

# TIKICRETE MF

## Solvent Free Polyurethane Concrete Flooring System

**TIKICRETE MF** is four component polyurethane concrete flooring system. It is a solvent free, seamless flooring system for use in medium to heavy duty traffic areas. The system provides high impact and abrasion resistance flooring system coupled with resistance to wide spectrum of chemicals.

### ADVANTAGES

- Seamless and microbiologically inert
- High abrasion, chemical and impact resistance
- Quick return to traffic (foot traffic < 10hrs. vehicular traffic < 24hrs.)
- Non-dusting easy to maintain system
- Suitable for application on 7-day old concrete surface / 2-day old polymer screeds

### USES

**TIKICRETE MF** is preferred flooring system for use on floors requiring high abrasion, chemical and impact resistance coupled with easy to clean and maintain floors in various industries, which includes:

- Pharmaceutical and food industries
- Dairy and beverage processing units
- Super markets and warehouses
- Chemicals and process industries
- Power plants and electronic assembly units
- Hospitals and industrial kitchen areas
- Automobile and engineering industries

### APPLICATION INSTRUCTIONS

#### SURFACE PREPARATION

The surfaces must be sound, clean, dry, and free from cracks, undulations, oil, grease, laitance and loose particles.

New concrete surfaces should be >7 days old and should be sound with tensile strength >1.5 mPa.

All joints in the substrate should be maintained or provided wherever required, in locations with anticipated movements – viz., construction joints, areas adjacent to machine bases, columns, metal channels, while laying **TIKICRETE MF** flooring system.

Locking chase or termination grooves shall be cut in square, at least twice the thickness of **TIKICRETE MF**, on to the concrete substrate within 75mm of all free edges, perimeter walls, joints, column bases, door thresholds, and drainage channels etc., the chase/groove filled with **TIKICRETE MF** Scratch Coat.

All movement joints in the concrete substrate should be reflected through the **TIKICRETE MF** floor and sealed with a **TIKISEAL PU40** polyurethane sealant.

### APPLICATION DATA

|   |   |
|---|---|
| <b>Mix Ratio PBW</b><br>Scratch Coat (Resin : Hardener : Filler)  | 15 : 15 : 70  |
| Body Coat<br>(Resin: Hardener: Filler: Colouring Liquid/paste)  | 15 : 15 : 70 : 1.25   |
| Pot life at 25°C  | 5 to 10 Min   |
| Curing Schedule<br>Foot Traffic<br>Full Traffic   | 8 to 10 Hrs<br>24 Hrs   |
| Coverage per Pack*<br><b>For 1mm + 3mm System</b><br>Scratch Coat @ 1mm Thickness<br>Body Coat @ 3mm Thickness<br>Total System (1mm Scratch Coat+3mm Body Coat) | 9 to 10 m <sup>2</sup><br>3 to 3.5m <sup>2</sup><br>2.2 to 2.6 m <sup>2</sup>     |
| <b>For 1mm + 5mm System</b><br>Scratch Coat @ 1mm Thickness<br>Body Coat @ 5mm Thickness<br>Total System (1mm Scratch Coat+5mm Body Coat)                       | 9 to 10 m <sup>2</sup><br>1.8 to 2.10m <sup>2</sup><br>1.5 to 1.75 m <sup>2</sup> |

\*Coverage is approximate and it depends upon the site conditions and surface porosity at the time of application

#### APPLICATION

**TIKICRETE MF** shall be installed only by trained and approved specialist contractors.

#### SCRATCH COAT

Mixing: Take **TIKICRETE MF Resin** component in a clean container followed by addition and gradual mixing of **TIKICRETE MF Hardener** component under continuous stirring. To the mixture, add **TIKICRETE MF Filler** component under continuous stirring until homogeneous mix is obtained.

Scratch Coat: Prior to application of **TIKICRETE MF** flooring system, the prepared mix of **TIKICRETE MF** Scratch coat is applied by spreading the mix @ 1mm thickness using toothed trowel to cover imperfections in the substrate. Allow the scratch coat to dry.

If the applied scratch coat is left for more than 48 hours, abrade the scratch coat surface mechanically to produce a suitable surface for the application of body coat (topcoat) **TIKICRETE MF**.

#### BODY COAT (TOP COAT)

Mixing: **TIKICRETE MF** is supplied as pre-weighed four components, ready to use at site. The components of **TIKICRETE MF** shall be mixed by taking **TIKICRETE MF Resin** component in a clean container followed by addition and gradual mixing of **TIKICRETE MF Colouring** component using slow speed heavy-duty electric stirrer to achieve homogeneous and uniform coloured mix. To the coloured mix is then added to **TIKICRETE MF Hardener** component under continuous stirring followed by gradual addition of **TIKICRETE MF Filler** component under continuous stirring until homogeneous mix is obtained.

Body Coat (Top Coat): The prepared mix of **TIKICRETE MF** is spread using toothed trowel and immediately rolled using spike roller to remove air entrapment and avoid pinhole formation, while maintaining minimum thickness of 3mm.

Allow the applied system to cure for 24 hours before allowing vehicular traffic.

Depending on the requirement, **TIKICRETE MF** Body coat shall be applied at 3 to 6mm thickness. Ensure that the entire prepared mix of **TIKICRETE MF** is used within its pot life (5 to 10 minutes).

#### PROPERTIES OF APPLIED PRODUCT\*

| Properties           | Values                                     | Test Standard              |
|----------------------|--|----------------------------|
| Compressive Strength | >50 mPa                                    | ISO 604                    |
| Flexural Strength    | >18 mPa                                    | ISO 178                    |
| Tensile Strength     | >7 mPa                                     | ISO 527                    |
| Impact Strength      | >8 KJ/m <sup>2</sup>                       | ISO 179                    |
| Bond Strength        | 35Kg/cm <sup>2</sup><br>(Concrete Failure) | ASTM D4541                 |
| Abrasion Resistance  | <0.150 gm                                  | ASTM D4060,<br>CS-17 Wheel |
| Impact Resistance    | >20 Joules                                 | ASTM D2794                 |
| Dry Heat Resistance  | 80°C to 100°C                              | ASTM D2485                 |
| Shore D Hardness     | > 80                                       | ISO 868                    |

\*Properties tested under laboratory condition for specimens cured for 15days @30°C. Properties may vary based on actual site conditions.

#### CLEANING

Immediately after application of **TIKICRETE MF**, use water for cleaning application tools.

## CHEMICAL RESISTANCE PROPERTIES

| No. | Chemical          | Concentration | Observation |
|-----|-------------------|---------------|-------------|
| 1.  | Acetic acid       | 30%           | Resistant   |
| 2.  | Hydrochloric acid | 30%           | Resistant   |
| 3.  | Sulphuric acid    | 50%           | Resistant   |
| 4.  | Nitric acid       | 10%           | Resistant   |
| 5.  | Phosphoric acid   | 30%           | Resistant   |
| 6.  | Salt solution     | Concentrated  | Resistant   |
| 7.  | Sodium hydroxide  | 30%           | Resistant   |
| 8.  | Water             | -             | Resistant   |
| 9.  | Lactic            | 10%           | Resistant   |
| 10. | Citric acid       | 10%           | Resistant   |
| 11. | Petrol            | -             | Resistant   |
| 12. | Oil               | -             | Resistant   |
| 13. | Fruit juice       | -             | Resistant   |
| 14. | Skydrol           | -             | Resistant   |

## SUPPLY

**TIKICRETE MF** is supplied in 20.25 Kg, pack. It has a shelf life of 12 months when stored under the covered shed in sealed condition.

Packing:20.25kg

| Product   | Resin | Hardener | Colouring Paste | Filler |
|-----------|-------|----------|-----------------|--------|
| Pack Size | 3 Kg. | 3 Kg.    | 0.25 Kg.        | 14 Kg. |

## STORAGE

**TIKICRETE MF** must be stored above 5°C. Store under the shed & protect from extremes of temperature, heat, direct sunlight and children.

## SAFETY PRECAUTIONS

As with all chemical products, care should be taken during use and storage of **TIKICRETE MF**.

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