



22nd July 2011

TufStuf: Anti-Slip and Protective Coating

Technical Data Sheet

Description

Cyndan TufStuf is a tough, durable, single pack, moisture curing, polyurethane anti-slip and protective coating. It cures to form a tough, abrasive resistant, semi-flexible coating in an attractive textured finish.

TufStuf has excellent durability as it is heat, water, saltwater, impact and chemical resistant (dilute acids and alkalines).

TufStuf has been designed to provide a slip resistant floor and protective coating for foot and vehicular traffic.

TufStuf (used in conjunction with Roc TufStuf Smooth Coating) has been tested and passed to AS/NZS 4586:2004.

Uses

TufStuf is suitable as an anti-slip protective coating for:

- Domestic & Recreational: Decks, balconies, patios, garages, steps, entertaining areas, pool surrounds.
- Schools, Parks & Public Areas: Playgrounds, demountable classrooms, walkways, toilets and change rooms.
- Hospitality: Kitchen areas, bar areas.
- Building & Construction: Anti-slip flooring, steps, stairs and walkways, decks, balconies, patios, equipment platforms, scaffolding planks, metal corrosion protection, driveways and bridges pool surrounds.
- Industrial Areas: Safety work areas, factory & warehouse floors, work platforms & scaffolding planks.
- Marine: Boat decks & trailers, general protective coating, steps & ramps, marinas, pontoons.
- Agriculture & Farming: Agricultural equipment, cherry picker platforms, animal races & pens.
- Automotive & Rail: Load areas of utes, trucks, vans, trailers, caravans & buses, pedestrian crossing, bridges & platforms.

Suitable Surfaces

TufStuf is suitable for most primed building substrates including:

Porous concrete, cement, cement render, brick, block work, plaster board, masonry, timber, FC sheeting, porous tiles (excluding fully vitrified and glazed tiles), fibreglass, metal (must be etch primed) and sound painted surfaces. Apply test areas to doubtful surfaces.

Specification

The information contained in this product data sheet is typical but does not constitute a full specification as conditions and specific requirements may vary from project to project. The instructions should be considered as a minimum requirement but the applicator or contractor must use their skill, knowledge and experience to carry out additional works as may be necessary to meet the requirements of the project. Specification for specific projects should be sought from the Company in writing.

Limitations

» TufStuf relies on the texture of the aggregate bound within the tough and abrasion resistant polyurethane resin. Therefore, a build up of fatty or greasy substances and grime will diminish or negate the products effectiveness and it is not recommended that it be used in these areas.

» It is essential that the product be kept free of dirt build - up. Chemicals spills must be cleaned immediately.

» The manner in which the product is applied will affect the degree of 'anti-slip' and possibly its X classification in terms of table 2 of AS/NZS 4586 Wet Pendulum Test. Classification tests were based on brushed samples deemed to be worst case scenario. Roller & spray application are likely to provide a higher classification.

» Colours will lighten and yellow over time. An aliphatic version is available where colour fastness is important.

Benefits and Advantages

- Single pack - no mixing is required.
- Brush, roller or spray applied.
- Quick curing - generally overnight.
- Tough, durable & flexible.
- Impact & vibration resistant. It is not brittle like some epoxies.
- Odourless when cured.
- Suitable medium duty traffic.
- Easily overcoated & repaired.
- Good chemical resistance - but refer 'Clean-Up'.
- Attractive finish in a range of colours.

Precautions in Use

- » TufStuf should be applied in well ventilated areas.
- » TufStuf is solvent based. The use of solvent resistant gloves & goggles is recommended. Breathing masks are recommended when spraying and adequate ventilation should be provided. In confined areas breathing apparatus is recommended.
- » TufStuf is flammable. Keep all sources of ignition away from the product & the area in which the product is being applied. Vapours may collect in low lying areas.
- » If swallowed do not induce vomiting, give plenty of water to drink. Seek urgent medical attention. If on skin, remove contaminated clothing & wash with soap & water.

Apply moisturising lotion. If inhaled (unlikely due to its viscous nature), remove person to fresh air. Apply artificial respiration if required. Inhaled substance is likely to be an aromatic hydrocarbon (solvent/ thinners).

Priming and Surface Preparation

Good preparation is essential. Surfaces must be sound, stable, dry, clean and free of dust, loose, flaking, friable material and substances that may diminish adhesion.

Concrete & Porous Tiles

Surface must be porous to allow the product to bond. The surface should be tested for porosity by spilling droplets of water on it. The absorption of the droplets is a good indicator of a suitable substrate. If droplets show little sign of being absorbed the surface should be considered as doubtful for bonding purposes needing additional preparation. Examples of such surfaces includes, steel trowelled & smooth helicopter finished concrete. These surfaces must be thoroughly acid etched, washed and neutralised to provide a porous surface. This should be done in accordance with E.P.A. requirements. If acid etching is not sufficient, surfaces may require mechanical abrading or sand blasting.

If concrete is as required above, prime with one good coat of either Cyndan Primeseal (2 part water based primer/sealer) at the rate of 3m² to 4m² per coat ensuring that the the coating has a solid, off-white appearance. In exposed areas where entrapped water moisture may exist in the substrate (which can lead to bubbling) the surface should be primed with Cyndan Primeseal applied at 3m² per litre.

Metal

Bare metal must be treated for rust & then etch primed. Apply TufStuf as soon as possible after etched primer has fully cured and before any surface contamination occurs. We recommend Cyndan Aluclean to be used as the etch primer.

Timber & Fibre-Cement Sheeting:

Sand or wire brush then clean, apply the application of TufStuf.

Application

Stir thoroughly before starting the application process, then intermittently, avoiding aeration.

Apply by brush or recommended roller (black texture) in coats of approximately 500 microns thick (0.5mm) until desired thickness is achieved. It is important that the product's texturing is maintained with each coat. Applied too thickly can cause unsatisfactory results. Spread onto surface as evenly as possible. Apply following coats as soon as possible and best within 48 hours.

By Spray

Mask off areas not intended to be coated. Spray by air assisted apparatus at approx. 80 psi (5.5 bar) or airless spray with 30 thou to 32 thou tip at 1000 to 2000 psi (pressure should be as low as practical). Remove all filters. Spray in overlapping movements in coats of approx. 500 microns thick. It is important that the product's texture is maintained with each coat. Apply following coats at right angles to preceding cured coats as soon as possible and best within 48 hours. To achieve best results, masking tape, if used, should be removed after each coat when still wet. After spraying, immediately clean equipment with Mineral Turpentine.

Wear, Tear & Repair of TufStuf.

Although TufStuf is tough and durable the nature of the applications renders it subject to wear & damage. It is important that the coating be monitored for wear and tear and that appropriate maintenance should be carried out to retain the products optimum performance. This is easy to carry out as follows:

To apply a maintenance or rejuvenation coat, clean surface and apply the new coat/s of TufStuf.

- Remove any damaged or loose areas.
- Clean and roughen surface as well as surrounding TufStuf.
- Treat exposed areas as per preparation instructions.
- Apply new TufStuf to area including 20 mm onto the existing sound TufStuf coating.

Coverage

The stated average coverage rate may vary depending upon type, condition, porosity, texture of the surface and application technique.

Apply TufStuf at a rate of 4m² per litre per coat applied in 2 or 3 coats.

Colours

Colours available on application. Minimum purchase quantities may apply.

NOTE: Whilst every attempt is made to replica colours, minor batch to batch colour variations may occur & batch lots should be ordered.

Shelf Life: 6 months in unopened containers, store in cool and dry conditions.

Drying and Curing

Drying and curing of the product is affected by type, dryness and porosity of the surface, temperature, humidity, ventilation, climate conditions and application technique and therefore drying and curing can only be given as a guide.

The product cures upon contact with atmospheric moisture & the speed of curing is affected by humidity, ventilation & temperature. The higher these factors are the quicker the cure.

Indicative curing rates at 25°C at 75% R.H. @ 500 micron thick. Tack Free: 6 to 12 hours Solid Cure: 24 hours Full Cure: 24 to 72 hours The product is suitable for light loads after 36 hours & full load after 72 hours. The product attains full properties after 96 to 168 hours.

Storage

Keep in cool, dry place away from heat, flame or combustible material. Product cures on contact with water or moisture. Product contains flammable solvents. Keep out of the reach of children and away from sources of ignition and heat. Class 3 dangerous goods must be declared prior to transportation. Available in 4 & 15 Litre Pails.

Clean Up

Avoid spills. They are difficult to clean particularly off porous surfaces. For wet spills use Cyndan Envirodrysorb. Equipment should be immediately cleaned with Mineral Turpentine.

Chemicals Spills on to TufStuf:

TufStuf has good chemical resistance. However, chemical spills should be immediately cleaned and removed from the TufStuf surface.

Tests and Technical Data

Information below is general and approximate.

- TufStuf has been tested by CSIRO AS4586:2004.

- Chemical Resistance:

 - 7 Day immersion Test.

 - 2% Sulphuric Acid - Excellent, 20% Sulphuric Acid - Good

 - 10% Acetic Acid - Excellent, 20% Acetic Acid - Good

 - 5% Hydrochloric Acid - Excellent, 20% Hydrochloric Acid - Good

 - 15% Phosphoric Acid - Excellent

 - 20% Sodium Hydroxide – Excellent

 - 2% Ammonia - Excellent, 20% Ammonia – Good

 - Petrol/Diesel - Neat - Fair

 - Water/Saltwater - Excellent

NOTE: The product is not intended or recommended for use in immersed situations or as tank lining. Immersion tests were carried out to assess extreme conditions. We strongly recommend that chemical spills are promptly & thoroughly cleaned to maximise the life of the coating. The results show that TufStuf has a good resistance to diluted acids & alkalines. Concentrated acids & alkalines show some discolouration but no loss in adhesion or film integrity.

- Bond Test: Bent around a 6 mm mandrel showed no loss of adhesion or cracking.

- Impact Test: Front & reverse side impact by a blunt 0.5cm sq, 1 kg load over a 1 m fall showed that the coating remained intact.