

Product Data Sheet

Rocktuff

Liquid Polyurethane , Anti-Slip Protective Coating

Description

Duram ROCKTUFF is a tough, durable, single pack, liquid applied, moisture curing, aromatic polyurethane anti-slip and protective coating. It cures to form a tough, abrasive resistant, semi-flexible coating in an attractive textured finish. Rocktuff has excellent durability as it is heat, water, salt water, impact and chemical resistant (dilute acids and alkalis).

Rocktuff has been designed to provide a slip resistant floor and protective coating for foot and vehicular traffic. Rocktuff (used in conjunction with Rocktuff Smooth Coating) has been tested to AS/NZS 4586:2004

Rocktuff is available in an aliphatic version where colour fastness is important.

Uses

Rocktuff 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, trafficable protective coating, 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, stone damage protection to cars and caravans, pedestrian crossing, bridges & platforms.

Suitable Surfaces

Rocktuff 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 soundly 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

- » Rocktuff 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. Takes the stress and difficulties away from using two part systems.
- 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 for light to medium duty traffic.
- Easily overcoated & repaired.
- Good chemical resistance - but refer 'Clean-Up'.
- Attractive finish in a range of colours.

Precautions in Use

- » Rocktuff should be applied in well ventilated areas.
- » Rocktuff 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.
- » Rocktuff 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 Duram 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 Duram Primeseal applied at 3m² per litre.

Metal

Bare metal must be treated for rust & then etch primed. Apply Rocktuff as soon as possible after etched primer has fully cured and before any surface contamination occurs.

Painted Surfaces

This generally applies to painted vehicles, equipment & 'Colorbond' type coated metal. Test surfaces with Duram Solvent for softening. If paint is effected or likely to peel then do NOT proceed. Further preparation is required, remove paint, clean and etch prime original surfaces as per priming instructions. High quality paint is generally not affected. Roughen with sandpaper or wire brush and then clean.

Fibreglass

Sand to remove all gloss & clean with Duram Solvent. Ensure that there are no traces of release agents, waxes or other production additives. Apply Rocktuff direct to the surface.

Timber & Fibre-Cement Sheeting:

Sand or wire brush then clean, apply Duram Primeseal ensuring it has fully cured before the application of Rocktuff.

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. If required, Rocktuff may be diluted by adding up to 10% (max.) with Duram Solvent and thoroughly mix slowly. Spray via a panel beater type gun 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 Duram Solvent.

Wear, Tear & Repair of Rocktuff.

Although Rocktuff 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, wire brush, wipe with Duram Solvent or Rocktuff Prep Solvent, allow solvent to evaporate and apply the new coat/s of Rocktuff.

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

Coverage

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

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

Additional coats maybe applied for heavier traffic.

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 Pails.

Clean Up

Avoid spills. They are difficult to clean particularly off porous surfaces. For wet spills use an absorbent cloth and Duram Solvent. Equipment should be immediately cleaned with Duram Solvent.

Chemicals Spills on to Rocktuff:

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

Tiling, Topping or Top Coating

N/A

Safety & Precautions

» Rocktuff should be applied in well ventilated areas.

» Rocktuff 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.

» Rocktuff 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).

For full safety data refer to the products Material Safety Data Sheet. Observe precautions as per label.

Tests and Technical Data

Information below is general and approximate.

- Rocktuff has been tested by CSIRO AS4586:2004.

- Chemical Resistance:

7 Day immersion Test. Sulphuric Acid - 2% - Excellent, 10-20% - Good Acetic Acid - 2 - 10% - Excellent, 20% - Good Hydrochloric Acid - 2 - 10% - Excellent, 20% - Good Phosphoric Acid - 2 - 20% - Excellent Sodium - 2% - Excellent Hydroxide - 10 - 20 % - Good Ammonia - 2% - Excellent, 10 - 20% - 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 ROCKTUFF has a good resistance to diluted acids & alkalis. Concentrated acids & alkalis 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.

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Conditions of Use and Disclaimer

The information contained in this Material Data Sheet is given in good faith based upon our current knowledge and does not imply warranty, express or implied. The information is provided and the product is sold on the basis that the product is used for its intended purpose and is used in a proper workmanlike manner in accordance with the instructions of the Product Data Sheet in suitable and safe working conditions. Under no circumstances will the Company be liable for loss, consequential or otherwise, arising from the use of the product.

Material Safety Data Sheet

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Liquid Polyurethane , Anti-Slip Protective Coating

Classified as Hazardous Material according to the criteria of Worksafe Australia.

Identification

Product Name: Rocktuff
 Other Names: Duram ROCKTUFF.
 U.N. Number: 1263
 Class: III
 Hazchem 3[Y]
 Code:
 Poison 6
 Schedule:
 Pack Sizes: 4ltr & 15ltr Pails.

Physical Description

Appearance: Coloured viscous
 Liquid incorporating
 aggregate.
 Boiling Point: Approximately
 300oC.
 Vapour
 Pressure: Approximately 6.00
 Xylene.
 Percent
 Volatiles: +-40%
 Specific
 Gravity: +-1.1
 Flash Point: Closed cup 28oC
 Xylene, Open cup
 N/A.
 Flammability: 1.1-7.0% Xylene.
 Water
 Solubility: Insoluble.

Ingredients

Chemical	CAS No.	Proportion
Urethane Poylmer.	Not Known.	30-60%
Inert Fillers	Not known.	10-30%
Inert Aggregates.	Not known.	10-30%
Xylene.	1330-20-7.	10-50%
Minor Ingredients.	Not known.	<5%

Uses:

ROCKTUFF is suitable as an anti-slip protective coating for:
Domestic: Decks, balconies & patios, garages, steps, entertaining areas & pool surrounds.
Schools: Playgrounds, demountable classrooms, walkways & toilets.
Hospitality: Kitchen areas, bar areas.
Building & Construction:
Anti-slip flooring.
Trafficable protective coating.
Driveways & bridges and much more.

Health Warning Information

Health Effects

Swallowed: Ingestion could cause irritation and burning sensation.

Eye: Irritation and burning, prolonged or long term exposure can cause damage. Grit can scratch eyes.

Skin: Irritation, burning sensation. Solvent can dry the skin, long term can lead to skin cracking. Apply moisturising cream.

Inhaled: Irritation with asthma like symptoms. It is unlikely that product would be inhaled due to its viscosity. Inhaled matter is likely to be Xylene.

First Aid

Swallowed: Do not induce vomiting, give either milk or water to drink and seek urgent medical advice.

Eye: Flush eyes with copious amounts of clean water lifting the lid to ensure product is flushed completely from underneath. Seek medical attention.

Skin: Remove contaminated clothing. Wipe product off skin. Wash skin with soap and water. Apply moisturising cream.

Inhaled: Remove person to fresh air. If breathing stops ally artificial respiration. Seek urgent medical attention.

Advice to Doctor

Treat Symptomatically.

Precautions in Use

Uncured product is flammable, therefore ensure all sources of ignition are kept away while the application is in progress.

The wearing of protective clothing and suitable masks is highly recommended while applying the ROCKTUFF. Follow normal good industrial hygiene and chemical precautions.

Exposure Limits

N/A

Ventilation

Ensure that area is well ventilated at all times. In confined areas the use of artificial breathing equipment is recommended.

Personal Protection

The use of solvent resistant gloves, coveralls and goggles (against splashes) are recommended. If spraying the use a suitable breathing mask is also recommended.

If spraying in confined areas, self contained breathing apparatus is recommended. Keep flame, sparks and sources of ignition away from uncured product. Vapours may collect in low-lying areas. Ensure ventilation, either natural or artificial is present to disperse vapours.

Safe Handling Information

Storage and Transport

Store: Away from flame and ignition sources. Keep cool, dry and away from direct sunlight.
Product is flammable and Dangerous Goods Class III must be declared prior to transportation.

Spills and Disposal

Spills: Remove sources of ignition. Prevent spills from entering drains and waterways. Absorb with sand or oil absorbing material. Discard to suitable landfill in accordance with local regulation. Product will solidify after contact with water or atmospheric moisture.

Disposal: Shovel into drums, incinerate or land tip in accordance with local regulation.

Fire / Explosion Hazard

Product contains Xylene. Containers should be kept cool with water spray to prevent pressure build up. Burning product may produce irritating smoke. Heat may cause cans to rupture. Ingress of moisture will cause product to begin curing releasing Co2 and may result in an increase in the pressure in the containers.

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