other contaminants. Sandblasting is the ideal surface preparation as it leaves the ideal anchor pattern for paint adhesion. After sandblasting, use clean compressed air to blow off any residual blast media. Be sure to wear surgical-type gloves when handling to keep natural body oils off the prepared surface.

If not sandblasting, prepare surface by using wire wheel, wire brushing, or abrasive sanding using 60-80 grit paper. This method will provide a surface equivalent to that provided by sandblasting and allow the desired surface profile or anchor pattern. Wash surface well with KBS Klean at a 10:1 (10 Parts Hot Water and 1 Part KBS Klean) ratio, rinse and let dry thoroughly. Allow surface to **thoroughly dry** before proceeding. Mask off areas not to be coated & protect adjacent areas with drop cloth or newspapers. For best results, apply when XTC and room temperatures are between 60-80° F.

MIXING:

Do not open containers until ready to use. Re-disperse any settled-out pigments by stirring. Use of a mechanical mixer (**KBS Hurricane Paint Mixer or similar mixing blade attached to drill**) is highly recommended. Effective mixing includes repeatedly touching bottom of can & lifting to disperse any settled pigments and/or matting agents. Placing paint can upside down for a short time before opening & mixing will aid with proper mixing. Keep lid on container when not in use. **NOTE: XTC Primer and XTC are heavily pigmented, so it can take at least 5-10 minutes of mixing with the KBS Hurricane Paint Mixer to get XTC and XTC Primer into its homogenous state, ready for application.**

COVERAGE:

Theoretical coverage at one mil (25 microns) is 360-400 sq.ft. per gallon. Recommended thickness of two mils (50 microns) would require two full coats. Material losses during mixing and application will vary and must be taken into consideration. Expect up to 30% less coverage on rough surfaces. Aerosol Can theoretically covers 10-15 sq. ft.

APPLICATION:

Ideal application temperatures of air & surface to be coated are 50-82°F. XTC may be applied by conventional or HVLP spray, airless spray, brush, or roller. Do not apply XTC or XTC Primer in heavy thickness because blistering may occur. For corrosion protection, metal surfaces should be primed with XTC Primer (approx. 2.0 mils/50um DFT), then top coated with one coat (1.0 mils/25um DFT) of the XTC color of your choice. Strain with a standard 100 micron filter.

ALWAYS APPLY THIN. COVERING COATS!

If not using XTC Primer, apply two coats (1.0 mils/25um DFT each) of XTC allowing at least 8 hours between coats and allow the second coat to dry at least 8 hours before subjecting surface to any heat. The number of coats of XTC needed depends upon service conditions of equipment and coarseness of surface.

SPRAY APPLICATION:

FOLLOW ALL CAUTION & WARNING NOTICES WHEN SPRAYING. ALWAYS WEAR AN AIR SUPPLIED RESPIRATOR: NIOSH/MSHA approved organic vapor particulate respirator.

Spray pressure of **35-45psi for siphon/pot guns** and **25-35psi for gravity/top container guns.**

Spray Tip of **1.0-1.5.**

Thinning is not generally required but if needed 5%-10% is normally adequate. Use **KBS #1 Thinner** or Xylene only which are slow evaporating solvents. Do not reduce XTC with lacquer thinner. Clean your spray gun immediately after using XTC.

ALWAYS APPLY THIN. COVERING COATS!

BRUSH APPLICATION:

FOR BEST RESULTS, use natural bristle or foam/sponge brushes. Apply thin covering coats (1.5-2.0 mils/35-50um wet film thickness). Do not flood surface with coating. As with all KBS Products, multiple thin coats is always the best practice. Put enough thin coats down to cover the surface adequately. Do not over-apply coats. Brush out thoroughly, maintaining a continuous wet edge and uniform appearing paint film. Do not over work brushing while attempting to eliminate brush marks. Whatever brush marks don't flow out during air dry process will flow out during initial heat curing. Do however avoid runs or drips. Allow first coat to air dry at least 8 hours before applying recommended second coat. Allow second coat to cure at least 8 hours before subjecting to temperature curing.

ALWAYS APPLY THIN. COVERING COATS!

AEROSOL SPRAY APPLICATION:

For best results, apply when spray can and room temperatures are between 60-80° F. Shake aerosol can vigorously for one minute after mixing ball rattles freely & periodically during use to ensure proper mixing and to prevent spray head from clogging. Repeat shaking frequently during use. Hold can 12-15 inches from surface and apply using steady, even strokes. Apply a minimum of two light coats, avoiding drips and runs. Put enough thin coats down to cover the surface adequately. **Do not over-apply coats.** Allow 15-30 minutes drying time between coats (Aerosol Only). Heavy applications can lead to reduced coating life/adhesion.

Clean aerosol spray head immediately after use by turning can upside down and spraying until no more paint appears. If clogging occurs, remove spray head and clean with a fine wire. Replace carefully, pointing can and spray head away from you. Allow painted surface to dry a minimum of 8 hours before Temperature Curing.

TEMPERATURE CURING (REQUIRED):

After proper dry time, XTC will be dry to the touch and can be handled using care, but resins will not reach full hardness until heated to approximately 350° F for 20-30 minutes.

TIP: For headers or manifolds, this can be done in an oven, BBQ, OR by mounting back on engine and following the method described next.

For **automotive type applications**, you can also temperature cure by installing and running the engine. After the parts have been installed, start the engine and let it idle until the XTC begins to smoke then immediately shut engine off and let the manifold or header completely cool naturally to room temperature. Repeat and do this process three times total. After the third time, perform a fourth temperature cycling and on the fourth cycle, let the engine run until the XTC smokes and this time let the engine continue to run until the smoke from the XTC dissipates. Once the smoke has completely dissipated, turn the engine off let the surface come back to room temperature naturally. It is important to follow this process to gradually cure the XTC.

NOTE: Coating can emit potentially harmful vapors during the first few heat/cool cycles. Allow for full and proper ventilation during initial heat curing. Avoid excessive heat during this initial "break-in" period, as the resins need to be tempered into the substrate to provide proper adhesion.

ALWAYS APPLY THIN, COVERING COATS!

THINNING:

XTC can be thinned up to 5% (20 parts paint/1 part thinner). Only thin using KBS #1 Thinner. Note: Use of other thinners not approved by KBS may hinder product performance.

AVOID OVER-APPLICATION:

XTC is NOT formulated to function well as a thick coating. Always apply XTC in THIN coats and just enough coats for coverage (based upon coarseness of the surface). Never overdo the number of coats of XTC and XTC Primer applied.

DRY TIME:

70°F 50% RH. XTC will air dry tack and thumb print free within 1/2-1 hour. Allow at least 8 hours dry time between coats. Allow at least 8 hour solvent flash off period before heat curing or placing into service. **Optimum film properties require a heat cure of 350°F for 20 minutes.** Equipment such as exhaust manifolds & headers protected with the XTC in the air-dried state will heat cure when placed into service.

CLEAN UP:

Thoroughly flush spray equipment and hoses immediately after use with KBS #1 Thinner or lacquer thinner. Dismantle spray equipment and clean parts, brushes, or rollers.

STORAGE:

Store in a cool, dry place with temperatures between 40-80°F. Keep container closed when not in use.

QUESTIONS & TIPS:

Q. Do I need to sandblast?

A. No, while a sandblasted surface is ideal for cleaning & providing an ideal anchor pattern or coating adhesion, wire brushing and/or abrasive sanding with 60-80 grit sandpaper will also work well.

Q. How many coats of XTC/XTC Primer do I really need?

A. This depends on the coarseness of the surface profile. The coarser the surface profile, the more thin, covering coats needed. We recommend a minimum of two coats of XTC or one coat of XTC Primer & one coat of XTC (color of your choice). Apply enough thin coats of XTC Primer and XTC to cover the surface adequately. **Do not over-apply coats.** With the XTC resin system, more is not always better.

Q. Do I need to heat the surface before painting?

A. No, the surface should be at room temperature 50-82°F during application. Do not apply to a hot surface.

Q. Do I need to heat cure after application?

A. Yes, while the surface will dry to the touch within 1/2-1 hour, the coating will not

reach its full cure until it reaches approximately 350°F.

Q. Do I need to heat cure between XTC Primer and XTC coats?

A. No, heat curing between coats of XTC Primer and XTC is not necessary, but heat curing will not hinder subsequent coats of XTC.

Q. Is XTC Primer required for adhesion?

A. No, XTC Primer is **NOT** required for adhesion. XTC will adhere incredibly well to a prepped surface. XTC Primer provides rust protection and hide. XTC Primer should be used when rust protection or hide is desired.

TECHNICAL DATA:

CHARACTERISTICS	JET BLACK, CAST IRON GREY, CHARCOAL METALLIC, PURE WHITE, ROCKET RED, OFF-WHITE, PONTIAC METALLIC BLUE, FLAME BLUE, CLEAR, ALUMINUM, STAINLESS STEEL, XTC PRIMER											
	Silicone											
Generic Type	Black, Grey, Blue, White, Ivory, Red, Silver, and Clear											
Color	XTC Primer 1200° XTC 1500°F											
Temperature Resistance Continuous	20-35 (varies with color)											
Percent (%) Solids by Volume	300-450 cps (varies with color)											
Viscosity	1.0-2.0 mils											
Dry film thickness per coat	4-8 mils											
Wet film thickness per coat	<table><tr><th>50°F</th><th>70°F</th></tr><tr><td>50 min</td><td>25 min</td></tr><tr><td>1 hour</td><td>30 min</td></tr><tr><td>10 hours</td><td>7 hours</td></tr><tr><td>42 hours</td><td>20 hours</td></tr></table>		50°F	70°F	50 min	25 min	1 hour	30 min	10 hours	7 hours	42 hours	20 hours
50°F	70°F											
50 min	25 min											
1 hour	30 min											
10 hours	7 hours											
42 hours	20 hours											
Drying time @ 50% RH To Touch To Handle To Recoat To Ship												
Full cure @ 350°F (176°C)*	30 minutes											
Weight per gallon	8.8-12.1 lb.											
Flash Point	45°F											
Pot life	N/A											
Shelf life	at least 2 years											

*See Dry Time Section

Type of Coating: High Temperature Coatings
Sprayable VOC's (Using KBS #1 Thinner): <650g/l

Please remember these instructions are general guidelines only and do not cover every application and environment. If you remain unsure as how to proceed, refer to our website: **KBS-Coatings.com**, or call for technical advice at **219-263-0073**. Please follow all warning and caution notices. See SDS for additional information.

MADE IN THE USA.

Information contained herein is to our knowledge true and accurate, but all recommendations or suggestions are made without guarantee. Since application lies outside our control, we cannot accept any liability for the results. User shall determine the suitability of the product for its intended use, and user assumes all risk and liability whatsoever in connection therewith.



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Revised 2026-03-01

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