

VARACRETE 2H

FAST SETTING CEMENT BASED PATCHING MATERIAL

DESCRIPTION

VARACRETE 2H is a fast setting concrete patching material composed of special cement, fine aggregate and selected plasticising admixture and fibers, requiring the addition of potable water only for mixing. It produces high early strength and achieves initial set in 20 to 30 minutes and final set in 45 minutes. Repaired areas may be opened to traffic in 2 - 2:30 hours.

USES

VARACRETE 2H is specifically formulated as a semi flowable material for the rapid patching of horizontal concrete surfaces such as airport runways, expressways, highways, bridge decks, streets, sidewalks, parking decks loading docks and floors.

ADVANTAGES

- ◆ **Ready to use:** Just add water for mixing.
- ◆ **Fast setting:** High early strength thus reducing repairing time.
- ◆ **Constant quality:** Locally manufactured, always fresh products factory quality controlled prepacked material eliminates batching variations.
- ◆ **Durability:** This special blend of materials delivers high quality and superior durability.
- ◆ **Adhesion:** Excellent to sound concrete substrates and steel reinforcement.
- ◆ **Chloride free:** Good early strength development without use of chlorides.
- ◆ **Fast Setting:** Attains compressive strength in excess of 20 N/mm² in less than 2 hours when used with 1/2 inch aggregates. Repaired areas can be opened for traffic at 1:30 to 2 hours after final set.
- ◆ **Low heat development:** Prevents cracking/debonding.
- ◆ **Fibre reinforced:** Prevents plastic shrinkage.

TYPICAL PROPERTIES @ 25° C:

Compressive Strength: N/mm² (Values are typical And not specification)

Age	Compressive Strength (N/mm ²)MORTAR	Compressive Strength concrete (N/mm ²)
1 Hours	3	15
3 Hours	13	25
4 Hours	15	29
24 Hours	24	43
7 Days	41	60
28 Days	58	66

Wet density: 2150 kg/M³ at 11% water for mixing.

SURFACE PREPARATION: Surface must be structurally sound, clean, free of loose or deteriorated concrete, dust, dirt and all contaminants. Vertically cut all edges of patch area to a minimum thickness of 5 mm. Abrade as necessary to provide proper bonding. Prewet prepared area with potable water immediately before application. Prime all concrete and steel surfaces with **VARABOND SBR** to 1 volume of **VARACRETE 2H** powder. Apply by brush using a stippling action. Allow surface to become tacky (usually 5 to 10 minutes at 25° -30° C).

For asphalt surfaces use one volume of **VARACRETE LM-033** mixed with one volume of **VARACRETE 2H** powder as primer

MIXING:

VARACRETE 2H will require 2.5 to 2.75 litres of water per 25 kg bag. Pour a measured amount of water into a clean mixing container, add the measured amount of **VARACRETE 2H**, and thoroughly mix for **no more than 60 seconds**.

Initially, the mixture will seem very stiff, but near the end of the mixing time, it will "relax" and achieve a semi-flowable consistency. **Do not add additional water or retemper. Too much water weakens the**

mixture. For large projects, use a rotary mixer with rubber tipped blades. Pour the required amount of water into the mixer, and add the **VARACRETE 2H**. Mix just long enough to achieve the proper consistency, but not more than 60 seconds. To fill patches 60 mm deep or greater, add clean, dry, 9.5 to 12.5mm size aggregate or chip stone to the **VARACRETE 2H**. The mix ratio must not exceed 15kg of aggregate to each bag of **VARACRETE 2H**.

Mixing procedure: Start mixer, load water, load rock, and then add **VARACRETE 2H**. Mix no more than 60 seconds. Do not add sand. Do not use liquids other than potable water for mixing. Clean mixing equipment between batches.

TYPICAL MIX DESIGN:

VARACRETE 2H	25 kg
1/2" Aggregate	12.5 kgs
Water	2.5-2.75 kgs (preferably 2.5 kgs)

Placing: Place the mortar by pouring and finish ensuring that it is well consolidated and compacted.

Curing: After compaction by lightly tamping apply a brush coat of **VARABOND SBR** and float the surface to a smooth finish.

PACKAGING

VARACRETE 2H is available in 25 kg bags. **VARABOND SBR** is available in 5, 20 and 200kg packing.

Coverage: A 25 kg bag after mixing with the correct quantity of water will produce 13 litres of mortar. If aggregates are added then volume increases accordingly.

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 work must be protected from rain and frost until fully hardened.

Storage: Shelf life is 6 months when stored in dry conditions at moderate temperature and humidity.

Fire resistance: **VARACRETE 2H** is not flammable.

HEALTH AND SAFETY

VARACRETE 2H 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.