Anti Corrosive Cements for Surface Protection

CORO VE

VINYL ESTER RESIN CEMENT
TECHNICAL INFORMATION SHEET

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

INTRODUCTION :

CORO VE is a Polyester (Vinyl ester) Resin Cement and is supplied as five component system which sets by chemical reaction to a hard strong mass, which can , in general, withstand temperatures upto 90^{0}C. it is resistant to oxidizing as well as non-oxidizing acids, acid and neutral salts, some organic solvents, chlorine and sodium Hypo-chlorite bleach solution. It is also resistant to mild alkalis. A special variety CORO VE Carbon filled is also available to withstand HF upto a concentration plus 5% and to mixed pickling solution consisting of 15% HNO3 plus H2 SO4 plus 3% HF.

AREA OF APPLICATION

CORO VE cement is used for laying and jointing of Acid resistant tiles and bricks. It solves a number of corrosion problems where strong oxidizing acids like Nitric and other acids prevail in Fertilizer Industries and Bleach solutions in Chemical Plants, steel, Pulp and Paper mills.. 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.

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.

MIXING RATIO :

CORO VE is supplied as five components system, which is to be mixed in the following ratio :

Mixing Ratio :

Solution	:	Promoter	:	Accelerator	:	Catalyst	:	Powder
100	:	1.5	:	1.5	:	1.5	:	400

POT LIFE :

The Pot life of the prepared compound is approx. 20 minutes at 25^{o}C.

Application :

The surfaces being lined and also the Bricks/ Tiles shall be dry and clean devoid of dirt, oil and other foreign particles. Apply CORO VE cement on the back and adjacent side of the tile / brick and spread it evenly with a trowel. The tiles 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 CORO VE 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^{o}C . The completed job should not be put into service for at least 4 days from initial setting of the compound unless artificial heat by means of hot air at 60^{o}C or heat injectors have been used to speed up curing time.

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

CORO VE Resin has a shelf life of 2 months when stored in covered cool conditions. CORO VE is severely affected by weather conditions and polymerization takes place and should be consumed within its shelf life period. CORO VE Powder has a shelf life of Twelve months in packed condition. 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

CORO VE Resin is supplied in containers of 35 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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VINYL ESTER RESIN CEMENT

PHYSICAL CHARACTERISTICS :

Working Time, Min	……. 20 Minutes.
Flexural strength , Min., Kg/cm^2 (at 7 days)	……. 150
Compressive Strength Min. Kg/cm^2 (at 7 days)	……. 500
Absorption Max. Percentage by weight	……. 1.5

CHEMICAL RESISTANCE CHART

	CORO VE
ACIDS	
HYDROCHLORIC ACID(CONC)	R
SULPHURIC ACID (10%)	R
SULPHURIC ACID (50%)	R
SULPHURIC ACID (70%)	R
NITRIC ACID (40%)	R
OXALIC ACID	R
ACETIC ACID	R
CHROMIC ACID (20%)	R
LACTIC ACID	R
CHLORINE (Gas)	R
PHOSPHORIC ACID	R
HYDROFLUORIC ACID (10%)	R
HYDROFLUORIC ACID (20%)	USE CARBON FILLED
ALKALIES	
SODIUM CARBONATE (35%)	R
SODIUM HYDROXIDE (10%)	R
SODIUM HYDROXIDE (50%)	R
SODIUM HYPOCHLORITE (BLEACH-18%)	R
CALCIUM HYDROXIDE(Conc)	R
SOLVENTS	
DICHLOROETHLYENE (E.D.C)	NR
BENZENE	LR (CONSULT)
TOULENE	LR (CONSULT)
ACETONE (UPTO 10%)	NR
ETHYL ALCOHOL	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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