

MRO 9012 – DIELECTRIC KOTE (52 KV) Electrical Insulation Coating

PRODUCT DESCRIPTION

'MRO 9012 – Dielectric Kote' is designed for use in wide range of industrial environments where the high breakdown voltage protection & insulation is required. It provides both insulation as well as combat corrosion and chemically resistant floor surface which is hygienic and easy to clean.

BENEFITS

- 4 Packs, Pre measured ratio for ease of on-site mixing and use
- Excellent adhesion to substrate
- Good chemical and mechanical resistance
- De-contaminable - Bacteria able to be removed
- Impervious
- High Glossy aesthetic finish- brightens up dull factories and warehouses
- Seamless / Joint free applications - Eliminates potential sources of failure
- Hygienic and does not support growth of bacteria and fungus
- Color Range: Available in different colour combinations as per standard RAL Shade Card.



APPLICATION AREAS

- Workshops
- Garages
- Traffic aisles in factories or warehouses
- Production Floors
- Processing areas
- Kitchens
- Laboratories
- Battery Rooms
- Store Rooms
- Sub Stations
- Switchgear panels support structure guards against animal caused flashovers
- Busbars
- Transmission Towers
- Electrical Poles

DIRECTIONS FOR USE

- Any residual trowel marks may be removed when the screed is dry by rubbing the surface with a carborundum stone
Note: The long term durability of any resin floor system is determined by the adhesive bond achieved between the flooring material and the substrate. It is most important therefore that substrates are correctly prepared prior to application. The substrate should have a moisture content of less than 5% and must be at least 3°C above dew point to reduce the risk of condensation or blooming on the floor finish. The ambient relative humidity should not exceed 95%. The minimum substrate temperature is +15°C and maximum substrate temperature +35°C.
- The clean, textured surface can be achieved by shot-blasting, Blastrac, scarifying or grit-blasting followed by vacuum cleaning.
New concrete floors:
- These should normally have been placed for at least 28 days Floors should be sound and free from contamination such as oil and grease, mortar and paint splashes or curing compound residues. Excessive laitance can be removed by the use of Mechanical methods. Dust and other debris should then be removed by vacuum cleaning.
Old concrete floors
- Surfaces should be structurally sound direct tensile strength of more than 1.5MPa via a pull off tester with a load rate of 100N/s. The clean substrate is essential to achieve maximum adhesion. As for new concrete floors dry removal of laitance by use of Mechanical methods is preferable. Oil and grease penetration should be removed by the use of a proprietary chemical degreaser or by hot compressed air treatment. Any damaged areas or surface irregularities should be repaired using MRO 4019 – Konkrete Putty.
Steel surfaces
- Steel surfaces should be degreased and grit blasted to SA 2 ½ immediately prior to application. The prepared surface should be treated with one coat of MRO 9021 – Primer DK solvent free epoxy primer.
- All surfaces primed with MRO 9021 – Primer DK, solvent epoxy primer designed for maximum absorption and adhesion to concrete substrates. Add the entire contents of the hardener tin to the resin tin and mix the two primer components thoroughly for at least 2 minutes - under no circumstances should part mixing be considered. Once mixed, the primer should be applied immediately to the prepared substrate using stiff brushes and/or rollers. The primer should be well 'scrubbed' into the substrate to ensure full coverage, but care should be taken to avoid over application or 'ponding'. Allow the primer to dry before proceeding to the next stage, do not proceed whilst the primer is 'tacky' as this will lead to unsightly marks in the finished surface. Porous substrates may require a second primer coat - when the first coat is directly absorbed into the substrate— but minimum over coating times must still be observed.

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- MRO 9012 – Dielectric Kote flooring is supplied in four pre-weighed packs (resin, hardener, aggregate and color pack) which are ready for immediate on-site use. Part mixing of these components is not acceptable and will affect both performance and appearance of the finished floor. Mixing should be carried out using either a forced action mixer; or a heavy duty, slow-speed drill fitted with mixing paddle. The components should be mixed in a suitably sized mixing vessel. The color pack should be added to the base container and mixed for 15-30 seconds, until homogeneous. Then add the hardener and mix for further 30 seconds, until an even color and texture is obtained. Hereafter, the contents of the graded aggregate pack should be slowly added and mixing carried out for a further 3 minutes until a completely homogenous material is obtained. Note: If required transfer the mixed material into the larger mixing vessel and re-mix for 30 seconds. Mixing in this way will ensure product uniform color consistency. Once mixed, the MRO 9012 – Dielectric Kote will generate heat and lose working time if it is left in the mixing container or otherwise kept in bulk. Once the mixed material has exceeded its pot life, the viscosity and the characteristics of the product will change and any unused product should be discarded at this time. Do not steam clean or use hot water above 50°C to wash the surface. Do not add solvent thinners at any time.
- The mixed material should be applied on to the prepared and primed floor as soon as mixing is complete using a serrated or notched or flat trowel to a typical thickness of 1.5 mm minimum. The care should be taken not to overwork the resin, spreading evenly and slowly. Immediately after laying, the material should be rolled, using a spiked nylon roller, to remove slight trowel marks, and to assist air release. The rolling should be carried out using a 'back and forth' technique along the same path. An overlap of 50% with adjacent paths is recommended. Further light rolling may be required to remove surface imperfections, or for subsequent release of trapped air, but should be prior to the setting of the product. Ensure application is a continuous operation and laying is within 15 minutes of mixing and spike rolled within 5 minutes of laying. Care should be taken to ensure that a continuous film is achieved.
 Note: Protect walls and columns against resin splashes using masking tape and polythene sheeting.
 The consumption of MRO 9012 – Dielectric Kote depends on the number of coats, surface profile, porosity, loss and wastage.
 Expansion Joints
 Expansion joints in the existing substrate must be retained and continued through the MRO 9012 – Dielectric Kote topping.
 High Temperature Workings
 It is suggested that, for temperatures above 35°C, the following guidelines are adopted as good working practice:
 - Store unmixed materials in a cool preferably air-conditioned environment, avoiding exposure to direct

sunlight. Preconditioned materials at 20-25°C will reduce the possibilities of flash setting and other defects.

- Keep equipment cool, arranging shade protection if necessary. It is especially important to keep cool those surfaces of the equipment which will come into direct contact with the material itself.
- Try to avoid application during the hottest times of the day. If necessary provide a shade over the area where application will take place.
- Make sufficient material, plant and labour available to ensure that application is a continuous process.

Low Temperature Workings

- It is suggested that, for temperatures above 15°C, the following guidelines are adopted as good working practice:
 - (i) Store unmixed materials in a heated room in hot weather conditions. Preconditioned materials at 20-25°C will reduce the possibilities of slow setting and other defects.
 - (ii) Make sufficient material, plant and labor available to ensure that application is a continuous process.

MAINTENANCE

- The service life of a floor can be considerably extended by good housekeeping practices
- Good housekeeping and regular cleaning is essential in order to maintain the performance of MRO 9012 – Dielectric Kote. It is particularly important in areas that are subject to regular spillage.
- Spillages should not be allowed to dry which results in higher concentrations of the materials, which may lead to early failure. Regular cleaning of the surface with a rotary scrubbing machine in conjunction with a water miscible cleaning agent or hot water washing at temperatures up to 50°C is recommended.

AVAILABLE PACKAGING

25 Kg

PRECAUTION

For complete safety and handling information, please refer to Material Safety Data Sheets (MSDS) prior to using this product.

SHELF LIFE & STORAGE

'MRO 9012 – Dielectric Kote' has a shelf life of 12 months if kept in a dry, air conditioned store between 5°C and 30°C in the original, unopened containers.

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Electrical Insulation Coating

Technical Properties

PARAMETER	VALUE
Colour	Custom Colour
Appearance ASTM D 1544	Viscous Liquid
Specific Gravity ASTM D 1475 - 98	1.45
Mixed Viscosity ASTM D 1200	25 min
pH VALUE ASTM D 1293	6-8
Pot Life @25 °C IS 101	30 min
Functional Cure Time ASTM D 1640	24 Hours
Compressive Strength @ 7 days ASTM D 695	78 N/mm ²
Tensile Strength @ 7 days ASTM D 638	11 N/mm ²
Adhesive Shear Strength ASTM D 1002	16 N/mm ²
Gloss ASTM D 523	87 @ 60 ° Angle
Dielectric Constant ASTM D 150	3.5
Break down Voltage in air ASTM D 149	52 KV
Flexural Strength @ 28 days ASTM D 790	22 N/mm ²
Abrasion Resistance ASTM D 1044	0.1 mg/No. Cycles
Cured Hardness ASTM D 2240	85 Shore D
Bond Strength @ 7 Days ASTM D 4541	1.9 N/mm ²
Chemical Resistance ASTM D 1038	Excellent
Water Absorption ASTM D 570	2%
Coverage	7.5 Sq. m/25 kg/2 mm/coat

HANDLING

Read instructions on the container label of the product before use. The product safety data sheet (SDS) contains the relevant information regarding PPE, safe use, and physical & health hazards. Safety data sheet is available from MRO INFR A or your local MRO INFR A Channel Partner.

DISPOSAL

All used and unused product should be disposed of in accordance with state regulations.

LIMITED WARRANTY

The information and data contained in this sheet is accurate to the best of our knowledge or is obtained from sources, tests or experiences believed by us to be reliable and accurate. User is responsible for determining whether recommended MRO INFR A product is fit for a particular purpose. All products should be tested for suitability on a particular application prior to actual use. We make no representations of any kind. Data offered without warranty.