Anti Corrosive Cements for Surface Protection

COROFUR

FURANE CEMENT

TECHNICAL INFORMATION SHEET

For Acid / Alkali Resistant Protective lining of Process Vesssels, Reactors, ETP Tanks, Floors, Drains, etc.

INTRODUCTION

COROFUR Furane cement is a two component silicious cement based on Fur-furyl alcohol resin. The hardened cement is impermeable and exhibits high resistance to non oxidising acids, alkalies and solvents. The cement is resistant upto a temperature of 160^{0}C. In Areas where Hydrofluoric acid, Strong alkalies are encountered COROFUR "C", a 100% Carbon filled cement should be used.

AREA OF APPLICATION

COROFUR cement is used for laying and jointing of Acid resistant tiles and bricks. It solves a number of corrosion problems where alternating acids, alkalies & solvent conditions prevail. It is used in the construction of A.R.Tile / Brick lining in Process vessels & Reactors, ETP Tanks & Pits, Floors, Drains , Storage tanks & Tank Farms in various industries viz; Dyes & Chemicals, Iron & Steel Plants, Petrochemicals, Refineries, Power Plants, Fertilizers, Rayon Plants, Pharmaceuticals and other Industries

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

COROFUR is supplied in two components: Powder & Resin. Three Parts of Powder should be added to one part of Resin to form a workable mortar. The above ratio is recommended but small adjustments can be made depending on the application.

APPLICATION

COROFUR resin and powder should be mixed in a dry, clean pan and in small batches which can be consumed with in 25- 30 minutes. Take Resin in a pan 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 COROFUR 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 mortar comes up in the joints. This ensures that the mortar is thoroughly filled in the joints without any air pockets. Scrape off any surplus material immediately with a trowel.

When bricks, tiles or stones are laid with Corocem 'K' Potassium Silicate cement and only the joints are required to be filled in with COROFUR cement, the joints should be raked out to the desired depth and should be cleaned carefully free from dust or loose particles by means of a brush or compressed air blast prior to filling with the compound

Setting & Hardening :

The rate of setting and hardening is markedly influenced by the prevailing temperature. The mixed compound begins to set in about two hours and is hardened after about 6-8 hours at a temperature of about 25^{0}C .
Tiled surface and masonry linings cemented with COROFUR cement should be allowed to cure for 48 hrs 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 and consult a doctor if necessary.

SHELF LIFE & STORAGE

COROFUR Powder and Resin has a shelf life of 12 months when stored in cool and dry place. Care should be taken that the powder and resins 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

COROFUR Resin is supplied in containers of 20 kg, 40 and 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.

PSK Corofrac Linings Pvt. Ltd.

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COROFUR

FURANE RESIN CEMENT

PHYSICAL CHARACTERISTICS :

Working Time, Min	…….	20 Minutes.
Flexural Strength , Min., Kg/cm^2 (at 7 days)	…….	75
Compressive Strength Min. Kg/cm^2 (at 7 days)	…….	350
Bond Strength , Min., Kg/cm^2 (at 7 days)	…….	10
Absorption Max. Percentage by weight	…….	1

CHEMICAL RESISTANCE CHART

ACID & ALKALIES	COROFUR	COROFUR'C'
ACETIC ACID (Any Strength)	R	R
AlLUM	R	R
AMMONIUM CHLORIDE	R	R
AMMONIUM NITRATE	R	R
AMMONIUM SULPHATE	R	R
CALCIUM HYDROXIDE	R	R
CALCIUM NITRATE	R	R
CHLORINE (Gas)	R	R
CHROMIC ACID (10%)	NR	LR
HYDROCHLORIC ACID	R	R
HYDROFLUORIC ACID	LR	R
LACTIC ACID (Any conc.)	R	R
NITRIC ACID	NR	NR
OLEIC ACID	R	R
PHOSPHORIC ACID	R	R
POTASSIUM CHLORIDE	R	R
POTASSIUM DICHROMATE	R	R
SODIUM CARBONATE	R	R
SODIUM HYDROXIDE (10%)	R	R
SODIUM HYDROXIDE (50%)	NR	R
SODIUM SULPHATE	R	R
SULPHURIC ACID (50%)	R	R
SULPHURIC ACID (70%)	LR	LR
SOLVENTS		
ALIPHATIC	R	R
CONC. AROMATIC HYDROCARBONS	R	R
CHLORINATED HYDROCARBONS	R	R

KEYS:

R = RESISTANT

NR = NOT RESISTANT

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

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