

CHEMDIE - 1000

4-component, self-leveling, high gloss, high strength,
high breakdown voltage dielectric flooring.

Product Description

4-component, self-leveling, high gloss, high strength, high breakdown voltage dielectric flooring.

Product Contents

1] Resin	Hazy, Liquid
2] Hardener	Transparent, Liquid
3] Manufactured Aggregates	Whitish, Powder
4] Pigment Colour concentrate	Ral Colour Paste

For available RAL colours, refer current Chemsol Flooring and Topping shade card. Some colour variations may occur due to backfilling with sand in the case of bright colours. Under direct sunligh,t there may be some discolouration and colour variation over time.

Applications

Chemdie 1000 is specially formulated for applications where we required

- Protection against electrical leakages & the resultant human risk in high voltage sub- stations.
- Dust prevention ,
- Chemical Resistance and
- Aesthetic appeal.

It Finds uses in following Industries:

- Use in high voltage sub- stations – switchgear panels, VCB's, battery rooms,
- Health Care
- Clean room
- Aerospace industries including airport hangars,

Salient Features

- Excellent self-leveling properties
- High dielectric strength & insulation resistance.
- Superior to conventional rubber mats.
- Meets requirements of Class B (at 1.8 mm DFT) as per IS 15652: 2006 (>45KV BDV)
- Pleasing Aesthetic Appeal due to Glossy, colourful Finish
- Superior Adhesion to Concrete
- Outstanding Mechanical Strength and Abrasion Resistance
- Easy installation, cleaning & repair
- Provides a clean dust dust-free atmosphere in panel rooms

Chemical resistance

Excellent resistance is observed against distilled water, detergent solutions, alkalis and acids.

Mechanical /Physical properties

Property	Test Method	Value and Unit
Mixing Ratio	NA	Pre-weighed kit to cover 10-12 sq m area @ 1000 micron thickness
Finish	CPI* 1001	Smooth, Glossy
Pot Life @ 30oC	CPI 1002	30-35 minutes
Surface Dry	CPI 1002	3 Hours
Hard Dry [Open for foot traffic]	CPI 1002	24 Hours
Full Cure [Vehicular Movement]	CPI 1002	72 Hours
Compressive Strength	ASTM C 579	>600 Kg/cm ²
Flexural Strength	ASTM C 580	>400Kg/cm ²
Tensile Strength	ASTM C 307	>200 Kg/cm ²
Pull off Adhesion Test	ASTM D 4541	Concrete Failure
Abrasion Resistance [Taber]	ADTM D 4060	50 mg loss
Shore Hardness	ASTM D 2240	D 80

BDV (1coat of Chemprime + 2 coats of chemdie 1000 top coat)	IS 15652 : 2006	53 KV in air
AC proof Voltage (1coat of Chemprime + 2 coats of Chemdie 1000 top coat)	IS 15652 : 2006	> 22 KV in air
Service Temperature	CPI 1122	0-50 °C
Shelf Life	CPI 1122	12 months in the original unopened Container when stored between 10- 30 °C

Method of Application

All Chemsol Products are recommended to be applied only by Approved Applicators and should be handled after using proper PPE's like Gloves, mask, goggles etc.

Application conditions

 **Substrate temperature:** 10-40°C

 **Substrate moisture content:** <5%

 **Relative humidity:** 80%max

Note: The substrate temperature must be at least 30C above the prevalent dew point temperature to reduce chances of condensation on the floor.

Substrate Quality

The concrete substrate must be sound and of sufficient compressive strength (minimum 200 Kg/cm²) with a minimum pull-off strength of 15 Kg/cm². The substrate must be clean, dry, and free of all contaminants such as dirt, oil, grease, coatings, and surface treatments, etc. If required, apply a test area first.

Substrate Preparation

Concrete substrates must be prepared mechanically using abrasive blast cleaning, Scarifying or grinding equipment to remove cement laitance and achieve an open textured surface. Remove weak concrete and expose surface defects such as blowholes and voids. Repairs to the substrate, filling of blowholes/voids, and surface levelling must be carried out using appropriate products. Ensure that the dust, loose and friable material is completely removed from all surfaces by brush and vacuum before application of the product.

The concrete substrate has to be primed or levelled with Chemprime in order to achieve an even surface. Allow the primer to cure for 5-6 hours. After this, apply a top coat of CHEMDIE 1000

Mixing

Stir the resin part mechanically. Add colour paste into resin and mix till a uniform colour is achieved. Add hardener to this mixture and stir continuously for 2 minutes until a homogeneous mass is obtained. Add aggregates to this mixture and continue stirring for a further 3 minutes with a motorised helical paint stirrer until a uniform mix has been obtained. Overmixing must be avoided to minimise air entrainment.

Note that the mixture has a stipulated pot life, hence the laying should immediately commence after mixing the contents. Allow it to dry for 12 hr., and again apply a 2nd coat of Chemdie 1000 on the applied cured material.

Curing Schedule

The epoxy curing reaction rate is temperature dependent. Refer to the following table to know how quickly the floor can be brought to service

Temp.(deg C)	Foot traffic	Full cure
10°C	48 hours	120 hours
20°C	36 hours	96 hours
35°C	24 hours	72 hours

Cleaning of Tools

Clean all tools and application equipment with thinner EP140 immediately after use. Hardened and/or cured material can only be removed mechanically.

Packing

Chemdie 1000 Resin, Hardener, and aggregates are available in a 16.4 kg pre-weighed kit.

Storage conditions

Store in dry and covered shed between 5°C to 30°C, away from sources of heat and naked flame.

Handling & Safety

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 Information provided is based on our experience, thorough investigations & sophisticated testing methods, but due to the vast number of applications and usage methods, Chemsol Polymer Industries cannot accept responsibility of any kind for any particular result. It is the responsibility of the user to verify the suitability of the product for their end use and in accordance with the rules and regulations of that country /territory. All information provided pertaining to our products should be treated only as a guidance tool without any guarantee or warranty of any sorts.

* All CPI test methods are our scientifically designed internal test methods which can be shared upon request.

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