



Bayer MaterialScience

## FLORGIENE MD

### 3-4 mm POLYURETHANE BASED FLOORING

#### Production Description

**FLORGIENE MD** is three components, chemical resistant antimicrobial polyurethane resin floor finish. It has a hard wearing, abrasion resistant and smooth matt coloured floor finish.

**FLORGIENE MD** has been developed with technology from **Bayer Material Science AG Germany**.

#### Green Building Compliance

This product has following distinct advantages

- Eco-friendly
- Low VOC
- Water based with a high level of mechanical, chemical and water resistance.
- Low odour
- Antimicrobial
- Low maintenance
- Easier cleanability
- LEED compliant
- Ideal for use in Green Building

#### Features

- Seamless
- Easily cleanable
- Antimicrobial
- High chemicals resistance
- High thermal resistance
- Fast return to service
- Non – dusting
- Application Thickness: 3.0 – 4.0 mm

#### Uses

**FLORGIENE MD** is recommended for conditions requiring the maximum chemical resistance and where a smooth, even and easy to clean surface is required. Specific applications include:

- Textile and film plants
- Food and beverage production
- Warehousing and storage
- Confectionery production

- Electronic component manufacture and assembly
- Pharmaceutical production
- Chemical plants
- Dairy and Milk Products
- Beverage plants
- Freezer rooms & Refrigerated stores
- Meat, poultry and fish processing plants
- Bakeries & confectionery industries
- Food juice plants

#### Properties

Pot Life @ 25 °C : 15 mins

Compressive strength (ASTM C 579) : 55 MPa

Flexural strength (ASTM C 580) : 25 MPa

Tensile strength (ASTM C 307) : 15 MPa

Bond strength to concrete :  
(Elcomete pull of test) Exceeds Tensile strength of concrete

Hardness, Shore D (ASTM D 2240) : 85-90

Taber Abrasion Loss/1000 Cycles : 40 mg  
(H22 wheels)

Slip resistance : Classified

'Satisfactory' Under BS 8204

Part 2: 2002(9), Wet and dry

Impact resistance :  
Classified 'High Impact Resistance'  
Under BS 8204: Part 1: 1999

Temperature resistance :  
Tolerant from -25 °C upto 75 °C

Mixing ratio : As supplied

The values given above are average figures achieved in laboratory tests. Actual values obtained on site may show minor variations from those quoted.

#### Coverage

**FLORGIENE MD:** 5.71 kg/m<sup>2</sup> @ 3 mm &

7.61 kg/m<sup>2</sup> @ 4 mm thickness.

APURVA INDIA LIMITED

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### Directions for use

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A sound, clean and dry substrate is absolutely essential for successful floor coating application and in ensuring maximum bonding between the substrate and coating system. New concrete surface must be a minimum of 28 days old, free from curing compounds and sealers and have a moisture content less than 5 % prior to application of the primer.

Concrete or screed substrate should be a minimum of 25 N/mm<sup>2</sup>, free from laitance, dust and other contamination. The substrate should be dry to 75% RH as per B28204 and free from rising damp and ground water pressure.

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### Inspection and Surface preparation

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Determine the general condition, soundness, and presence of contaminants, presence of moisture vapour emissions, and the best methods to prepare the concrete surface to receive F/C system. (Hydrophobic contaminants can be identified by a simple water drop test. Other contaminants can be identified by pH)

Remove localized weak or deteriorated concrete and replace by sound concrete and structural repair materials.

Remove bond-inhibiting materials such as oils, grease, wax, fatty acids, and other contaminants. (This can be accomplished by the use of detergent scrubbing, low pressure water cleaning (less than 5000 psi), steam cleaning, or chemical cleaning.

Acids and alkalis can be removed by neutralizing to form a water soluble salt and then high pressure water cleaning).

In the areas where the contaminants cannot be removed, complete removal and replacement of the contaminated concrete is typically considered.

Concrete defects such as voids, bug holes, excess porosity, and physical and chemical damage are usually filled or repaired prior to the installation of the Flooring system. (Materials such as slurries, mortars, and polymer concrete are used to level, smooth and patch concrete surfaces).

The laitance (A thin, weak, brittle layer of cement and aggregate on concrete surface) on in-situ bases and any surface sealer or curing membrane should be entirely removed by suitable mechanised equipment, e.g. shot-blasting, panning or grinding, to expose cleanly the coarse aggregate.

**Old Concrete surfaces:** All surface contamination, e.g. oil, paint and rubber, should be removed and adequate mechanical preparation carried out to achieve a sound and stable surface with exposed coarse aggregate. (Existing floor paints should be removed by mechanical abrasion or contained shot blasting. When clear of all surface contamination, the concrete should be prepared mechanically to remove all laitance and expose a fresh surface).

After surface preparation all loose debris and dirt should be removed by vacuum- equipment.

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### Priming:

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Use suitable primer depending on substrate condition to ensure maximum product performance.

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### Laying of FLORGIENE-MD

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**FLORGIENE-MD** shall be mixed and applied only by specialist flooring contractors who have been trained in the correct application procedures. Detailed method of statement is available on request

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### Packaging

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**FLORGIENE MD** is supplied in pre-weighed packs for easy handling. Each pack consists of  
2.88 kg. of Base  
3 kg. of Curing Agent  
14.12 kg. of Aggregates  
It can be supplied in Bulk packing also.

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### Shelf life

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**FLORGIENE MD** has a shelf life of 6 months if kept in warehouse conditions at 30 °C in the original, unopened pack.

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### Storage conditions

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Store in dry conditions between 5°C and 30°C, away from sources of heat and naked flames, in the original, unopened packs. If stored at high temperatures the shelf life will be reduced

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### Curing

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At 30°C, foot traffic access in 8 hours, vehicular traffic in 16 hours. At 20°C, foot traffic access in 12 hours, vehicular traffic in 24 hours. Full cure at 28 days.

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### Colours

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**FLORGIENE MD** is available in five Apurva's standard colours: Green, Grey, Red, Cream and Yellow.

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### Limitations

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**FLORGIENE MD** is not colour fast and may change colour over time (exhibits a yellowing effect). Colour change depends on the UV light and heat levels present and hence the rate of change cannot be predicted. This is more noticeable in light colours and blues but does not compromise the product's flexibility or chemical resistance characteristics. We have endeavoured to adopt colours within our standard range which minimize this change.

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### Handling & Safety

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Keep the containers tightly sealed when not in use. Avoid skin contact and inhalation of fumes (if any). While spraying it is advised to wear a mask. If it comes in contact with the body, wash affected parts with plenty of water. In case of persistent irritation, contact a physician.

**Disclaimer:** *The manufacturer reserves the right to change the specifications. Apurva India Limited products are guaranteed against material manufactured and are sold subject to the company's Terms and Conditions of Sale. Whilst we endeavour to ensure that advice, specifications, recommendations and information given is correct, we cannot have control over how our products are applied and will not accept liability, directly or indirectly, arising from application of our materials.*

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