

Product Data Sheet

Duram 195

Liquid Polyurethane Waterproofing Membrane

Description

Duram 195 is a single pack, liquid applied, moisture curing, self leveling, waterproofing membrane which cures to form a seamless, tough, durable, elastomeric (class 3) waterproofing membrane.

Duram 195 incorporates UV stabilisers, UV absorbers and anti-oxidants to enable the product to provide greater UV protection and stability than conventional aromatic polyurethane membranes.

Duram 195 bonds well to most suitably primed building substrates and is suitable for above and below ground applications.

Duram 195 is black in colour but will not bleed or stain tiles or grout as the product is tar and bitumen free.

Duram 195 meets the 'Green Star' environment criteria.

Uses

Duram 195 is designed to waterproof most applications within the building and construction industry including:

Exposed Areas: Roofs, decks, terraces, balconies, podiums and gutters.

Tiled or Covered Areas: Shower recess & wet areas (floors and upturns), decks, balconies, terraces, podiums, retaining walls, planters & landscaped areas, structural slabs, tanks, pits, bunding areas and water features.

Suitable Surfaces

Duram 195 is suitable for most building substrates including: Concrete • Cement • Cement Render • FC and CFC Sheeting • Render • Brick • Block work • Plaster Board • Masonry • Bitumen (when primed with Duram Primeseal) • Metal • Timber, Particle Board and Plywood (when primed with Duram Primeseal).

Surfaces must be made good and should be sound, stable, dry, clean and free of dirt, dust and contaminants and suitably primed.

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

Product contains protective technology including UV absorbers and UV blockers to give the product UV resistance and is therefore suitable for exposed applications. However, where extended UV resistance is required, Duram 195 should be top coated with Multithane ATC. Colour of Duram 195 may lighten when exposed to direct sunlight or immersed.

Benefits and Advantages

Duram 195 represents the highest standards in polyurethane waterproofing technology and provides the following benefits and advantages:

- Single pack - no mixing.
- Fast curing (within 24 hours).
- Meets the 'Green Star' environmental criteria.
- Permanently flexible (tests show flexibility > 500% - Class 3 [highest class of extensibility]).
- Will not stain tiles or grout - as Duram 195 is tar and bitumen free.
- Self leveling and seamless membrane (no joints or laps).
- Suitable for immersion in water.
- Can be directly tiled (broadcasting of sand in to final wet coat is recommended).
- Good chemical resistance.
- High strength and puncture resistant.
- Easily repaired and or maintained.
- Odourless (subjective) when cured.
- Formulated to provide long term protection.
- Easy to apply.
- Has good hydrostatic resistance.
- Usually black to charcoal grey in the can.
- 27 year history of Australian use.

Precautions in Use

Risk is considered low when properly used and the precautions on can, label and / or data sheets should be observed. Use in well ventilated areas. Uncured product is flammable, so keep all sources of ignition away from product and its vapours.

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.

Priming

Surfaces should be suitably primed with Duram Primeseal applied at no less than 1 Lt per 4m² and allowed to dry. Duram Primeseal must be used for roof and exposed areas, timber and particle board surfaces, bitumen or where there is a risk of evaporation of entrapped moisture in the substrate which may cause the membrane to bubble.

Alternative primers such as Duram Multiseal may be used in non-exposed porous areas and where the moisture content of the surface is very low, applied at 3 to 4 Lts per m².

Metal surfaces must be clean, free of contaminants and then metal etch primed. If rusted, treat to remove rust, apply a rust converter and then metal etch prime.

Excessively porous, friable and dusty surfaces may require an additional priming coat.

Allow primers to dry or fully cure before applying the membrane and please refer to the product data sheets of the stated primers.

Detailing Preparation

Corners

Prime as required.

Apply an adequate flexible polyurethane sealant, in accordance the manufacture's instruction and tool off to form a solid, coved or 45° fillet extending at least 10mm on to the adjacent surfaces. Allow to cure. Apply the Duram membrane directly over the sealant and on the adjacent surfaces.

For Additional waterproofing protection the following additional steps should be taken

Lay a strip of Duram Leak-Seal Tape (self-stick, butyl mastic waterproofing membrane with a polyester backed reinforcing fabric) over the cured polyurethane sealant (as described above) pressing it firmly on the surface. Apply the Duram membrane directly over the tape and on the adjacent surfaces.

Joins, Gaps and Cracks

General

Joins, gaps and cracks should be suitably filled and sealed with an appropriate elastomeric sealant, preferably a polyurethane sealant, and allowed to cure.

Recommendation: The movement of small cracks should not be underestimated and should be at least covered with a flexible polyurethane sealant or additional coats of membrane.

Large or Live Cracks

Large cracks should be routed out to form a 'V' and then filled and sealed with a polyurethane waterproof joint sealant as per the manufacturer's instructions. The sealant should be finished slightly proud of the surface and allowed to cure.

After priming, as required, lay a strip of Duram Leak-Seal Tape over the join or crack pressing it firmly on to the substrate. The Duram membrane is then applied directly to the Duram Leak-Seal Tape and extending at least 75mm on to the adjacent surfaces.

If the Duram Leak-Seal Tape is not used then a suitable bond breaker tape (such as duct tape) at least 48mm wide should be laid over the join or crack and apply a fully reinforced Duram membrane consisting of a base coat of membrane in to which the reinforcing fabric is embedded, a saturating coat of the Duram membrane ensuring that the fabric is entirely saturated and covered and then allowed to cure. At least one or two further coats are applied as per the Duram membrane's Product Data Sheet extending at least 75mm on to the adjacent surfaces.

Joins - Particularly in CFC Sheeting and Timber Sheeting

Ideally the sides of the sheets should be fully coated with a flexible polyurethane waterproof joint sealant prior to butting the sheets together.

If not, the joins should be suitably filled and sealed with an appropriate elastomeric polyurethane waterproof sealant and finished flush with or preferably slightly proud of the surface and allowed to cure.

After priming, as required, lay a strip of Duram Leak-Seal Tape over the join, pressing it firmly on to the substrate. The Duram membrane is then applied as described under 'Large or Live Cracks'.

If the Duram Leak-Seal is not used then follow the procedure as described under 'Large or Live Cracks'.

Waste Outlets, Penetrations and Angles

Waste Outlets: Floor wastes and puddle flanges should be rebated in to the floor to allow water to readily drain.

Plastic or metal angles: Where required by the Building Code such as internal hobs and exterior door barriers and also plastic corner angles under wall boards, they should be securely embedded in to a continuous, gap free bed of a polyurethane sealant / mastic.

Application

Apply Duram 195 by brush, roller, broom and squeegee in a minimum of two coats, usually a day apart so that the minimum dry film thickness is 1.2mm. Where no primer is used, an additional coat of Duram 195 is recommended. The minimum wet coat thickness per coat is 0.5mm.

Reinforced System

In areas such as corners and over joins and cracks the membrane should be used in conjunction with a reinforcing fabric (Duram Durascrim or fibreglass matting) the application consists of applying a base coat in to which the reinforcing fabric is laid followed by the application of a saturating coat ensuring that the product is worked well in to the fabric and that no wrinkles or bubbles are present and that fabric is entirely saturated and covered with product. Allow to cure. Apply one or two further coats of products.

Multithane ATC

Multithane ATC is an aliphatic based polyurethane top coat which extends the life of the exposed membrane.

When top coating Duram 195 with Multithane ATC, allow Duram 195 to fully cure and then apply one good coat of Multithane ATC at the approximate rate of 3 to 4 sq.m. per Lt.

Coverage

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

Duram 195: Generally, 1.5 to 1.6 Lt per sq.m. for two coats combined, i.e. 0.75 to 0.80 Lts per sq.m. per coat. On average a 15 Lt pail usage covers 10m² (maximum) finished. Primers: Generally 4 sq.m. per Lt per coat (refer above).

Colours

Black. Colour may lighten after application when exposed to direct sunlight..

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.

Generally Duram 195 is weather resistant within 8 to 12 hours with full cure within 24 hours.

Storage

Keep in cool, dry place away from heat, flame or combustible material. Product contains flammable solvents. Class 3 dangerous goods must be declared prior to transportation.

Available in 1 Lt, 5 Lt and 15 Lt pails.

Self life: 6 - 12 months in unopened original containers but best used within 6 months. As

this is a polyurethane some skinning of the product may occur. This should be cut out and removed. Balance of the product will be suitable for use.

Clean Up

Avoid spills. They are difficult to clean particularly off porous surfaces. For wet spills on concrete and non-porous surfaces use a cloth and Duram Solvent. Do not clean off carpets as it is better to allow product to cure and then shave the carpet. Equipment should be immediately cleaned with Duram Solvent.

Tiling, Topping or Top Coating

Duram 195 can be exposed, covered, topped with sand: cement mix, covered with Geo-textile and pebbles or tiled which will extend its life.

If membrane is to be tiled, dry builders sand should be liberally and fully broadcast into the last wet coat to provide a mechanical key. Allow to cure then remove any loose sand. Ensure surface is dry and clean.

Two pack , flexible tile adhesives are recommended. Acrylic bonding agents can be used in sand:cement mixes for better strength and adhesion. When tiling, it is essential that adequate expansion joints are installed in accordance with good tiling practice and AS3958.1-1991.

Safety & Precautions

Duram 195 is solvent based. The use of solvent resistant gloves and goggles (against splashes) are recommended. If spraying, which is very rare, the use of self contained breathing apparatus is recommended. If swallowed do not induce vomiting, give plenty of water to drink. Seek urgent medical advice. If in eyes, flush thoroughly with clean water, holding lid open to ensure any trapped product may be flushed away. Seek medical assistance. If on skin, remove contaminated clothing and wash skin with soap and water. This may not remove the product but will encourage it to cure and can be later peeled off. If inhaled, unlikely due to viscosity of the product, remove person to fresh air and apply artificial respiration if required and seek urgent medical attention. Product is flammable when wet. Keep away from all sources of ignition. Ensure adequate ventilation. Vapours may collect in low lying areas.

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. Duram 195 passes the criteria for AS4858:2004 Wet Area Membranes Elongation at break: >500% Class 111 High Extensibility. Resistance to Cyclic Movement: 50 cycles without rupture, tears and crazing.

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

Duram 195

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None.

Identification

Product Name: Duram 195
 Other Names: 195
 U.N. Number: 1263
 Class: III
 Hazchem Code: 3Y
 Poison Schedule: 6
 Pack Sizes: 1 ltr, 5 ltr & 15 ltr pails

Physical Description

Appearance: Dark brown to black high viscosity liquid.
 Boiling Point: Approx. 300oC.
 Vapour Pressure: Approx. 6.00 (Xylene).
 Percent Volatiles: > 15%
 Specific Gravity: +/- 1.1

Ingredients

Chemical	CAS No.	Proportion
Urethane Polymer	N/A	30-60%
Inert Fillers	N/A	10-30%
Xylene	1330-20-7	10-30%
Minor ingredients, unspecified water	N/A	< 5.0%

Flash Point: 28oC
(Xylene)
Flammability: 1.1-7.0%
(Xylene)
Water Insoluble.
Solubility: Cures
slowly on
contact
with
water.

Uses:

Duram 195 is designed to waterproof most applications within the building and construction industry.

EXPOSED AREAS:

Some but not limited to the following.

Roofs, decks, terraces, balconies, podiums and gutters.

TILED OR COVERED AREAS:

Shower recess & wet areas (floors and upturns), decks, balconies, terraces, podiums, retaining walls, planters and landscaped areas, structural slabs, tanks, pits and water retaining structures.

Health Warning Information

Health Effects

Swallowed: Ingestion could cause gastric irritation.

Eye: Irritation and burning. Long - term exposure can cause damage.

Skin: Irritation, burning sensation.

Inhaled: Irritation with asthma like symptom. Headache and nausea is possible. It is unlikely that the product would be inhaled due to its viscosity. Inhaled matter is likely to be Xylene.

First Aid

Acute Swallowed: Do not induce vomiting. Give plenty of milk or water to drink. Seek immediate medical advice.

Acute Eye: Flush eye with copious amounts of clean water, holding open the lid to ensure any trapped product may be flushed away.

Acute Skin: Wipe product off skin. Wash skin with soap and water. Apply moisturising cream.

Acute Inhaled: Remove person from exposure. Keep rested ,if breathing has stopped apply artificial respiration immediately and seek immediate medical attention.

Chronic: Except for prolonged skin contact causing sensitivity and alkaline burning, products of this type are not anticipated to cause significant adverse effects.

Advice to Doctor

Swallowed: Do not induce vomiting. Give plenty water to drink and seek immediate medical attention.

Eye: Immediately thoroughly flush eye with clean water, holding open lid to ensure any trapped product maybe flushed away. Seek medical assistance.

Skin: Remove contaminated clothing, wash with soap & water. Do not use solvents to remove material. Apply moisturising cream.

Inhaled: Remove person to fresh air. Keep rested, if breathing has stopped apply artificial respiration immediately and seek immediate medical attention.

Precautions in Use

Treat symptomatically

Exposure Limits

Use in ventilated areas and provide flame proof artificial ventilation if required to maintain concentrations below Xylene Exposure Standard of 350g/m³ (TWA) 655 mg/m³ (STEL) or 100ppm.

Ventilation

Exposure limits TLV (mg) 10.

Personal Protection

Good ventilation is required. The use of solvent resistant gloves, coveralls, safety boots and goggles (against splashes) is recommended. Avoid breathing vapours. Vapours may collect in low lying areas. Respirator type (AS1716): Use if inhalation risk exists. Keep flame, sparks and any sources of ignition away from uncured product.

Safe Handling Information

Storage and Transport

Store in cool dry area, away from all sources of ignition.

Store in original containers. Keep sealed, labeled and leak free.

Suitable containers: Plain metal cans or pails as recommended by manufacturer.

Class 3 dangerous goods must be declared prior to transportation.

Spills and Disposal

Prevent spills from entering drains and waterways. Clean up spills immediately. Absorb material with sand or other adsorbing material and shovel into suitably labeled containers and dispose of in accordance with local council regulations.

Fire / Explosion Hazard

Containers should be kept cool with water spray to prevent pressure build up. Burning product may produce a dense, toxic, irritating smoke. Heat may cause cans/pails to rupture. Do not allow run off to enter drains and waterways.

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