

# Questions & Answers

- Q.** How do I know when the plastic is ready to paint?
- A.** After cleaning with Wax & Grease Remover and Abrasive Bumper Cleaner, mist the part with water. If it sheets, you are ready to go.
- Q.** What order should Bulldog® BFT be added to clear; before or after the activator?
- A.** Clear should be catalyzed first before adding Bulldog® BFT.
- Q.** Can Bulldog® be added to primer?
- A.** Yes, it can be added to primer in the ratio of up to 1/3 Bulldog® BFT.
- Q.** Can Bulldog® BFT be mixed with new water-based systems?
- A.** No, it can not. It is only compatible with modern solvent paint systems. It can be used under aqueous systems.
- Q.** What air pressure should be used at the nozzle when spraying Bulldog® BFT?
- A.** Typically, we recommend 30-40 psi, but it could be adjusted to whatever pressure the painter is comfortable using.
- Q.** Is there a difference between the HVLP and conventional spray gun for using with Bulldog® BFT?
- A.** Not really. Either gun will work for spraying Bulldog® BFT. Conventional guns should be set for 30-40 psi, while HVLP guns should be set as recommended by HVLP gun manufacturer.
- Q.** How does Bulldog® BFT work so well when nothing else does?
- A.** The unique properties of Bulldog® BFT are due to a one component polymerization reaction between styrene, polyester resin and various monomers. Once Bulldog® BFT is applied and solvents have flashed out, the resins react to form a highly cross-linked resin coating. The product's strong adhesion promoting properties are due to the varied types of monomers used in the formulation. The filling, sealing and flow out properties of the final coating are due to fairly high solids as well as inclusion of fibers in the formulation.
- Q.** Can surface be tacked after Bulldog® BFT is applied?
- A.** Yes, it can after the solvents flash off, usually within 15-20 minutes.
- Q.** Can Bulldog® BFT be used for edge outs?
- A.** Absolutely. It will save time and assure you of a great finish.
- Q.** Will Bulldog® BFT effect paint (finish) in blend-out areas?
- A.** It will not effect original paint because it is clear. It will actually help in blend-out areas to provide a smoother finish. Some painters use Bulldog® BFT to improve in the flop/alignment of metallic pigments and as a midcoat for special effects.
- Q.** Can Bulldog® BFT be used as a tie-coat?
- A.** Yes, it can be applied to metal, rubber, fiberglass, plastic and primer. Bulldog® seals Bondo-repaired areas and other automotive surfaces.
- Q.** Is it necessary to prep the part before spraying with Bulldog® BFT?
- A.** We recommend the use of Bulldog® Abrasive Bumper Cleaner and scuff pad before the application of Bulldog® BFT. However, some parts, such as textured bumpers, which cannot be scuffed, can be cleaned thoroughly with Bulldog® Abrasive Bumper Cleaner before applying Bulldog® BFT.
- Q.** How many coats of Bulldog® BFT are recommended as a sealer?
- A.** We recommend 2-3 coats. The third coat of Bulldog® BFT will aid in covering deeper sandpaper scratches (up to 320 grit paper).
- Q.** What makes Bulldog® BFT level out so well and create a mirror-like finish while competitive products spray-out much rougher?
- A.** Bulldog® BFT is formulated with different resins that are found in high quality automotive lacquers. These special blends of resins wet the surface completely, promoting greater flow and leveling which leads to superior appearance.
- Q.** Is Bulldog® BFT compliant with current VOC regulations in all states?
- A.** Yes, it is. Bulldog® BFT is considered a specialty coating and must have a VOC of less than 7.0 lb/gal (840g/L). The VOC of Bulldog® BFT is 6.23 lb/gal (748 g/L). This is significantly lower than most competing adhesion promoters and other specialty coatings. When using Bulldog® BFT, a sealer is not required.
- Q.** After Bulldog® BFT is applied, how long should it flash out before base coat is ready to be sprayed, and how long can it remain before it loses effectiveness and has to be reapplied?
- A.** After Bulldog® BFT is applied, it needs 5-10 minutes flash time before the application of base coat. However, it can be effective up to 24 hours. If the part is coated with Bulldog® BFT and left overnight, base coat can be applied without any problem. If the part is left over the weekend, it needs to be scuffed again, tacked and recoated with 1 coat of Bulldog® BFT before applying base color.
- Q.** At what ratio should Bulldog® BFT be added to clear coat as flex additive?
- A.** Up to 1 to 4 parts.
- Q.** How can Bulldog® BFT appear hazy, yet dry clear and water white?
- A.** The microfibers which allow Bulldog® BFT to fill 340 grit scratches give Bulldog® BFT a hazy appearance. When the solvents evaporate, the fibers have the same refractive index as the coating polymers and disappear.

# REFINISH TECHNICAL BULLETIN



## TPO-123 – BOND-FLEX-TIE-COAT

Klean-Strip® Bulldog® Bond-Flex-Tie-Coat (BFT) is a 1K water white, high gloss reactive coating which combines the functions of an adhesion promoter, flex agent and tie-coat. Bulldog® BFT greatly improves the quality, performance and durability of automotive finishes by providing superior bonding of paint to all automotive surfaces, even problem plastics, and improving flexibility. Bulldog® BFT is equally effective on metals, rubber, fiberglass and other flexible intractable surfaces, including TPO, found on today's hi-tech automobiles. Bulldog® BFT has been successfully used over all OEM and after market finishes.

**Self-leveling · Covers 320 grit and finer · Significantly reduces time and materials  
Dries to a clear water white finish · Increases shop productivity and profits**

## EUP-367 FLEXIBLE BUMPER PAINT STRIPPER

Bulldog® Flexible Bumper Paint Stripper is a fast acting remover designed to strip paint from flexible automotive parts such as urethane bumpers. It removes the toughest factory finishes, even two-part epoxies and urethanes. When used according to directions, Bulldog® Stripper will not attack urethane bumpers. This heavy bodied formula clings to vertical surfaces without running or dripping.

## PABC-124 ABRASIVE BUMPER CLEANER

Bulldog® Abrasive Bumper Cleaner is an effective cleaner for plastic parts, designed to remove water and solvent-based mold release agents, wax, grease, fingerprints and other contaminants prior to coating. It eliminates the need to clean plastic parts with solvent wax and grease removers as well as soap and water. Bulldog® Abrasive Bumper Cleaner contains micro-abrasives that leave tiny scuff marks on the surface and allow coatings to adhere. Bulldog® Abrasive Bumper Cleaner can be used as an alternative to time consuming hand sanding and scuffing, and it is VOC compliant, too.

For more information or to order the Bulldog® System or any other Klean-Strip product, please call or write:

phone: 1.800.235.3546 fax: 1.800.621.9508 address: W.M. Barr P.O. Box 1879, Memphis, TN 38101

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## SUBSTRATE TYPES

Painting methods for plastics vary greatly and depend on the top-coat and type of plastic. Some rigid plastics, such as SMC, can often be successfully coated with traditional metal systems. However, most plastics can only be coated with the use of adhesion promoters and the addition of flex agents to the top-coats. Bulldog® BFT answers both needs.

- Adhesion promoters on the market today are traditionally non-reactive resinous coatings that are applied to the plastic surfaces and bind to both the plastic and subsequent coatings. Most adhesion promoters are not universal but instead are plastic-specific. They have poor adhesion to metal surfaces or even to other plastics. Consequently, any overspray must be removed. With Bulldog® BFT, there is no worry about overspray because it works equally well on all plastic, metal, fiberglass and painted surfaces.
- Flex-Agents are plasticizers, non-volatile liquids, which are added to coatings to increase flexibility and elongation. Since plasticizers are not linked into the polymeric matrix, they can migrate out of the coating causing the coating to crack and possibly destroying the adhesion between the coating and the plastic substrate. Bulldog® BFT contains no plasticizers.

Bare metal and body filler must be primed and dry or wet sanded with 320 grit sandpaper prior to applying Bulldog® BFT. Bulldog® BFT is used to fill 320 or finer grit scratches and seals these repaired areas. However, Bulldog® BFT does not interfere with any of the repair process steps. Overspray into repair areas is of no concern, unlike the overspray of metal primers onto plastic areas which must be removed as it may cause paint failure over plastic.

Painted surfaces, after repair, are sealed and repainted with flexibilized coatings. On these surfaces, Bulldog® BFT is used to fill sandpaper scratches and seal. Bulldog® BFT, mixed with the base color and/or clear coat serves as a flex agent and adhesion promoter. Bulldog® BFT has been successfully used over all OEM and aftermarket finishes.

## PROCEDURES FOR USING BULLDOG BOND•FLEX•TIE-COAT

Five simple, easy to follow steps

1

### CLEAN

with BULLDOG® Abrasive Bumper Cleaner. Wax and Grease Remover may be used before BULLDOG® Abrasive Bumper Cleaner, but not after



2

### RINSE

thoroughly with water



3

### BLOW

off dust and dry with air hose



4

### MIST

To be sure the plastic is ready, mist the surface with water. If it sheets, apply. If not, repeat steps 1-3.



5

### SPRAY

on BULLDOG® Bond•Flex•Tie-Coat



**Ground effects, new flexible and rigid bumpers, fiberglass, plastic interior and exterior parts:** Wipe with grease and wax remover, clean thoroughly with Bulldog® Abrasive Bumper Cleaner, rinse completely and dry. Apply 2 to 3 light coats of Bulldog® BFT allowing it to flash from 3 to 5 minutes between coats. Apply color finish wet on wet. For new pre-primed parts, wash with soap and water; abrade very lightly, being careful not to penetrate the primer. Apply Bulldog® BFT and paint as described above.  
**Edging and jams:** Clean thoroughly with soap and water and allow to dry completely. Apply 2 to 3 light coats of Bulldog® BFT and paint; or dilute colorcoat up to 1:3 with Bulldog® BFT and paint.

**Overall refinishing, including metal, plastic, rubber and pre-painted body parts:** After applying primer to all bare metal and filler areas, sand the entire area to be repainted with a DA orbital sander using 320 grit or finer. Apply 2 to 3 medium coats of Bulldog® BFT wet on wet. Allow 10 minutes flash time after final coat of Bulldog® BFT before applying color coat. If adhesion to plastic surfaces is involved in the repair area or color coat or top coat require flexibility, up to 1:4 Bulldog® BFT can be used in the color coat or up to 1:3 in the clear coat.

**Spot and panel repair:** Bulldog® BFT can be used before epoxy, urethane or polyester fillers to promote adhesion to Polypro and TPO bumpers. Apply primers to all metal and filler areas. Sand all areas to be painted with 320 grit or finer. Apply 2 medium coats of Bulldog® BFT; allow to flash 3-5 minutes before applying color coat.

**Sanding Bulldog BFT:** Normally, Bulldog® BFT should not require sanding; but should the need arise, allow 30 to 60 minutes drying time before wet sanding.

**Cleanup:** All tools and spills should be cleaned up immediately with lacquer thinner. Care should be taken to keep lacquer thinner away from freshly painted surfaces.

**Remember:** When applying Bulldog® BFT over fresh lacquer or uncured acrylics or applying lacquers over Bulldog® BFT, give extra time to dry between light coats.

## PAINTING PRECAUTIONS

Always test Bulldog® BFT in a small area for its affect on plastics. Certain plastics such as lexan and polystyrene should never be treated with solvents. Check for Bulldog BFT compatibility with paint system before mixing. It is incompatible with enamels, water-based and some other paint systems.

Coatings designed for automotive repair are required to adhere to a number of different types of substrates, often in a single operation. These substrates include metals, fiberglass, plastics, rubber, coatings, and various repair materials. The surfaces of all these substrates must be cleaned and abraded before any coating can be applied. Bulldog® BFT has been successfully used over all OEM and after market finishes.

Cleaning is the most critical procedure for successful coating application. Lack of adequate cleaning can cause surface defects as well as delaminating of the entire coating. If the original substrate has not been completely degreased and dewaxed, it is impossible to obtain adequate adhesion of any coating to any surface. It is important that the surfaces be cleaned before being abraded. Use Bulldog® Abrasive Bumper Cleaner to remove all contaminants prior to coating.

Abrading of the substrate is also essential for successful coating application. Even gentle scuffing with a red scuff pad will greatly increase the bite of the coating. Bare metals, OEM painted surfaces, previous repair coats, and plastic surfaces should all be abraded prior to repainting. The only procedure not requiring abrading is edging parts with Bulldog® BFT.

Blowing off and tacking the substrate is the last step before applying any coating. Use a dry high pressure air hose to blow off any dust and to dry off any remaining solvents. Neglecting to filter and dry the air causes coating contamination and failure. A tack rag needs to be brushed lightly over all surfaces to remove any last traces of dust contamination.

Shake before use, and strain through a doubled paint filter before use. Toluene, Toluol, Xylene, Xylol and other aromatic solvents cause Bulldog® TPO and polypropylene plastics to swell. Do not use any product containing these solvents to wipe or clean plastics before applying Bulldog® BFT.

## JOB COMPARISON

Typical overall paint job with major structural repair:

### WITHOUT BULLDOG® BFT

- Clean car with wax and grease remover
- DA-feather edge body work with 80 to 180 grit sandpaper if work is rough
- Mask areas as necessary
- Apply 2 to 3 coats of primer
- Wait 20 to 30 minutes for primer to dry
- Block body work with 320 to 400 grit wet or dry sandpaper
- Blow and tack, retape as needed
- Reprime with 2 to 3 coats of primer
- Wait 20 to 30 minutes for primer to dry
- Sand with 320 grit wet or dry sandpaper
- Blow, tack and retape as needed
- Reprime with 2 coats of primer
- Wait 20 to 30 minutes for primer to dry
- Wet sand primed areas with 1000 grit
- Blow and tack
- Tape off all plastic and rubber parts
- Apply sealer
- Allow 10 to 15 minutes to dry
- Wet sand with 1500 grit paper
- Blow, tack car off and retape
- Apply color to metal parts
- Bake per coating manufacturer's instructions
- Allow to cool
- Remove masking from all plastic parts
- Mask off all metal parts that have been painted
- Sand and scuff plastic and rubber parts
- Blow and tack off
- Apply adhesion promoter
- Mix flex agent with color base coat
- Apply color base coat
- Bake per manufacturer's instructions
- Cool, blow and tack off
- Remove masking from plastic and rubber parts
- Apply clear coat to all surfaces
- Bake finish per clear coat manufacturer's instructions

### WITH BULLDOG® BFT

- Clean car with wax and grease remover
- DA-feather edge body work with 80 to 180 grit sandpaper if work is rough
- Mask areas as necessary
- Apply 2 light coats of Bulldog® BFT to all plastic parts
- Apply 2 to 3 coats of primer
- Wait 20 to 30 minutes for primer to dry
- Block body work with 320 to 400 grit wet or dry sandpaper
- Blow and tack, retape as needed
- Reprime with 2 to 3 coats of primer
- Wait 20 to 30 minutes for primer to dry
- Sand with 320 grit wet or dry sandpaper
- Blow off dust, tack with tack rag
- Apply Bulldog® BFT to all surfaces to be painted or mix color base coat with up to 1/3 Bulldog® BFT in the mix ratio
- Apply 2 coats of color to all surfaces to be painted
- Apply clear coat to all surfaces to be painted\*
- Bake finish per clear coat manufacturer's instructions
- Remove masking from plastic and rubber parts

18 steps saved with

GET A GRIP



**BULLDOG®**  
BOND-FLEX-TIE-COAT

\*Bulldog may be applied before clear coat or mixed with the clear coat at 1/4 to help outer coat adhesion.