

# Griptop MD

Medium to heavy duty flow applied polyurethane topping



## DESCRIPTION

Griptop MD is a water based polyurethane topping that provides floor surfaces with a seamless, hygienic and cosmetically attractive matt finish. It is designed for medium to heavy duty food and chemical processing areas, dairies, breweries, etc.

Griptop MD is flow applied to horizontal surfaces and has very good durability towards pedestrian and vehicular traffic. It also has very good resistance to many of the chemicals commonly found in an industrial environment.

Griptop MD can be supplied in three-component or four-component options and in a variety of colours (consult our Sales Department for further details).

## ADVANTAGES

- › Resistant to thermal shock and temperatures between  $-15^{\circ}\text{C}$  to  $60^{\circ}\text{C}$  @ 4 mm thickness and  $-25^{\circ}\text{C}$  to  $80^{\circ}\text{C}$  at 6 mm thickness.
- › Easy to clean.
- › Resistant to a wide range of chemicals.
- › Hard wearing and good impact resistance.
- › Slip resistant.

## STANDARDS

Griptop MD complies with EN 13813, SR-B2.0-AR0.5-IR10.

## CHEMICAL RESISTANCE

Griptop MD provides resistance to a wide range of chemicals commonly encountered in the food and pharmaceutical industries, these chemicals include:

- › Acetic Acid (50%): found in spirit vinegar
- › Lactic Acid (10%) @  $60^{\circ}\text{C}$ : found in milk and dairy products
- › Oleic Acid (100%) @  $60^{\circ}\text{C}$ : used in food processing as an emulsifier
- › Citric Acid (25%): found in fruits
- › Methanol (100%): representative of alcohols and a range of solvents used in pharmaceuticals.

Griptop MD is also resistant to a wide range of inorganic acids, mineral oils, fats, fuels and solvents. Please contact DCP Technical Department for advice.

*Note: Some staining and discoloration may occur upon contact with certain chemicals, depending on the exposure time, nature and housekeeping regime employed. This will not adversely affect the performance of the product.*

## TECHNICAL PROPERTIES @ $25^{\circ}\text{C}$ :

|  |  |
|--|--|
| Mixed density:   | $1.9 \pm 0.05 \text{ g/cm}^3$  |
| Pot life:  | 20 - 30 min  |
| Bond strength:<br>ASTM D4541   | $\geq 2 \text{ MPa}$<br>(concrete failure)   |
| Compressive strength:<br>BS 6319-2   | $\geq 48 \text{ MPa @ 28 days}$  |
| Flexural strength:<br>BS 6319-3  | $\geq 15 \text{ MPa @ 28 days}$  |
| Tensile strength:<br>BS 6319-7   | $\geq 6 \text{ MPa @ 28 days}$   |
| Taber Abrasion:<br>ASTM D4060<br>(1000 g, 1000 cycle)<br>H22 Wheel<br>CS17 Wheel | 1200 milligram<br>75 milligram   |
| Shore D hardness:<br>ASTM D2240  | $\geq 80$  |
| Temperature<br>resistance:   | $-15^{\circ}\text{C}$ to $60^{\circ}\text{C}$ @ 4 mm<br>thickness<br>$-25^{\circ}\text{C}$ to $80^{\circ}\text{C}$ @ 6 mm<br>thickness |
| Coefficient of thermal<br>expansion:<br>ASTM C531                                | $4.5 \times 10^{-5}/^{\circ}\text{C}$  |
| Water absorption:  | Nil  |

*The above data was developed under controlled laboratory conditions. Properties in the field may vary. Expect reasonable variations from these results, depending on material and ambient temperature, jobsite and test conditions.*

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# Griptop MD

## METHOD OF USE

### SURFACE PREPARATION

The substrate must be clean, dry (less than 75% RH measured by hygrometer) and free of laitance (see the Guide to Surface Preparation for further details).

To ensure a good bond to the substrate, saw cut grooves that are twice as wide and twice as deep as the screed thickness. The grooves must be opened at a distance of 5 to 10 cm from coves and walls, running parallel to them.

At all wall-to-floor junctions, a coving system shall be installed prior to the application of the floor screed to ensure a seamless and hygienic transition. The coving shall be formed using Griptop Cove Pack and sealed with Griptop Cove Pack Seal, applied to achieve a smooth, concave profile between the vertical and horizontal surfaces.

For treatment of surfaces containing expansion joints, consult DCP Technical Department.

### PRIMING

For optimal performance, surfaces should be primed using Strongcoat Primer prior to the application of Griptop MD. The primer should be applied in accordance with its technical data sheet to ensure proper adhesion to the prepared substrate.

Where elevated substrate moisture is present, priming must be carried out using Strongcoat DPM. For surfaces with relative humidity (RH) between 75% and 85%, apply one coat and allow it to dry prior to subsequent application. For RH levels greater than 85%, apply two coats, ensuring the second coat is fully cured before proceeding.

As an alternative, where site conditions necessitate, a scratch coat of Griptop MD may be used as a priming layer. This should be applied by trowel at a thickness of 0.5 – 1.0 mm to provide a mechanical key between the substrate and the subsequent floor topping.

The scratch coat must be prepared following the prescribed mixing procedure and applied onto a clean, properly prepared substrate. It should be allowed to cure for 24 – 48 hours prior to the application of the main Griptop MD layer. If this interval is exceeded, the surface must be mechanically abraded and a fresh scratch coat applied.

The use of a scratch coat as a primer should be carefully assessed based on site conditions and is recommended only where appropriate.

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## CHEMICAL RESISTANCE

Occasional spillage after full cure (28 days @ 25°C), ASTM D1308 (Spot - test @ 1 hr)

### Organic Acids

|                   |   |
|-------------------|---|
| Oleic Acid sat.   | R |
| Citric Acid 25%   | R |
| Acetic Acid 10%   | R |
| Lactic Acid 10%   | R |
| Tartaric Acid 10% | R |

### Inorganic Bases

|                         |   |
|-------------------------|---|
| Sodium Hydroxide 40%    | R |
| Ammonia Solution 10%    | R |
| Potassium Hydroxide 50% | R |

### Aqueous Solutions

|                      |   |
|----------------------|---|
| Sodium Chloride sat. | R |
| Chlorinated Water    | R |

### Solvents

|              |   |
|--------------|---|
| White Spirit | R |
| Xylene       | R |

### Fuels

|               |   |
|---------------|---|
| Petrol        | R |
| Diesel        | R |
| Engine Oil    | R |
| Hydraulic Oil | R |
| Brake Fluid   | R |

### Inorganic Acids

|                       |   |
|-----------------------|---|
| Hydrochloric Acid 10% | R |
| Nitric Acid 10%       | R |
| Phosphoric Acid 20%   | R |
| Sulphuric Acid 25%    | R |

### Sugar Flavourings

|                     |   |
|---------------------|---|
| Sugar solution sat. | R |
| Glucose syrup sat.  | R |

### Carbonated beverages

|                 |   |
|-----------------|---|
| Pepsi/Coca Cola | R |
| Mirinda/Fanta   | R |
| 7UP             | R |

# Griptop MD

## MIXING

### *For three-component system:*

Prior to mixing, stir the individual components to disperse any settlement. Transfer the entire contents of the hardener into the resin component and using a Jiffy-type mixer attached to a slow running electric drill, or the rotary drum mixer, mix for approximately two minutes until a lump-free consistency is obtained.

It is important to use a slow-speed mixer operating at 300 - 400 rpm to avoid entrapping air and to achieve a homogeneous mixture.

Once mixed, transfer all the combined material into a Casco or Creteangle-type mixer, ensuring that the sides and bottom of the container are thoroughly scraped. With the mixer running, gradually add the entire contents of the filler component and continue mixing for approximately 2 minutes until a uniform, lump-free mix is obtained.

*Note: Never mix Griptop MD by hand as this could lead to areas of uncured material.*

### *For four-component system:*

Prior to mixing, stir the individual components to disperse any settlement. Transfer the entire contents of the colour pack into the resin component and mix using a Jiffy-type mixer attached to a slow-speed electric drill for approximately 2 to 3 minutes, until a uniform, lump-free consistency is achieved.

Once mixed, add the entire contents of the hardener component to the resin and colour pack mixture. Continue mixing with a Jiffy-type mixer or a rotary drum mixer for approximately 2 minutes, ensuring a smooth, lump-free consistency. It is important to use a slow-speed mixer operating at 300–400 rpm to avoid entrapping air and to achieve a homogeneous mixture.

After mixing the resin, colour pack and hardener, transfer the combined material into a Casco or Creteangle-type mixer, ensuring that the sides and bottom of the container are thoroughly scraped. With the mixer running, gradually add the entire contents of the filler component and continue mixing for approximately 2 minutes until a uniform, lump-free mix is obtained.

*Note: Never mix Griptop MD by hand as this could lead to areas of uncured material.*

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### Electrochemical solutions

|                    |   |
|--------------------|---|
| Copper Sulphate 1M | R |
| Zinc Sulphate 1M   | R |

### Fruit juices

|              |   |
|--------------|---|
| Orange juice | R |
| Apple juice  | R |
| Lemon juice  | R |

### Fats

|               |   |
|---------------|---|
| Vegetable Oil | R |
|---------------|---|

### Cleaning Aids

|                    |   |
|--------------------|---|
| Dishwashing liquid | R |
|--------------------|---|

*R: Resistant*

## APPLICATION

Once mixing is complete, transfer the mixed Griptop MD to the primed surface and spread it evenly using a pin rake set to the required thickness or a notched trowel. Immediately after spreading, use a spiked roller to roll the surface and release any entrapped air. Avoid repeating this rolling process later.

For more information about the application, please refer to the Method Statement of Griptop MD.

## WORKING TIME

Griptop MD has a working time of approximately 20 minutes at 25°C.

*Note: Never leave the mixed Griptop MD kit to stand for any length of time prior to application as this will considerably shorten its working time.*

## WORKING CONDITIONS

Griptop MD should not be applied at temperatures less than 10°C.

## CURING TIME

At 25°C, Griptop MD can be opened to heavy wheeled traffic after 24 hours.

At the same temperature, it should be allowed to cure for seven days before exposing it to chemical contamination (consult DCP Technical Department for details of curing times at other temperatures).



# Griptop MD

## SLIP RESISTANT FINISHES

For advice on slip resistant surfaces, please consult DCP Technical Department.

## LIMITATIONS

- » Ensure good ventilation in the application area to prevent excessive ambient humidity, which could affect the product's performance.
- » To minimise colour fading and the effect of efflorescence, protect the installed floor from damp, condensation, and water for 4 to 5 days.
- » The substrate and uncured floor must be kept at least 3°C above the dew point to reduce the risk of condensation or blooming on the surface.
- » In areas of exposure to direct UV light, Griptop MD is susceptible to some yellowing with time, especially with light Griptop MD colours. This will not adversely affect the performance of the product.

## CLEANING

Once mixing, application and finishing are complete, tools can be cleaned with DCP Solvent.

## PACKAGING

Griptop MD is available in 19 kg (10 litre).

## THICKNESS RANGE

4 - 6 mm.

## COVERAGE

Approximately 2.5 m<sup>2</sup> per kit at 4 mm thickness.

## STORAGE

Griptop MD has a shelf life of 6 months from date of manufacture if stored in unopened containers and under good conditions at temperatures between 5°C and 30°C.

If these conditions are exceeded, contact DCP Technical Department should be contacted for advice.

## CAUTIONS

## HEALTH AND SAFETY

Griptop MD should not come in contact with skin or eyes. Goggles and gloves should be used.

In case of accidental contact with eyes, immediately flush with plenty of water for at least 10 minutes and seek medical advice if necessary.

For further information, refer to the Material Safety Data sheet.

## MORE FROM DON CONSTRUCTION PRODUCTS

A wide range of construction chemical products are manufactured by DCP which include:

- » Concrete admixtures.
- » Surface treatments
- » Grouts and anchors.
- » Concrete repair.
- » Flooring systems.
- » Protective coatings.
- » Sealants.
- » Waterproofing.
- » Adhesives.
- » Tile adhesives and grouts.
- » Building products.
- » Structural strengthening.

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### Note:

We endeavour to ensure that any information, advice or recommendation we may give in product literature is accurate and correct. However, because we have no control over where and how products are applied, we cannot accept any liability arising from the use of the products.