

# MonniChem K100

## High Chemical Resistant Epoxy Coating

### Product Description

MonniChem K100 is a two component 100% solid, epoxy coating suitable for concrete and steel protection in aggressive chemical conditions like industrial pavements, reinforced concrete, metallic structures, process plants and sewage work. Once it is cured, the product transforms into a continuous anti dust membrane that is resistant against chemicals, and abrasion.

### Uses

MonniChem K100 is used as follows:

- ▶ A resistant coating against chemicals. It also acts as an abrasion protective coating for floors and walls and aggressive products, stored in metallic or concrete tanks
- ▶ As an abrasion and chemical resistant coating in seawater tanks, sewage works, manholes and pipe linings

### Advantages

- ▶ Ecofriendly, low VOC
- ▶ Excellent adhesion to concrete steel, wood, stoneware, etc.
- ▶ High chemical and abrasion resistance
- ▶ Easy applied by brush, roller or spray
- ▶ Acts as a protective and waterproof coating

### Usage Instructions

#### Surface Preparation

The surface must be clean, sound, uncontaminated, free from grease, friable varnishes, etc. The substrate must be rough in order to achieve maximum adhesion with the coatings.

Preparations using mechanical methods like grinding or blasting in order to provide a suitable clean surface is strongly recommended. All necessary repairs should be made prior to application by using one of MONNELI's range of epoxy mortars. Contact Monneli Technical Department for advice.

New concrete or cementitious surfaces should be at least 28 days old and have moisture content not exceeding 5%. Old or existing floor should be refurbished mechanically to ensure clear sound substrate.

On existing epoxy coating, the application of MonniChem K100 can lead to wrinkling and peeling. It is recommended that tests are made to assure the adhesion of old coat to the substrates, otherwise this coating should be removed prior to application of MonniChem K100.

Steel surfaces should be grit blasted to surface quality SA 21/2. Coat the surface before it starts to re-oxidize.

### Priming

In general cases properly prepared concrete does not require any priming. Highly porous surfaces, should be primed with MonniPrime EF before applying MonniChem K100.

After grit blasting the metal surfaces, use MonniPrime to eliminate the formation of rust.

### Mixing

MonniChem K100 is composed of two components that are mixed at the moment of use. Pour component B (hardener) into component A (resin) and mix carefully with a drill at low number of turns (200-300 turns per minute), till obtaining a homogeneous consistency.

Apply MonniChem K100 mixture with a brush or Roller in two crossed coats at a rate of 4-5 m<sup>2</sup> / liter per coat. The first coat is applied to achieve a uniform coating with minimum wet coat thickness of 200 microns. The second coat can be applied after making sure that the first one is completely dry and within maximum time of 24 hours from first coat application. The two coats must achieve minimum thickness of 400 microns.

If slip resistance finish is required, broadcast the Quartzo silica sand with the required sieve size onto the first coat while it is still wet. Once cured, remove excess sand and apply the final coat.

### Cleaning

All tools used in the preparation and application of MonniChem K100 must be cleaned with Monneli Solvent 10 before hardening. Hardened material should be removed mechanically.

## Recommendations

- ▶ Partial mixing of the product components should not be allowed under any conditions extra care should be taken when applying at high temperature as pot life of the mixed product will shorten automatically

- ▶ It is recommended to shade the working area while mixing and placing MonniChem K100
- ▶ MonniChem K100 should not be applied onto surfaces with relative humidity more than 80%, and temperature below +5°C.

## Technical Data

Category	Typical Values
Appearance	Liquid coating
Color	Monneli Color Chart
Density at 25°C	1.54 kg/L
Dry residual	100%
Viscosity at 25°C	5000-7000 cps
Pot life at 25°C	40 minutes
Adhesion Strength at 7 days (ASTM D4541)	40
Compressive Strength at 7 days (ASTM C579)	75 N/mm <sup>2</sup>
Flexural Strength at 7 days (ASTM C580)	>25N/mm <sup>2</sup>
Tensile Strength (ASTM C307)	20 N/mm <sup>2</sup>
Abrasion Resistance (ASTM D4060)	89mg
Shore D Hardness (ASTM D2240)	82
Initial cure at 25°C	24 hours
Final cure at 25°C	7 days
Full Chemical Resistance at 25°C	7 days

All values are subject to 5-10 % tolerance

Chemical Resistance		
Aggressive	Concentration	Resistant
Hydrochloric acid	50%	Resistant
Sulphuric acid	50%	Resistant
Sodium Hydroxide	50%	Resistant
Nitric acid	20%	Resistant
Acetic acid	10%	Resistant
Citric Acid	10%	Resistant
Ammonia	10%	Resistant
Petrol	-	Resistant
Hydraulic Oil	-	Resistant
Kerosene	-	Resistant
Skydrol	-	Resistant
Grease	-	Resistant
Lubricants	-	Resistant

## Health & Safety

During application, wear appropriate protective clothing, goggles, gloves and respiratory equipment.

Avoid contact with skin, eyes and inhalation of vapour. Ensure proper ventilation at working place.

In case of contact with skin, rinse with water and again wash thoroughly with soap and water.

In case of contact with eyes, rinse with plenty of water and seek medical advice accordingly.

If ingested, obtain medical attention immediately. Do not induce vomiting.

## Consumption

4-5 m<sup>2</sup> / liter per coat at 200 micron (wft) according to the porosity of the substrate.

## Packaging

MonniChem K100 is supplied in 4 Liter and 15 Liter kits (Base & Hardener).

## Shelf Life & Storage

Keep in tightly closed containers and in sheltered and dry place. Shelf life is 12 months if stored as recommended.

## Legal disclaimer

Monneli endeavors to ensure that any advice, recommendations, information it may give, is accurate and correct. It cannot accept any liability either directly or indirectly arising from the use of its products, because it has no direct or continuous control over where or how its products are applied, whether or not in accordance with any advice, specification, recommendation or information given by us. Monneli has the right to change any of the specifications mentioned in the Technical data sheets upon its discretion without prior notification. Hard copies of TDSs are printed once or twice a year, while our technical data sheets are continuously being updated as per R&D improvements and new 3rd party testing; kindly refer to our website for the latest updated TDSs.

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