

## INSTRUCTIONS FOR USE (IFU) 15.12.2015/1<sup>st</sup> issue

### PRODUCT DESCRIPTION

CEMLINE UM 1 is a grey cementitious, waterproofing and repairing mortar. For application CEMLINE UM 1 powder is mixed with water.

#### Packaging

25 kg PE-lined paper bag

#### Storage

When stored in a dry place in unopened, undamaged original packaging, shelf life is 12 months.

### AREAS OF APPLICATION

- substrates: concrete, masonry and natural stonework
- waterproofing and protection against water and moisture
- horizontally and vertically applicable mortar for waterproofing, levelling and reprofiling
- fillets for wall-floor junctions
- foundations, slabs, retaining walls, etc.
- drinking water structures

### SURFACE PREPARATION

The substrate to be treated must be sound and even, open-pored, roughened and its surface free from voids, large cracks or ridges. Any adhesion reducing substances like bitumen, oil, grease, remains of paint or laitance must be removed by suitable means. Water leaks must be stopped e.g. with VANDEX PLUG.

Thoroughly moisten the substrate it must be damp but not wet at the time of application. Any surface water on horizontal surfaces must be removed.

#### Brick- and blockwork substrates

Any remaining plaster, render or other substances that could inhibit bonding must be removed back to the substrate. Gypsum, remains of wood or other foreign material must be removed by appropriate means. Loose pointing must be routed out and the substrate cleaned thoroughly.

### MIXING

Mix 25 kg of CEMLINE UM 1 with 3–4 litres of tap water in a clean container for at least 3 minutes to a lump-free, homogeneous consistency. Use a mechanical mixer.

### APPLICATION

CEMLINE UM 1 is applied with trowel or suitable spray equipment.

Apply a minimum of 6 mm (approx. 12 kg/m<sup>2</sup>) and a maximum of 12 mm (approx. 24 kg/m<sup>2</sup>) in one working cycle.

For small areas such as coves, fillets, local repairs and shutter tie holes CEMLINE UM 1 may be applied in layer thicknesses exceeding the above value.

Pour CEMLINE UM 1 over horizontal surface, then compact and strike off. After initial hardening it can be trowelled or provided with a broom finish to increase the non-skid quality. Apply CEMLINE UM 1 to vertical surfaces like normal render. If several coats are required it is recommended to apply the next coat whilst the previous coat is still damp at the surface.

The waiting time before applying the following coat depends on local climatic conditions such as humidity, temperature, etc. The previous coat must be textured by suitable means whilst still plastic to form a key.

To maintain workability of the material do not add water, simply re-stir the mixture. Workability at 20 °C approx. 45 minutes.

#### Trowel application

First a scratch coat is applied for maximum adhesion to the substrate. Ensure that all cavities in the substrate are filled in order to exclude any trapped air.

#### Spray application

CEMLINE UM 1 can be applied with a suitable fine mortar spraying device.

For maximum spray pattern it should be possible to adjust volume of product as well as air pressure and volume. The nozzle diameter is approx. 10 mm.

# CEMLINE UM 1



The first layer of Vandex is applied in a circular motion with the spray nozzle held at a 90° angle to the substrate. The material is then flattened and trowelled or keyed for a further layer.

Do not apply at ambient temperatures below +5 °C, or to a frozen substrate.

## CONSUMPTION

Type of water impact	Recommended overall application rate	Total layer thickness (approx.)
Pressureless water	12–16 kg/m <sup>2</sup>	6–8 mm
Water under pressure	16–24 kg/m <sup>2</sup> depending on water pressure	8–12 mm

## CURING

Provide a relative humidity of > 85% in enclosed areas and avoid formation of water films or condensation on top of coating during 7 days after application. Keep surfaces exposed to weathering damp for at least 5 days and provide suitable protection against extreme weather conditions (e.g. sun, wind, frost) while setting. The freshly treated surfaces should be protected from rain for a minimum period of 24 h.

## FILLING OF WATER RETAINING STRUCTURES

Filling can take place when the surface treatment has hardened sufficiently, usually not less than

- 21 days after application at a curing temperature  $\geq 7\text{ °C}$
- 14 days after application at a curing temperature  $\geq 15\text{ °C}$
- 7 days after application at a curing temperature  $\geq 20\text{ °C}$

and provided that the surface is thoroughly checked for hardness.

The required cure time may be calculated from the minimum daily temperature recorded by the water company's representative, or if no records are kept, 21 days minimum.

## CLEANING AND DISINFECTION

A careful cleaning and disinfection prior to the first operation is essential. Observe national laws and regulations (e.g. Principles of Water Supply Hygiene &

Technical Guidance Note No. 8 "Water treatment [disinfection]").

### Cleaning and disinfection of the tanks prior to the first filling

A careful cleaning and disinfection prior to the first operation is essential:

- rinsing of all inner surfaces (ceiling, walls, floor, columns, stairs) with drinking water (pressure  $\leq 30\text{ bar}$ )
- disposing of the rinsing water

The use of detergents prior to the first operation is generally not necessary.

For disinfection all inner surfaces have to be treated with approved disinfectants (e.g. aqueous solutions of sodium hypochlorite, calcium hypochlorite etc.) and afterwards rinsed with clear water.

The disinfectant contaminated water has to be disposed of according to legal requirements (also refer to Principles of Water Supply Hygiene & Technical Guidance Note No. 14 "Disposal of chlorinated water").

At the time of filling the tank samples for bacteriological analysis shall be taken. When the samples are approved to comply with legal requirements the tank can be put into operation.

### Periodical cleaning and disinfection

The drinking water tanks shall be cleaned periodically (min. once a year) and disinfected if necessary.

For the cleaning water jetting and the use of appropriate mechanical equipment is suitable. Chemical detergents shall only be used exceptionally, increasing the water pressure and careful scrubbing brings in most cases the same effect.

The water tank shall be cleaned immediately after emptying as the residues can be removed more easily when still humid.

Suitable means for the cleaning:

- combined brushing (scrubbing) and rinsing with water ( $\leq 30\text{ bar}$ )
- water jetting ( $\leq 30\text{ bar}$ )

The use of chemical detergents shall be reduced to a minimum and prior to application be discussed with the local Vandex distributor.

Chemical additives to the cleaning water reduce the cleaning time and shall be applied only to remove very

# CEMLINE UM 1



resistant residues. Acid containing detergents attack cement based Vandex coatings. In order to prevent damages Vandex coatings shall be exposed to aggressive detergents only for a short period.

Furthermore, the following recommendations shall be considered:

- Chemical detergents must be assessed for their toxicology and drinking water suitability prior to their application. It is highly recommended to apply only detergents which are approved for contact with drinking water. This includes also assessments regarding potential consequences on the microbiology of the water, the compatibility with the coating material, the disposal and work and safety related issues.

- It has to be checked if and under which conditions the detergent containing water can be disposed of safely into the municipal wastewater system.
- Adverse effects of the cleaning on the inner surfaces or mounting parts, e.g. roughening or corrosion, shall be kept as little as possible.

## HEALTH AND SAFETY

For safe handling procedures and precautions, instructions on safe disposal of spillage and excess product, avoidance of harm to the environment etc. please refer to Safety Data Sheet of CEMLINE UM 1.

The information contained herein is based on our long-term experience and the best of our knowledge. We can, however, make no guarantee since for a successful outcome, all circumstances in an individual case must be taken into consideration. Indications of quantities required are only averages which in certain cases might be greater.



An **RPM** Company

### HEAD OFFICE AND INTERNATIONAL SALES:

**Vandex International Ltd**  
P.O. Box - CH-4501 Solothurn/Switzerland  
+41 32 626 36 36 · info@vandex.com · www.vandex.com

### PRODUCTION:

**Vandex Isoliermittel-Gesellschaft m.b.H.**  
P.O. Box - D-21487 Schwarzenbek/Germany



VXI IFU UK CEMLINE UM 1\_12.2015/1