



Anti Corrosive CEMENTs for Surface Protection

COROCEM 'K' POTASSIUM SILICATE CEMENT TECHNICAL INFORMATION SHEET

For Acid / Alkali Resistant Protective lining of Towers, Chimneys, ETP Tanks, Floors, Drains, etc.

INTRODUCTION

COROCEM 'K' Cement is self hardening potassium based silicate Cement. It is supplied in two component system viz. Corocem 'K' solution and Corocem 'K' powder

COROCEM 'K' Cement is resistant to all concentrated organic and inorganic acids and can withstand temperatures up to 800°C. It is however not resistant to Hydrofluoric acid. It is also resistant to all acidic salt solutions and solvents, but is not resistant to alkalies of any concentration or for boiling water or steam or for frequent washing with water.

COROCEM 'K' cement should not be used under wet conditions, or should not be allowed to come into contact with water until after the joints are pointed with suitable Resin Cement as per instructions.

AREA OF APPLICATION

COROCEM 'K' Cement are suitable for laying and jointing of Acid resistant tiles and bricks where high concentration of acid are encountered like in Acid tanks, Acid Towers, Pits Ducts etc. Its use is particularly recommended for inside lining of chimneys which are highly attacked by flue gases. It is not resistant to dilute acids, alkalies or for areas where there is frequent washing with water. It is, however, used as bedding Cement for floor lining and joints are sealed with suitable Resin Cement.

PRETREATMENT OF SURFACE

The concrete / metal surface should be thoroughly cleaned to ward off rust and other foreign particles either by sand blasting or conventional methods of cleaning. The cleaned surface should be applied with a protective monolithic membrane.

The selection of the protective membrane depends upon the temperature and chemical condition. The Cement should not, under any conditions, be directly applied on to the metal or concrete surface because of the presence of the acid catalyst.

MIXING RATIO

Solution : Powder = 1 : 3

COROCEM 'K' is supplied in two components: Solution & Powder. Mixing ratio by wt is 1 part of Solution to 3 part of powder to form a workable Mortar. The above ratio is recommended but small adjustments can be made depending on the application.

APPLICATION

COROCEM 'K' solution and powder should be mixed in a dry, clean pan and in small batches which can be consumed within 20-25 minutes. Take Solution in a pan a

and add powder gradually while mixing with a trowel. Continue mixing until a homogeneous mortar is obtained.

The surfaces being lined and also the Bricks/ Tiles shall be dry and clean devoid of dirt, oil and other foreign particles. Apply COROCEM 'K' Cement on the back and adjacent side of the tile / brick and spread it evenly with a trowel. The bricks shall be laid in sliding motion and tamp the bricks or tiles so that Cement comes up in the joints. This ensures that the Cement is thoroughly filled in the joints without any air pockets. Scrape off any surplus material immediately with a trowel.

When joints of bricks or tiles laid with COROCEM 'K' Cement are to be filled with any other suitable resin cement, then the silicate cement in the joints shall be allowed to dry for 48 hrs before being filled with suitable Resin Cement

Tiled surface and masonry linings cemented with COROCEM 'K' Cement should be allowed to cure for 3-4 days after completion.

SAFETY PRECAUTIONS DURING USE

It is recommended that Protective hand gloves and goggles should be worn while working with the Cement. If it comes in contact, with the skin or eyes, it should be washed with plenty of water.

SHELF LIFE & STORAGE

COROCEM 'K' Powder and Solution has a shelf life of 12 months when stored in cool and dry place. Care should be taken that the powder and solutions should be tightly packed and stored in a dry place not exposed to sunlight. No moisture or water should come in contact with the material.

PACKING

COROCEM 'K' Solution is supplied in Drums of 250 kg. Powder is supplied in 50 Kgs HDPE Bags.

Note: All recommendations for use of our products, whether given by us in writing, verbally or to be implied from the results of tests carried out by us are based on the current state of our knowledge. Although the information contained in this sheet is accurate to the best of our knowledge, no liability can be accepted in respect of such information and no warranty or conditions are intended in respect of the product described as the conditions of applications are beyond our control.

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COROCEM 'K'

POTASSIUM SILICATE CEMENT

PHYSICAL CHARACTERISTICS :

| | | |
|--------------------------------|-------|----------------|
| Working Time, Min | | 20-25 Minutes. |
| Flexural Strength , Min., | | 40 |
| Kg/cm ² (at 7 days) | | |
| Compressive Strength Min. | | 150 |
| Kg/cm ² (at 7 days) | | |
| Bond Strength , Min., | | 5 |
| Kg/cm ² (at 7 days) | | |
| Absorption of Toulene Max. | | 18 |
| Percentage by weight | | |

CHEMICAL RESISTANCE CHART

COROCEM 'K' CEMENT

ACIDS

| | |
|----------------------|----|
| HYDROCHLORIC ACID | R |
| SULPHURIC ACID (10%) | R |
| SULPHURIC ACID (50%) | R |
| SULPHURIC ACID (70%) | R |
| NITRIC ACID (CONC) | R |
| ORGANIC ACID (CONC) | R |
| CHROMIC ACID (CONC) | R |
| CHLORINE (Gas) | R |
| CHROMIC ACID (10%) | NR |
| HYDROCHLORIC ACID | R |
| HYDROFLUORIC ACID | NR |

ALKALIES

| | |
|------------------|---|
| SODIUM CARBONATE | N |
| SODIUM HYDROXIDE | N |

SALTS

| | |
|-------------------------------|----|
| ACIDIC (Ph Value less than 4) | R |
| ALKALINE | N |
| NEUTRAL | LR |

SOLVENTS

| | |
|--------------------------|---|
| ALIPHATIC HYDROCARBONS | R |
| AROMATIC HYDROCARBONS | R |
| ALCOHOLS | R |
| KETONES | R |
| CHLORINATED HYDROCARBONS | R |

KEYS:

R = RESISTANT
NR = NOT RESISTANT

LR = LIMITED RESISTANCE, IN CERTAIN
CASES, CONSULT YOUR SUPPLIER.

N.B.: The information given in this leaflet is based on results gained from experience and test. However, all recommendations and suggestions are made without any guarantee as the conditions of use are beyond our control.

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