

# VARACRETE LM-033

## HIGH SOLIDS ACRYLIC LATEX BASED BONDING AGENT

### DESCRIPTION

**VARACRETE LM-033** is a high concentration acrylic polymer emulsion blended with selected auxiliary modifying agents to improve the general properties of the cementitious mixes and bonding.

### USES

**VARACRETE LM-033** is used as a bonding primer for **VARACON I**, **VARACON S** and **VARASHIELD 20**. It is used as a mixing liquid with **VARATILEGROUT** for improved water resistance and when used with sand cement to produce mortars, sands, floorings, it provides extra flexibility and water resistance. It is recommended as a high quality bond coat primer for sand cement renders. **VARACRETE LM-033** is recommended for use in internal or external application of thin and thick bed mortars. It is also recommended for use in mortars for tiling over gypsum plaster or panels.

### ADVANTAGES

- ◆ Improves bond strength and waterproofing of cementitious mortars.
- ◆ It improves the general qualities such as flexibility and durability of mortars produced at the job sites.
- ◆ It enhances the flexibility of mortars to compensate for thermal movements and thermal shocks minimizing the cracking problems in rendering or tile mortars.
- ◆ It is specially formulated as an integral flexible admix for cementitious mixes produced at the job site and used as swimming pool tile bonding mortars.

### TYPICAL PROPERTIES

- ◆ **Bond Strength** : When **VARACRETE LM-033** is used as a primer for **VARACON S** Tensile bond strengths in excess of 3.4 N/mm<sup>2</sup> at 28 days are typical values. When used a

primer **VARACON I** bond strengths in excess of 2.3 N/mm<sup>2</sup> are observed.

- ◆ **Temperature limitations:** Do not use below 5° C.

### APPLICATION

**As a bonding agent** : Use **VARACRETE LM-033** as such. Do not dilute with water or solvents of any kind. Pour liquid into suitable container ready for application on to previously prepared substrate. Surface preparation is a key step in successful repairs. Mechanically remove all contaminated loose or damaged concrete. Expose full circumference of any corroded reinforcement bars.

All fine dust and debris should be blown off with oil free compressed air. Pre-soak the repair area thoroughly with water prior to application of **VARACRETE LM-033** as a primer. Remove excess water with a stiff brush. **VARACRETE LM-033** is applied using a stippling action working well into the substrate. Do not allow puddling as this may cause slippage of the repair mortar. Apply repair mortars whilst the primer coat is still tacky. Surfaces that have dried out should be reprimed again.

### As an admixture for cementitious Mortars:

**VARACRETE LM-033** modified cementitious mortars are waterproof and have excellent mechanical properties.

This may be suitable for water-soaked areas such as fountains, swimming pools etc. A typical mix design is given below.

Cement	: 1 part
Fine sand	: 2 parts
<b>VARACRETE LM-033</b>	: 0.20 parts
Water	: to adjust to required application consistency.

**Note:** These mortars should be preferably tight mixes to ensure a compact Mortar.

**As a curing aid :** VARACRETE LM-033 can be used as a curing aid whilst using repair mortars. It is applied by brush when the mortar surface has dried enough to receive it.

**As an additive for Tiling Mortars and Grouts:** VARACRETE LM-033 can be used as additive for cementitious tiling Mortars and grouts to improve thermal shock resistance and waterproofing characteristics. Please refer to respective datasheets, for its usage an application.

**As a liquid latex mortar (Thin Set):** For fixing all kinds of ceramic tiles and natural stones. The mix design given below is used as a slurry bond coat for thick set application and as adhesive for thin set application. It is recommended for use in interior-exterior application over concrete cement, ceramic tiles and masonry surface and for water resistant applications such as swimming pool etc.

#### Mix Design

Portland Cement : 2 to 2.5 kg

**VARACRETE LM-033** : Upto 1 kg for desired consistency.

#### PHYSICAL PROPERTIES

- ◆ **Wet density** : 1650 kI/M<sup>3</sup>.
- ◆ **Pot Life** : 2 hrs.
- ◆ **Tensile Adhesion (As per BS 5980: 1980 Class AA** : 14 days 1500N.
- ◆ **Shear Adhesive Strength: BS 5980 : 1980 Class AA** : 20.5 KN
- ◆ **Shear Bond Strength: ANSI A 118.4 1985 F 6.2.5** : 3.2 Mpa,
- ◆ **Compressive Strength: A 118.4 1985 F-8** : 34 Mpa.
- ◆ **Linear Co-efficient of Thermal Expansion (ANSI I C 531-81)** :  $65 \times 10^{-7} \text{ }^{\circ}\text{F}$   $117 \times 10^{-7} \text{ }^{\circ}\text{C}$ .
- ◆ **Service Rating** : Extra Heavy.
- ◆ **Smoke Contribution** : Nil.

#### PACKAGING

**VARACRETE LM-033** is available in 5, 20 and 200 kgs containers.

**Coverage** : As a bonding primer 5-8 m<sup>2</sup>/kg.

#### PRECAUTION

**Limitations** : Do not work at 5° C or less.

**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, frost until fully hardened.

**Storage** : Shelf life is 12 months when stored in dry conditions at moderate temperature and humidity. Protect product from frost.

**Fire resistance** : VARACRETE LM-033 is not flammable.

#### PERFORMANCE STANDARDS

The performance standards of **VARACRETE LM-033** for conformance and testing are:

**ASTM - C - 1042-85** Type-II,  
**ANSI-A -118.4-1976** Latex Portland Cement Mortar.

It also meets and exceeds the water resistance and bond strength requirements of:

**ANSI-136.1-1972** - Organic Adhesive.  
**ANSI-118. 1-1972**-Dry set Portland Cement mortar.

#### HEALTH AND SAFETY

**VARACRETE LM-033** 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.