

USES

- ◆ Reduces water absorption by over 85-90%
- ◆ EMULSION KR-2 is permanently bonded to the substrate and cannot be washed out.
- ◆ Does not leave an oily residue on the product.
- ◆ Easy to use. Can be used in existing processes.
- ◆ The degree of water resistance can be varied by changing the rate of addition.
- ◆ No hazardous solvents emitted during use.
- ◆ Non flammable and non corrosive
- ◆ Cost effective.

DESCRIPTION

Protakta Emulsion KR2 is a solvent-free aqueous silicone ester emulsion. It is designed to be **used as an admixture during the in-plant manufacture of low slump cement containing blocks paving products, and as Admixture in RMC, Freshly made concrete and MORTAR FOR PLASTER**

1. When Protakta Emulsion KR2 is incorporated into low slump cementitious products such as imitation stone blocks and pavers, the permeability to water and the occurrence of unsightly efflorescence is dramatically reduced. Additionally, the 28day compressive strength and transverse breaking load strength is increased by up to 50%. The use of EMULSION KR-2 enhances the intrinsic quality of cementitious products by increasing the compressive strength and reducing the damage caused by water uptake and efflorescence.
2. When incorporated in concrete/or mortar, it reduces the water absorption by 85-90%

APPLICATION

Emulsion -KR2 is designed to be added as part of the gauging water during the mixing process.

If a typical mix is normally produced by mixing 1000 kgs of dry ingredients with approximately 10 litres of water, the procedure to incorporate 0.5 litres of Emulsion KR2 into this 1000 kgs of dry mix would be as follows:

- a) Thoroughly mix all the dry ingredients (1000 kgs) in a batch mixer.
- b) Shake EMULSION - KR2 before use.
- c) Measure out 0.5 litres of EMULSION-KR2 and dissolve in 5 litres of clean water.
- d) Add the above solution to the dry mix.
- e) Blend thoroughly while adding water to attain the desired consistency.
- f) The mix can now be processed as us usual.
- g) **For RMC/Fresh concrete Mix/Mortar for plaster 125 ml/per bag of cement.**

TECHNICAL DATA

Appearance	Milky white liquid with slight alcoholic odour.
Specific gravity	0.95
pH value	7
Solubility in water	Miscible
Flash Point	> 100°C

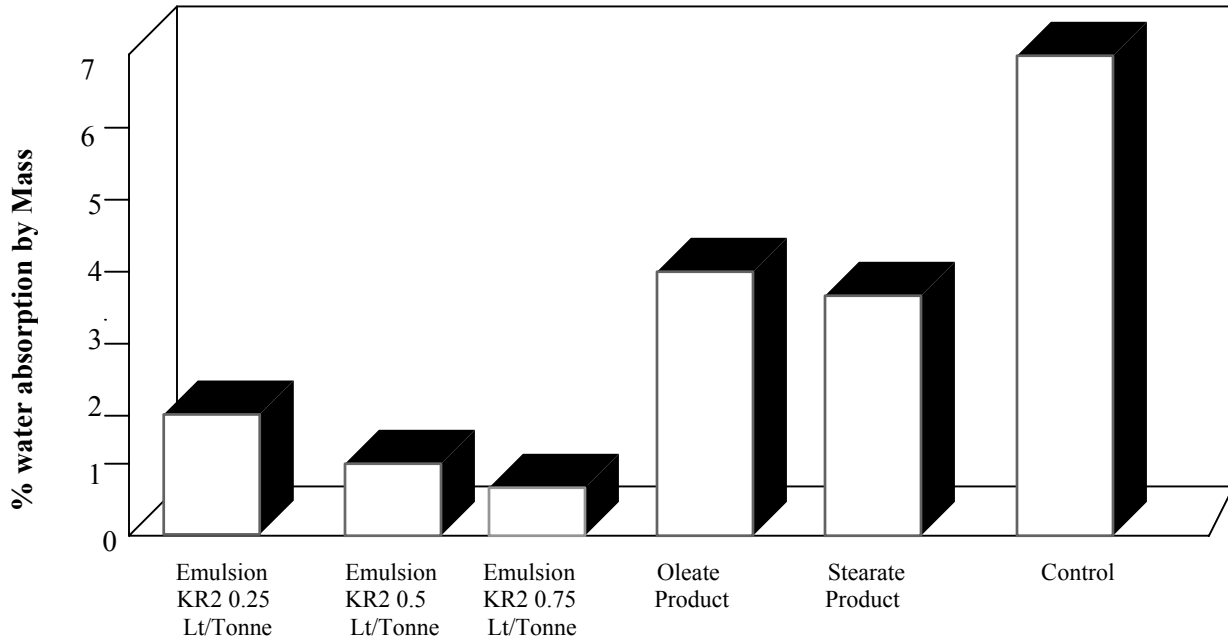
PERFORMANCE

1) *Reduction in Water Absorption*

A comparison of the performance of EMULSION-KR2 at three different concentrations versus an Oleate-Based product (1.8 Lt/Tonne) and a Stearate-based product (2 kg/Tonne) can be seen in Figure 1.

The mix used was a standard block formulated containing 18% cement and 70% graded sand. The samples were steam cured at 60°C over night and let stand in ambient conditions for 28 days. The test blocks were placed on a water saturated sponge for 24 hours, after which the capillary water absorption was measured. The results show that the performance of EMULSION-KR2 is far superior to that of both Oleate, and Stearate-based products.

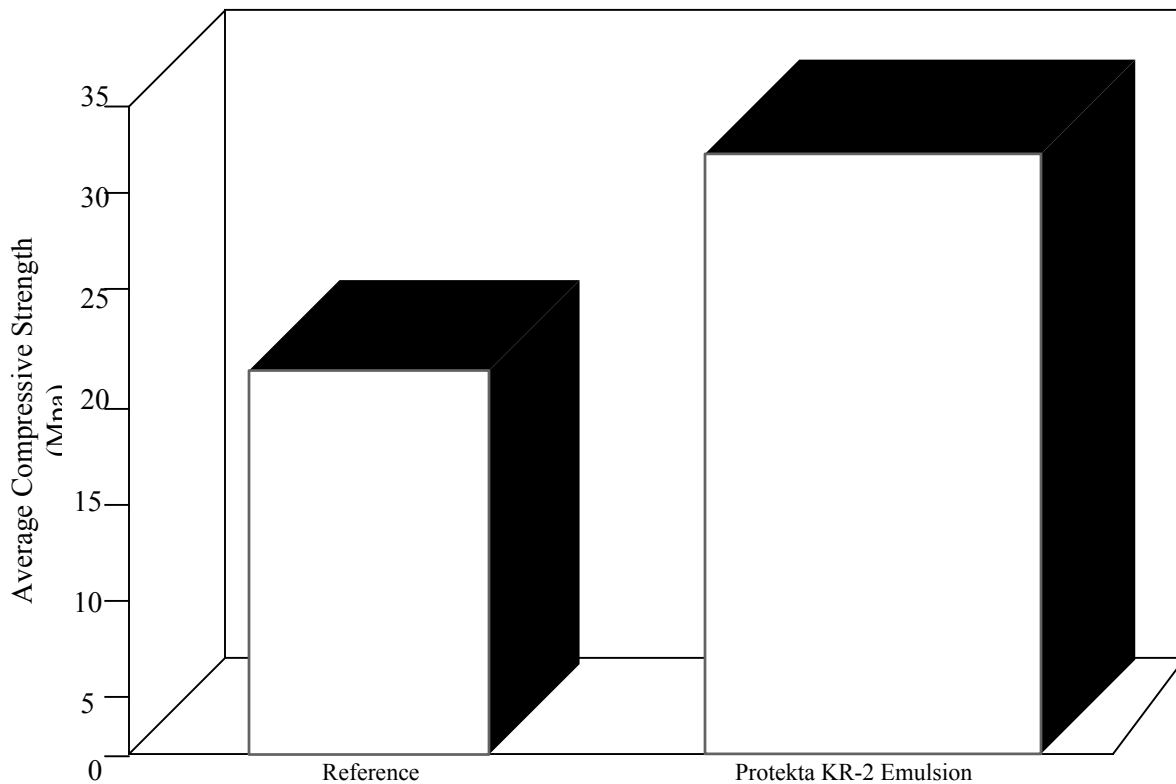
Fig 1. Reduction of Water Absorption



2. Increase in compressive strength

A comparison of the 28 day compressive strength of pavers with and without Protekta KR-2 Emulsion can be seen in Figure 2. Sample paving slabs were cast using Protekta KR-2 Emulsion at a rate of 0.5 litre per tonne of dry mix ingredients as above. The slabs were steam cured at 60°C and left to cure at ambient conditions for 28 days.

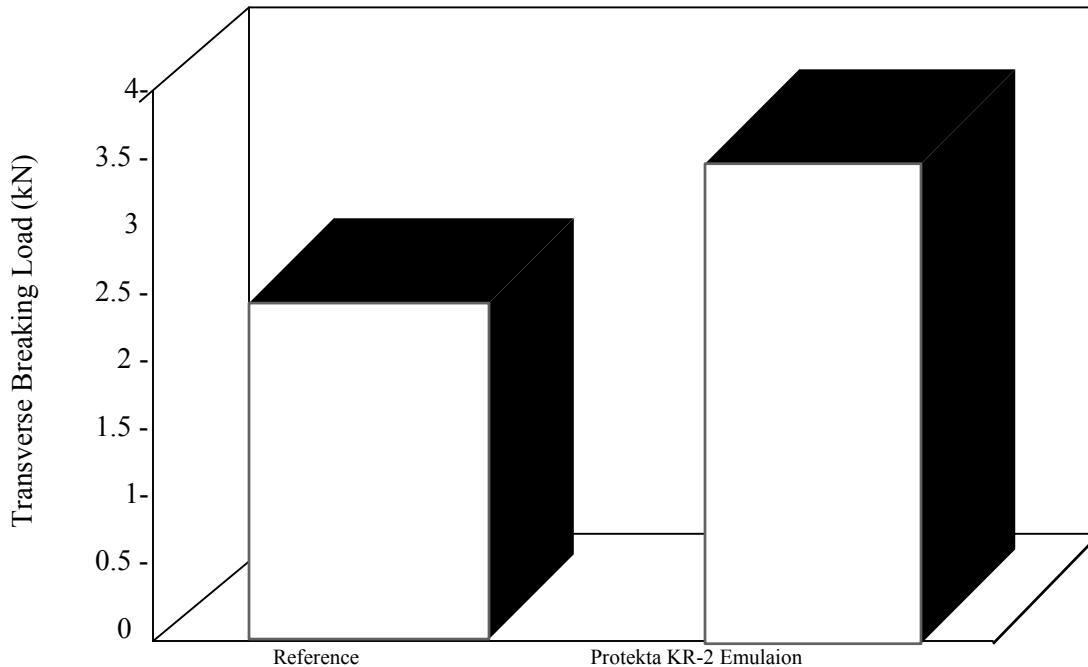
Figure 2. Increase in Compressive Strength



3. Increase in Flexural Strength

The flexural strength of paving units with and without Protekta KR-2 Emulsion is presented in Figure 3. The results show that the flexural strength is increased by 32% over the control specimens.

Figure 3: Increase in Flexural Strength



COVERAGE: The rate of addition depends on the specific mix design and the level of water repellency, which is required. The usual dosage rate range is between 0.125 and 0.75 litres under undiluted Emulsion-KR2 per tonne (1000 kgs) of dry mix ingredients.

SHELF LIFE: 6 months in a closed uncontaminated container and should be used before the use-by-date printed on the container. However if the product is passed its used-by-

date it is not necessarily unusable. A quality control should be performed on the properties relevant to the application or otherwise contact the manufacturer for further advice

STORAGE: To be stored in closed containers in a cool place and prevent from extremes of heat

HEALTH & SAFETY: Non-Hazardous, Non-toxic, Non-flammable

IMPORTANT NOTE

Protekta products are non-hazardous when properly handled, stored and applied. When handling suitable protective clothing should be worn. The materials should not be ingested, inhaled or make skin contact. MSDS are available.

WARRANTY:

The information given in this data sheet is based on many years of experience and is correct to the best of our knowledge and should be used only as a guide. Tech Dry (India) Pvt Ltd reserves the right to alter certain product parameters within the spectrum of properties in order to keep abreast of technical advances. The information in this document is based on the present state of our knowledge and is applicable to the product. Tech Dry (India) Pvt Ltd is responsible for the quality of the product at the time of despatch but is not responsible for its quality after subsequent storage, handling and application. Neither Tech Dry (India) Pvt Ltd nor its associated companies shall be held liable for any damage resulting from the handling or from contact with the above product. See reverse side of invoice or packing slip for additional terms and conditions of sale.

Tech-Dry (India) Pvt. Ltd.
769, Ground Floor, I Cross, I Stage, Indiranagar, Bangalore 560 0328, Ph: ++91-80-25255294 / 25255406,
Fax: ++91-80-25289159. E.mail: techdry@airtelbroadband.in, Website: www.techdryindia.com