



## SECTION 1: TOOLS AND PREFACE

### TOOLS & MATERIALS CHECKLIST *Available at Drytech (\*)*

✦ Tufflex Materials – See us for coverage information*	<input type="checkbox"/>	✦ 2 - 3 clean 5 gallon pails (1 for water, 1-2 for mixing base)	<input type="checkbox"/>
✦ Flexstone Seam tape 4" x180ft (use for plywood joints)*	<input type="checkbox"/>	✦ Slow speed drill & small mixing paddle	<input type="checkbox"/>
✦ V-Notch trowel (3/16") – Larger job? Call us for tips*	<input type="checkbox"/>	✦ Silica sand (#20-30 grit) for slip-guard on Standard Finish*	<input type="checkbox"/>
✦ Several Disposable brushes (3-4")*	<input type="checkbox"/>	✦ Xylene solvent (for cleanup) – Other thinners may be used	<input type="checkbox"/>
✦ Roller Sleeves (10mm), roller cage & extension pole*	<input type="checkbox"/>	✦ Nitrile or Rubber Gloves*	<input type="checkbox"/>

### THINGS TO KNOW BEFORE YOU GET STARTED

- ✦ Surface preparation is **very important**. Failure to properly prep surface could result in a weaker adhesive bond.
  - Tufflex "Tuff" base adheres to almost any clean surface: wood, concrete, metal, old vinyl, tiles and fibreglass.
  - Do not waste money on Good 1 Side (G1S) plywood or PTD plywood – standard grade Ply works best.
- ✦ Base Coat **DOES NOT** adhere well to smooth plastics or metal. To avoid peeling, rough up metal with coarse sandpaper.
  - When in doubt, test adhesion by applying some base coat on a small test area.
- ✦ **IMPORTANT:** Tuff Base is a urethane. Urethanes cannot be applied over asphalt or tar-based products.
- ✦ Fill knot holes, screw holes and cracks with a small amount of mixed Tuff base which can also be thickened to use as a caulking or for filling low spots. A generic 1-part polyurethane caulking may also be used.

## SECTION 2: SURFACE PREPARATION

### CLEANING THE SURFACE:

- ✦ Ensure that the all surfaces are clean and free of dust, debris, oils or grease prior to base application.
  - The surface **MUST** be dry. New surfaces like plywood (not PTD) & clean rough concrete do not require priming.
- ✦ Make sure you use a 4 to 1 mix in hot weather and mix slowly to avoid air bubbles. (you can use a bit less water but **not** more) Smooth concrete & flashings should be roughed up &/or primed. If the surface is contaminated, dirty, weathered or when PTD plywood is used, prime/seal first. Ground level concrete should always be primed/sealed. Use Tufflex #2 primer/sealer .

### SEAMS & GAPS IN THE SURFACE:

- Do not let base coat to get into open gaps as it will protrude when plywood swells and gaps close in humid weather.*  
*If "Tongue & Groove" plywood is not used, leave a 1/16" expansion gap between Square Edge ply. (T&G joints should not need seaming)*
- ✦ Use **our special seam tape** over open gaps. Apply thin amount of base so seam fabric sticks then another thin coat on top.
  - ✦ If large gaps or holes exist you can use round foam backer filler rod prior to the Tuff base coat.

### APPLICATION OVER EXISTING COATINGS OR OLD MEMBRANES

- Applying Tufflex over an old coating or covering such as vinyl, fibreglass or ceramic tiles, some prep work is likely required to ensure the old coating will not lift. Tiles may need priming if they are really smooth. Make sure all old coverings are stuck down well.*
- ✦ If Vinyl or fibreglass is not stuck down well in some areas either secure those areas or just remove all of the old coating.
  - ✦ Also, cut out old vinyl around the walls and posts if it is shrinking. With thicker vinyl where high seams exist, you can either grind them down or cut them out and fill the void with Tuff base coat.
  - ✦ Vinyl usually curls up when applied down vertical part of drip edge flashing so it is usually cut and removed from drip flashing.

## SECTION 3: PREPARING THE PERIMETER

### DRIP / WALL FLASHINGS

- ✦ If water drains off the edge of the deck, install a 2" x 2" metal drip-edge. (Available at lumber yards)
- ✦ Use small flat-head galvanized ring nails (drywall nails work well) to secure the flashing. Keep the nails 4" – 5" apart and a bit closer to the inside edge to prevent buckling and no seam tape is needed to allow water to drain freely.
- ✦ Rough up the top of the drip-edge with coarse sand paper for good adhesion of the base coat.
- ✦ Keep the base 1/2" from the outside edge & 2" out past drip flashings. Use flat edge of the trowel to flatten out both termination edges.
- ✦ At walls on new construction you should run the base up the wall 8" and use our seam/reinforcing tape or an angle flashing.



## SECTION 3: PREPARING THE PERIMETER (Continued...)

### PERIMETER APPLICATION (DO THIS PRIOR TO SPREADING TUFF BASE OVER LARGE AREAS)

After the surface has been prepped and the flashings installed & sanded, the next step is to mix a small amount of Tuff Base to apply over drip flashings & up walls / posts, fill knot holes etc. Use flat edge of a trowel or a brush for tight areas.

Flexstone "Tuff" base coat can be also be thickened forgoing up vertical surfaces and can also be used as a caulking.

- ✦ Pour a small amount of Tuff base into a pail. (Tuff is odorless with a thick white molasses-like consistency)
- ✦ Add 1 part water to 4 parts of Tuff Base (1 gal Tuff + 1 quart water) – **MEASURE ACCURATELY & do not increase amount of water.**
- ✦ Stir the Tuff base coat until it feels thick and consistent - Follow Tuff Base mixing instructions below.
- ✦ At vertical surfaces thicken Tuff with some sand or fine rubber to get a vertical grade. Use small amounts when stirring until desired thickness is obtained. Push the mix up under stucco or siding using a brush or trowel.

### **\*IMPORTANT\*** (Read before mixing) SECTION 4: MIXING FLEXSTONE/TUFFLEX "TUFF" BASE COAT

Flexstone's "Tuff" Base is thicker than all other urethanes and MUST be mixed with water in order to adhere and perform.

\* If you forget to add water and apply the base it will not cure and it will have to be removed and re-coated.

**TUFF Base is mixed at a ratio of 4:1 (4 parts Base - 1 part water) – 1 Pail normally covers 150–160 sq ft on plywood (more on concrete). Base + Water must be thoroughly mixed on SLOW speed (to avoid bubbles) until water and base is no longer separated (a few minutes).**

### HELPFUL HINTS:

- ✦ Once the base coat has been thoroughly mixed with water it is designed to set up quickly to resist damage from rain. Spread the mix immediately to ensure all of it self-levels. You have only **15 – 30 minutes** to spread each batch depending on temperature.  
**\*In hot weather apply early in the day or keep the pails in the shade & spraying cold water on hot pails helps cool them down.**
- ✦ Heat and direct sunlight causes the base-coat to set up faster. You can also **slow this process by adding ice to the water used for mixing.** Alternatively, in colder temperatures, using warmer water and/or vials of catalyst (max 2 per pail) will speed up the cure.
- ✦ On damp surfaces you can reduce the amount of water added to base from 4:1 to 5:1. **\*Not Recommended on extremely wet surfaces\***
- ✦ Expect 150-160 sq ft / 5 gal pail of TUFF base on plywood and apply just thick enough to get a smooth surface to avoid waste.
- ✦ For less experienced crews: Start small (1 Gal base & 1 Qt water) and track your time to see how much you can apply within 20 mins. Once you know how much you mix and can spread before it starts to set up you can then increase the batch size accordingly.

## SECTION 5: APPLYING FLEXSTONE/TUFFLEX BASE COAT

**TUFF BASE IS NORMALLY 40 - 63 MIL (1/16") THICK (FULL SYSTEM = 80-100 MILS) - DO NOT APPLY BELOW 5-7 DEGREES CELSIUS. IN HOT WEATHER USE ICE TO COOL WATER. ONCE WATER IS ADDED YOU MAY ONLY HAVE 15-30 MINUTES TO SPREAD BEFORE IT STARTS TO SET UP (harden).**

### BASE SPREADING STEPS:

- 1) Stir all new pails of Tuff base thoroughly before you pour out and add water - use slow speed drill & small mixing paddle.  
**TIP - You can save time if you mix all base pails at once then use up one pail at a time. \*Keep pails in the shade\***
- 2) Pour some base into a clean bucket, add 4 parts Tuff base to a max of 1 part water. (You get 6.25 gals/pail)
- 3) Stir the entire mixture slowly & thoroughly to avoid air bubbles in the solution. Once water is mixed in pour out the whole mix in a line and spread it quickly maintaining a wet edge. **Do not spread more than you can reach with your trowel or application tool.**
- 4) Spread the using a 3/16" deep V-Notched trowel, Notched squeegee, or Gauge Rake. Spread base as quickly & evenly as possible.
- 5) While spreading the mix, DON'T interrupt the self-levelling process by "playing" with base after it is spread, it self-levels gradually.
- 6) Minor imperfections can be easily fixed by using an angle grinder and a round coarse 7" sandpaper disk (#25-30 grit). Just feather grind imperfections by barely touching the surface and touch-up with additional product.

### ADDITIONAL TIPS:

- ✦ The Flexstone basecoat will form a skin within 4-5 hrs which will then protect the surface from rain.
- ✦ When coating larger areas, it is better to have 2 people – 1 to mix and 1 to spread the membrane.
- ✦ When you pour out the mix, scrape out residue and set it upside down on to the next area so it drains. Swapping 2 mixing pails helps to avoid combining the old mix with the new batch which may cause chunks.
- ✦ To measure the mix quicker use a wooden stick and cut notches in it at a ratio of 4 to 1 (i.e. 2" to 8"). In warmer weather the base cures in a day. Even if it is a bit tacky you can still apply the finish coats but then wait until it is no longer tacky before walking on it.



---

## SECTION 6: CURING & CLEAN-UP

---

### ADDITIONAL TIPS:

- ✦ After the base coat is applied, if it freezes, the base just stops curing then continues curing when it warms up.
- ✦ Warmer water & also using the vial of base catalyst speeds up the cure time but this means you must move fast. (Use in cold weather)
- ✦ In warm weather full cure is approx. 1 day (without catalyst) & even if the base is a bit tacky it's ready for top coat.
- ✦ For cleaning up on the job wipe away any drips or excess product with a rag as soon as possible.
- ✦ You can also use a small amount of Xylene on your rag. Clean tools with Xylene at the end of the job.
- ✦ Save the TUFF plastic pails & peel out the skin which you can cut up & use to as samples to demonstrate how strong it is. You may also want to save the pails to use on your next job. Store left over colour and clear coats in plastic pails.

---

## SECTION 7: FINISH COATS – STANDARD & TEXTURED STONE

---

**USEFUL FACT:** At any time in the future you can change/update your finish type any time by simply applying a new finish on top.

### STANDARD COLOUR COAT FINISH:

The Standard System consists of a rugged urethane (AL) colour top-coat with maximum UV protection. Tufflex top coats superior as they will not to fade like most other urethanes. After you roll out the colour coat broadcast a little fine silica sand (#20-30 grit) on top for traction. Back roll the top-coat to even out the sand (you can control how rough it is by how much sand you use).

### APPLICATION STEPS:

- 1) Stir the pail of AL (aliphatic) Colour Top-Coat a bit before use. (See instructions on the pail)
- 2) Pour some AL Colour Top-Coat into the roller tray and roll it out with a 10mm roller sleeve and roll out evenly over the surface.
- 3) For slip-resistance, broadcast a bit of #20-30 grit silica sand over the applied top-coat rolling back and forth to even out the sand.
- 4) Roughness depends on the amount of sand & how rough you want the surface. (Broadcast the sand like feeding chickens)
- 5) One thick layer of top-coat is usually sufficient for a home but for heavy traffic areas always use two coats.  
A second coat will also solve any potential fish-eyeing issues after the initial coat. Sand sometimes causes separation of top coat.

### ADDITIONAL TIPS:

- ✦ If the base-coat has been exposed for a prolonged period of time it can harden in a hot climate and become very smooth. Wipe the surface with a small amount of Xylene on a rag to soften the base. This will ensure good adhesion of the top coat.
- ✦ In warmer temperatures the top-coat usually cures in a day. When it is not tacky you can walk on it.
- ✦ **Pour leftover top-coat into an air-tight plastic base pail to save for future use** & store in a cool dry place.

### TEXTURED STONE FINISH:

#### APPLICATION STEPS:

- 1) Multi coloured blends of specially sized fire-resistant special Acrylic Coloured Flakes are utilized along with the Tuff base coat, a colour coat, and our unique 1-part Tufflex urethane clear coat to create a stunning luxurious textured stone finish. *\*Approved Tuff system.*
- 2) Roll on a thin colour coat over the base coat. Light tan AR (aromatic) is used for all chip systems, regardless of colour.
- 3) While top-coat is still wet, broadcast special colour flakes to refusal / rejection by hand or use a hopper gun.
- 4) Allow flakes to cure over night then sweep off excess and lightly pole sand (100-150 grit) surface to knock down any jagged pieces.
- 5) Evenly roll on a coat of Tufflex Multi-Glaze Clear Coat in all directions (similar to painting a wall) until every inch of exposed chips are covered evenly and consistently. Flashing / shiny spots can result if some areas are overlapped and thicker.
- 6) Allow the clear-coat to cure until it is no longer tacky and enjoy!

#### ADDITIONAL TIPS:

- ✦ Sanding the flakes dictates how rough the surface is for slip resistance. Sanding more aggressively gives you a smoother finish and a light sanding leaves the surface rougher. You do need some roughness for slip resistance and safety.