



## Commando Coat 500X – High Performance Flexible Urethane

NOTE: Surface preparation and application instructions for both Commando Coat 500X 18 is identical unless otherwise noted.

IMPORTANT – Commando Coat 500X has thousands of uses and we have put this guide together for the most popular applications, please read carefully and apply accordingly for your specific application. Please contact us with any questions

Commando Coat 500X will bond well to properly prepared, clean, thoroughly dry surfaces. On sound-painted surfaces(not peeling or flaking), paint must be fully dried or cured to manufacturer's specifications. The solvents in Commando Coat 500X will not soften or attack properly dried or cured paint. This makes Commando Coat 500X ideal for coating over another coating without having to do a costly diamond grind.

## GENERAL DIRECTIONS

Always thoroughly clean the surface of all oily or waxy contaminants and use recommended cleaning solvent. Leave no residue. Always do a small test on the substrate to ensure adhesion.

**NOTE: Due to the possibility of slight batch color variations, mix partially used cans of Commando Coat 500X with new cans as they are opened during applications.**

## DO AN DO NOTS

DO	Use only Xylene cleaning solvent as last step before applying Commando Coat 500X or to thin Commando Coat 500X if necessary.
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DO NOT	Clean surfaces with lacquer thinners or any solvent containing alcohol, which will prevent Commando Coat 500X from curing and bonding
DO	Clean surface with strong aggressive detergent and rinse thoroughly. Then use Xylene to wipe the surface as a last step. Allow solvent to evaporate.
DO NOT	Assume surface is clean unless you have cleaned it according to instructions.
DO	Test surfaces beforehand for adhesion with Commando Coat 500X
DO NOT	Shake can to mix. (Rubber granules will not mix evenly.)
DO	Stir Commando Coat 500X thoroughly before application (preferably with an electric mixer) to keep rubber granules in suspension.
DO	Keep Commando Coat 500X rubber granules in suspension by stirring periodically.
DO	Apply Commando Coat 500X in at least two coats. (Two coats is normally sufficient for most applications.)

## SURFACE PREPARATION FOR SPECIAL ADHESION

### IMPORTANT – READ CAREFULLY!

The following information is provided as a guide only, because substrates can differ significantly. All surfaces should first be tested to ensure adhesion.

#### CONCRETE

For best results, NEW concrete should:

- Be fully cured, for at least 28 days.
- Have a brush finish.
- Be hand troweled (if already power troweled, test for adhesion of Commando Coat 500X Shot Blasting may be needed to provide the proper profile.
- Be thoroughly cleaned with Epoxy Central Acid Safe Etching kit, rinsed with water, and thoroughly dried. One kit per 400 sq ft.
- Be wiped with Xylene and allowed to dry, until solvent has evaporated, immediately before applying Commando Coat 500X (This is recommended, for best results, to ensure there is no remaining residue on the surface.)

#### NOTE:



- If the new concrete contains plasticizers, a small test for adhesion is essential. A primer may be needed if there is poor adhesion.
- If the concrete is oil-soaked, refer to instructions for oil-soaked concrete (see below).

**OLD concrete should:**

- Be completely dry before application of Commando Coat 500X. Be shotblasted, if possible, and rinsed with water.

OR

- Be abraded with a scarifying machine (leaving a roughened surface) and brushed off.

OR

- Be thoroughly cleaned with muriatic acid wash.
  1. Use 45% to 50% muriatic acid solution mixed with 3 to 4 parts water.
  2. Agitate solution on surface with a hard-bristled deck brush for approximately 10 minutes, to open pores on surface.
  3. Rinse off with a 5% ammonia/water solution to neutralize acid. Mix 7 ounces of ammonia with one gallon of water per 500 sq ft, brush in and then rinse thoroughly. Repeat over entire floor. (Failing to neutralize acid could leave residue which might cause delamination.)
- Be dried completely. If necessary, use a heat source.
- Be brushed off to remove all residue.
- Be wiped well with Xylene immediately before applying Commando Coat 500X. Let the Xylene evaporate before applying Commando Coat 500X.

**NOTE:**

- If the old concrete contains plasticizers, a small test for adhesion is essential. A primer may be needed if there is poor adhesion.

**OIL-SOAKED CONCRETE**

Open pores of concrete with muriatic acid and rinse, as above.

1. Apply Epoxy Central Oil & Grease remover and agitate with deck brush for 10 minutes.
2. Rinse with hot water.
3. Rinse twice with cold water.
4. Dry completely.
5. Apply Epoxy Central Oil Stop Primer, let dry and then apply Commando Coat 500X.

**SEALED CONCRETE**

Sealed concrete should first be tested for Commando Coat 500X adhesion:

1. Clean surface thoroughly with Muriatic Acid as above.
2. Roughen surface with floor buffer and black pad.
3. Brush surface off thoroughly.
4. Rinse with water and dry thoroughly.



5. A Xylene wipe is recommended. Let solvent evaporate.
6. Apply test patch of Commando Coat 500X
7. If delamination occurs, sealer must be removed by mechanical means (i.e., shot blasting or scarifying).

## **ASPHALT**

1. Prime surface with a mineral spirit or water-based driveway sealer according to manufacturer's specifications. Be sure the sealer is compatible with both asphalt and one-part moisture cured polyurethanes.
2. Apply Commando Coat 500X when primer is thoroughly dry.

## **ALUMINUM**

1. Abrade to obtain rough surface. May or may not require additional primer. Recommend test for adhesion.
2. If a primer is needed, use an etch primer for aluminum which is compatible with moisture-cured polyurethanes. Apply during the first third of the recommended overcoat window, after the primer is touch dry.

## **METAL**

1. All smooth metal should be thoroughly cleaned, aggressively roughened and primed with an etch primer which is compatible with moisture-cured polyurethanes. Commando Coat 500X adheres well to cured painted metal. Most rough metal surfaces such as pitted rust need not be primed; however, all loose scale should be removed. We recommends that a small area be pre-tested with and without primer. On applications of extreme wear, such as step nosings, a primer is highly recommended.

**CAUTION!** When priming metal surfaces, the primer must be fully dry before overcoating. Careful attention must be given to manufacturer's recommended window of minimum and maximum time for overcoating primer with polyurethanes. When using primers, a small test must be done to ensure adhesion of primer to Commando Coat 500X. Aim for the first third of the recommended window of opportunity for overcoating.

## **WOOD**

If wood texture is rough, it may not require special preparation. For best results, abrade surface of wood with 40-grit sandpaper before applying Commando Coat 500X. Some pressure-treated woods may need priming. If in doubt, make a small test application first. Commando Coat 500X will bond to wolmanized treated wood without priming.

## **PAINTED SURFACES**

1. Remove all peeling, cracking or chipping paint.
2. Clean surface thoroughly.
3. For best results, lightly abrade surface with an 80-grit sandpaper.



4. Clean the surface with a good cleaner, such as tri-sodium phosphate (TSP). Test in small area to make sure cleaner isn't softening the painted surface.
5. It is strongly recommended to wipe surface with Xylene before applying Commando Coat 500X
6. In the case of epoxy coatings which become very hard with age, clean, then abrade surface with 40-grit sandpaper. Rinse, dry, and test for adhesion. If poor adhesion occurs, soak with Xylene for 10 minutes, wipe off, roughen, and wipe once more with Xylene.

## **RUBBER**

Clean well using detergent or cleaning solvent, such as rubbing alcohol, to remove all surface release agents. Rinse well and allow to dry. Abrade surface aggressively, wipe off with Xylene, and then apply Commando Coat 500X.

NOTE: Commando Coat 500X will not bond to chlorinated rubber.

## **FIBERGLASS**

Good adhesion can be obtained on unweathered gel-coated glass, rough fiber, side molded glass, and smooth-mold resin-side glass. Surface should be free of release agents, waxes and other production additives, then roughened well with 40-grit sandpaper to remove all gloss, leaving a high profile surface. To ensure optimal bonding, use an epoxy primer compatible with both fiberglass and moisture-cured polyurethanes. Do a small test for adhesion.

## **CERAMIC AND TERRACOTTA TILES**

Remove glaze from ceramic tile with a grinder, rinse with water, and let dry. For Terracotta Tiles clean with Acid Safe Etching Kit. Apply special primer, and let dry thoroughly. Then apply Commando Coat 500X within 12 hours.

## **HOW TO APPLY**

Commando Coat 500X for roller, brush or spray applications, is available in one-quart and one-gallon containers. For volume applications, it is also available in five-gallon containers by special order.

Before applying Commando Coat 500X it is important that the surface to be coated is completely clean and dry. (See Surface Preparation.) Mask all areas not to be coated. Remove masking tape after application of second coat, using a razor knife to cut along the taped edge.

## **IMPORTANT – READ CAREFULLY!**

Commando Coat 500X has extreme bonding capability so do not let cure on anything you do not want coated! It can only be remove via mechanical grinding! Clean up splatters or drips immediately with Xylene.



Commando Coat 500X contains flammable solvents. Ensure proper ventilation and fire precautions.

## **ROLLER APPLICATION**

Smooth version of Commando Coat 500X can be applied with any standard low-nap (up to ¼") roller. Do not apply too thick as it could prevent proper curing. Textured version must be applied with provided special foam roller. USE 1 FOAM ROLLER PER GALLON.

*CHANGE ROLLER AFTER EACH GALLON USED.* Two thinner coats are recommended. Apply textured Commando Coat 500X with special, Epoxy Central Textured roller. Use only an Epoxy Central special roller, which is designed to evenly distribute the embedded rubber granules on application – other rollers will cause clumping of the rubber granules. Roller sleeves are available in 9" and 3" sized.

Each can of Commando Coat 500X is supplied with an Accelerator Pak. Mix can till product is uniform in color then pour in accelerator and mix thoroughly.

Apply first coat of Commando Coat 500X as a thin coat, to fully cover. If using Commando Coat 500X Outdoor, the first coat is done with standard Commando Coat 500X second coat is done with Commando Coat 500X 18 this provides the UV protection. When first coat is touch dry – usually within 1½ to 3 hours – apply second coat. To avoid "mud cracking" or pooling, do not apply Commando Coat 500X too thickly. Between coats, pour a small amount of Xylene over rollers, so rollers will not dry out. Extreme climactic conditions of heat, humidity and cold can shorten or lengthen this period.

## **BRUSH APPLICATION**

Commando Coat 500X can be applied with a soft paint brush, in two coats at right angles to one another. (Commando Coat 500X is not a paint, and should be laid onto the surface, in one direction, not brushed out as an oil or latex paint.) Between coats, clean brush well with Xylene, only. The second coat can be applied as soon as the first coat is touch dry (usually within 1½ to 3 hours). Extreme climactic conditions of heat, humidity and cold can shorten or lengthen this period.

## **COVERAGE**

One quart covers a flat area of about 25-40 square feet. one gallon covers approximately 200-225 square feet, with a final dry coat thickness of approximately 24-30 mils when two coats are applied.



## IMPORTANT POINTS

Commando Coat 500X should be stirred thoroughly before applying – preferably with an electric paint mixer attachment – as shaking can will not distribute rubber granules evenly.

- Stir periodically to maintain rubber granules in suspension.
- To avoid “mud cracking” or loss of slip-resistance, do not allow Commando Coat 500X to pool.
- Commando Coat 500X is a moisture-cured product. An open or partially used can will thicken and eventually become unusable. Seal can well and turn upside down for a few seconds. This will seal any space in the can and may prolong the life of the unused portion of Commando Coat 500X. Putting unused portion into a smaller container may help prolong the life of the product, as well. Make sure that the rim of the new container remains free of Commando Coat 500X avoid difficulty in reopening the container.
- If the product thickens slightly, it can be thinned by using up to 15% Xylene without affecting performance.

## IMPORTANT:

- Other solvents can cause product failure. Do not dilute product or clean rollers, brushes or spray guns with lacquer or alcohol-based thinners.
- Once the consistency of the product has become pasty and unmixable, it should be discarded. If Commando Coat 500X is thick, but still liquid, it can be thinned with Xylene and be used.
- Normally, Commando Coat 500X can be subjected to light foot traffic within 6 to 12 hours of application. It takes approximately 2 to 4 days to fully cure: less in hot humid conditions, and more in cold dry weather. The coating should not be subjected to cleaning or chemical exposure until fully cured.

## SPRAY APPLICATION

Commando Coat 500X can be sprayed using one of the listed sprayers below. Commando Coat 500X should flow through the spray gun easily and can be thinned with Xylene.

1. Use a conventional spray gun, such as Binks #2001, with the following specifications, or equivalent: 67 fluid nozzle; 567 fluid needle; 67 PB air cap; heavy-duty (#54-1372) needle spring; 2-28 teflon fluid packing; ½” I.D. (#71-283) fluid hose with 3/8” connectors (#72-1333), and 3/8” I.D. air line with ¼” connectors (#71-1355).
  - a. To remove contaminants from the air line, use Oil & Water extractors mounted at the pressure tank.





2. Sears Craftsman No. 15524 (or De Vilbiss AS 300) with external mix nozzle. Requires 7 CFM. Use compressor with 9 CFM at 50 psi. (For more information, call De Vilbiss Air Power Tools at (901) 423-7983.)
3. Airless spraygun: Graco Bulldog 33:1 with air intake pressure = 6-7 bar (90-100 psi). Outlet pressure = 100 bar (+/- 3000 psi). Tip: 0.039 ins (ie 35-39 thou). Delivery rate: 2.9 gallons per minute.
4. For smooth Commando Coat 500X Graco Bulldog 33:1 with 21-23 thou. tip.
  - a. Use a respirator with chemical absorbing cartridges, such as Binks #40-128.
  - b. Before starting the job, spray a few short bursts away from the surface to test that everything is working properly.
  - c. If Commando Coat 500X does not spray easily and evenly, thin with Xylene.
  - d. Spray an even coat over the entire surface to be covered. Be careful not to apply coat too thickly.
  - e. When surface becomes tacky – between 20 minutes and one hour, depending on weather conditions – spray second coat. Extreme climactic conditions of heat, humidity and cold can shorten or lengthen this period.
  - f. Intercoat / curing time can be significantly shortened by use of special accelerator (see section on accelerator).
5. Spray gun manufacturers often change model numbers. Consult individual manufacturers for superseded models.
6. Remove any over-spray immediately with Xylene. Once cured, SUPER-Commando Coat 500X is very difficult to remove.
7. Solvents released when spraying are flammable. Observe all fire precautions. Proper ventilation is required.
8. Clean spray gun between coats and immediately after job is completed. Use only Xylene

## CLEANING

Once Commando Coat 500X coatings have fully cured, they are very easy to maintain. Because Commando Coat 500X cures to an impermeable membrane, all dirt sits on the surface.

**[CAUTION!]** If dirt sets in on Commando Coat 500X surface while it is soft and before it is cured, it could become permanently imbedded.]

1. Use any general non-chlorinated floor cleaner, from a neutral household cleaner to a degreaser.
2. **IMPORTANT!** For best results, use a stiff bristled deck brush to agitate cleaner on the surface. [A cotton mop is not recommended since pieces of mop may get caught on high profile of Commando Coat 500X surface]. A synthetic fiber material mop may be used if a deck brush is unavailable.





3. Rinse surface thoroughly to remove all residue.
4. Remove all water with a sponge mop, a 24 oz. mop or water vacuum.

## **ALTERNATE METHODS**

For larger areas, where the above method is not time efficient, there are alternatives available to expedite cleaning.

### **PRESSURE WASHER**

A wide-angle water pressure spray of 600-700 PSI can clean Commando Coat 500X without damage to the surface.

### **ROTARY MACHINE**

A rotary 14" waxing-type machine with a (thickline) blue pad can be used.

### **RINSE-FREE DETERGENT**

If a rinse-free detergent is used, the dirty water pickup can be done with a water vacuum.

### **GREASE SPILLS**

To clean a Commando Coat 500X surface of a greasy or slippery solution, it is necessary to use a slightly more aggressive detergent, containing a degreaser, available from chemical suppliers.

### **REMOVAL OF A STICKY SUBSTANCE**

For removal of gum or other sticky substances from a Commando Coat 500X surface, use a pressure washer. A wide-angle water-pressure spray of 600 to 700 PSI, at an angle of 35-40 degrees, should enable the removal of gum pieces within 10 to 15 seconds without damage to the Commando Coat 500X coating.

### **CHLORINE**

If left on the Commando Coat 500X surface, concentrated chlorine will discolor Commando Coat 500X. Immediately rinse off the concentrated chlorine with water.