

VARACON S

CEMENTITIOUS STRUCTURAL REPAIR MORTAR

DESCRIPTION

VARACON S is supplied as a ready to use dry powder requiring only the addition of water to produce cohesive easily applied mortar. The product is a careful blend of Portland cements, graded silica sands, shrinkage compensating agents silica fume, water reducing agents and compatible water resistant polymers. The product is designed to give good adhesion and cohesion in, the plastic state and low water requirement resulting in a non-shrink low porosity mortar with high compressive strength and durability.

USES

VARACON S is recommended for structural reinstatement of damaged concrete for beams and columns in inland and marine environments, and as a general purpose repair mortar for concrete floors and highly trafficked areas.

ADVANTAGES

Easy to use: Easily trowel applied. Workability retained for approximately 1 hour.

Constant quality: Factory controlled prepacked material eliminates site batching variations.

Durability: Low water cement ratio. Low porosity. Good resistance to carbonation and chloride penetration.

Adhesion: Excellent to sound concrete substrates and steel.

Iron free: No metallic iron to cause staining or deterioration to rust expansion.

Chloride free: Good strength development without the use of chlorides.

Non-shrink: Shrinkage compensated.

Fibre reinforced: Minimises plastic shrinkage.

TYPICAL PROPERTIES

Compressive strength: BS 1881, Part 116 in 100 mm cubes cured under restraint at a water/powder ratio of 0.09.

Age (days)	Compressive strength (N/mm ²) at 30° C Mortar
7	35
28	60

Flexural Strength: BS 1881 - at 20° C - 9 N/mm² at 28 days

Wet density: BS 1881 – 2150 kg/M³, giving a yield of a 12.8 litres per 25 kg bag at mortar consistency.

Bond strength: BS 6319 slant/shear - substrate concrete pre-soaked with water and slurry primed with **VARACRETE LM-033** @ 28 days 50 N/mm².


APPLICATION

Planning: Ensure that competent assessment on the extent of repair has been made defining area and depth.

Concrete preparation: Cut back concrete at edge of repair to minimum depth of 10mm. Do not feather edge. Use mechanical hand tools, grit blasting or water jetting.

Steelwork: Corrosion products should be removed from all exposed steel using mechanical means, grit or water blasting.

Steel primer: Steelwork should be primed before new corrosion products form with a slurry coat of **VARACRETE LM-033** with neat cement or a zinc rich primer.



Concrete primer: The concrete should be first soaked with water to reduce the absorbency. A slurry priming coat of **VARACRETE LM-033** with neat cement should then be applied to the concrete.

Mixing: Place 2.5 litres water in mixer to give mortar consistency. Add 25 kg bag and stir with slow speed drill and paddle or preferably with a mechanical mixer. Mix for 3 to 5 minutes after all powder has been added to obtain a smooth cohesive mortar.

Placing: Place the mortar whilst the primer is tacky by trowel or preferably by hand ensuring that it is well consolidated behind any reinforcing steel. The minimum application thickness should be 5mm. The maximum practical application thickness vertically is 15mm without formwork. The maximum thickness in one application is 30mm. For using at higher thickness requirements use two and three layers to achieve desired thickness.

Curing: When mortar is set, cure exposed surfaces with curing membrane such as **VARACURE P** or use **VARACRETE LM-033**.

PACKAGING

VARACON S is available in 25 kg bags.

PRECAUTIONS

Cleaning: All equipment must be cleaned with water immediately after use. Mixes containing this product must not be emptied into drainage systems.

Protection: All works must be protected from rain and frost until fully hardened.

Storage: Shelf life is 12 months when stored in dry conditions at moderate temperature and humidity.

Fire resistance: **VARACON S** is not flammable.

HEALTH AND SAFETY

VARACON S is non toxic but is mildly alkaline. Gloves should be worn during application. Splashes to the skin or eyes should be removed with clean water. In the event of prolonged irritation, seek medical advice.