

**COMPANY PROFILE**

**Year of Establishment :**

February 1999.

**Our Presence :**

Mumbai, New Delhi, Uttarakhand, Ahmedabad, Kolkata, North-East India.

**Our Works :**

Presently in Dehradun, Uttarakhand and in Rabale, Navi Mumbai, Maharashtra.

**Our Quality Standard :**

ISO 9001:2008 Certified

**Our Product Range :**

- ✓ Normal Admixtures
- ✓ Water Reducing Plasticizing Admixtures
- ✓ Water Reducing Super Plasticizing Admixtures
- ✓ PEC Based High Water Reduction Super Plasticizer
- ✓ Micro Silica
- ✓ Polymer Modified Bitumen Membranes
- ✓ Integral - Waterproofing Compounds
- ✓ Polymeric Waterproofing Barrier Coatings
- ✓ Mould Release Agents
- ✓ Curing Compounds
- ✓ Air Entraining Agents
- ✓ Block Additives and Many More.....

**Our R & D :**

A team of dedicated personnel has been put in our Research and Development department to provide technical service to Project Consultants, Engineering Companies & Architects to achieve high technology concrete solutions.

**Our Association :**

M/s. Bitumat Co. Ltd., Saudi Arabia.

**Our Valued Clients :**

- DMRC** (Delhi Metro Rail Corporation)
- BMRC** (Bangalore Metro Rail Corporation)
- THDC** (Tehri Hydro Development Power Corporation)
- NHPC** (National Hydro Power Corporation)
- UJVNL** (Uttaranchal Jal Vidyut Nigam Ltd.)
- NHAI** (National Highway Authority of India)
- NHDC** (Narmada Hydro Development Corporation)

**Our Vision :**

To provide customized solution to the infrastructure developing industries.

**Lenght**

1 in. (inch)	=	2.54 cm
1 ft. (foot)	=	0.3048 m
1 yd. (yard)	=	0.9144 m
1 cm	=	0.394 in.
1 m	=	3.28 ft.
1 m	=	1.094 yd.

**Area**

1 sq. in. (square inch)	=	6.452 cm <sup>2</sup>
1 sq. ft. (square feet)	=	0.093 m <sup>2</sup>
1 sq. yd. (square yard)	=	0.8361 m <sup>2</sup>
1 cm <sup>2</sup>	=	0.155 sq. in.
1 m <sup>2</sup>	=	10.764 sq. ft.
1 m <sup>2</sup>	=	1.196 sq. yd.

**Volume**

1 cu. in. (cubic inch)	=	16.387 cm <sup>3</sup>
1 cu. ft. (cubic feet)	=	28.316 cm <sup>3</sup>
1 cu. yd. (cubic yard)	=	0.765 m <sup>3</sup>
1 US gallon	=	3.785 L (liter)
1 US (fluid) ounce	=	29.57 cm <sup>3</sup>
1 imp. (Imperial) gallon	=	4.546 L (liter)
1 imp (fluid) ounce	=	28.41 cm <sup>3</sup>
1 cm <sup>3</sup>	=	0.061 cu. in
1 cm <sup>3</sup>	=	0.0353 cu. ft.
1 m <sup>3</sup>	=	1.308 cu. yd.
1 L	=	0.264 US gallon
1 cm <sup>3</sup>	=	0.0338 US (fluid) ounce
1 L	=	0.220 imp. gallon
1 cm <sup>3</sup>	=	0.0352 imp. (fluid) ounce

**Weight**

1 oz. (ounce)	=	28.35 g
1 lb. (pound)	=	0.4536 kg
1 cwt. (hundredweight)	=	50.8 kg
1 g	=	0.03527 oz
1 kg	=	2.204 lbs.

**Temperature**

$$^{\circ}\text{C} = \frac{^{\circ}\text{F} - 32}{1.8}$$

$$^{\circ}\text{F} = 1.8 \times ^{\circ}\text{C} + 32$$

**Note :** Though it is desirable to use the respective components for multi-component products to obtain best results, customers may use any of these components with required components of their own formulations provided they are confident of obtaining satisfactory performance.

## **INDEX**

### **1. SUPERPLASTICISERS**

VITCON 9001 HG .....	1
VITCON 9001 HP .....	2
VITCON 9001 P .....	
VITCON 9001 PA .....	
VITCON 9001 PCE .....	
VITCON 9001 PCM .....	
VITCON 9001 MF .....	
VITCON 9001 PSC .....	
VITCON 9001 HG - CI5 .....	
VITCON 9001 RCI .....	
VITCON 9001 MC .....	
VITCON 9001 SPQ .....	
VITCON 9004 .....	
VITCON 9005 SF .....	
VITCON 9006 CS .....	
VITCON SP 7 .....	

### **2. PLASTICIZERS**

VITCON 9012 WR .....	
VITCON 9012 RP .....	
VITCON 9014 BLOKMIX .....	
VITCON 9015 RETARDSOL .....	

### **3. AIR ENTRAINING AGENTS**

VITCON 100 AR .....	
VITCON 100 SFA .....	
VITCON 600 FA .....	

### **4. CURING COMPOUNDS**

VITCON 9021 WB .....	
VITCON 9021 RB .....	
VITCON 9021 AB .....	

### **5. DE-SHUTTERING AGENTS**

VITCON 9032 RELOL .....	
VITCON 9033 RELOL WEM .....	

### **6. WATERPROOFING COMPOUNDS**

VITCON 9041 RAINKOTE MX B .....	
VITCON 9042 MXP .....	
VITCON 2011 POLYKOTE .....	
VITCON 2011 POLYKOTE P .....	
VITCON 2011 POLYKOTE E .....	
VITCON 2012 FLEXIKOTE .....	

VITCON 2013 SBR .....	
VITCON 190 AWP .....	
VITCON 2009 RAINKOTE .....	
VITCON 900 PSF .....	
VITCON 13 FGC .....	

### **7. WATER REPELLENT COATING**

VITCON 2010 SB .....	
VITCON 2010 WB .....	

### **8. TILE ADHESIVES AND JOINT FILLERS**

VITCON SEALANT 9003 PG .....	
VITCON 211 TILE FIX .....	
VITCON 212 TILE JF .....	

### **9. FLOORINGS**

VITCON 9045 HARD TOP FLOOR .....	
----------------------------------	--

### **10. GROUTS**

VITCON GROUT 2053 NSC .....	
VITCON GROUT 2052 (N) .....	
VITCON GROUT 2051 GA .....	

### **11. SHOTCRETE ACCELERATORS**

VITCON 9013 AFL .....	
VITCON 9013 AFS .....	
VITCON 9013 SPA .....	
VITCON 9013 LSA .....	

### **12. SEGMENT JOINT MATERIAL**

VITCON 2023 PRIMER SB .....	
-----------------------------	--

### **13. ROCK ANCHORING**

VITCON 7001 ANCHOR C .....	
VITCON 7002 ANCHOR R .....	

### **14. MEMBRANES**

VITCON 14001 MEM .....	
------------------------	--

### **15. EPOXY FLOORING**

VITCON 150 EFC .....	
----------------------	--

### **16. CONCRETE SLURRY PUMP PRIMER**

VITCON 9016 EC .....	
----------------------	--

## VITCON 9001 HG

*High Grade Concrete Superplasticiser*

### DESCRIPTION

VITCON 9001 HG is a high-grade brown coloured concrete superplasticiser, conforming to the specifications of ASTM C 494 type G and IS 9103-1999 (amendment 2003).

### ADVANTAGES

- ✓ Enhances slump retention, helps to achieve pumpable concrete.
- ✓ Increases ultimate strength with maximum water retention.
- ✓ Compatible with all types of cement.

### DOSAGE / USAGE

Generally dosed in the range of **0.3 to 2.5% by weight of cement**. The dosage can be enhanced to further 3.5% at higher temperature. But it is always advisory to go for trial mix to determine the optimum dosage. To be used for high grade of concrete upto M-50.

### APPLICATION

VITCON 9001 HG reduces water demand in concrete mix enabling to achieve high ultimate strength. With the addition of VITCON 9001 HG, the concrete shows a strong dispersing effect and achieves a flowable consistency. The controlled extension of concrete setting time also minimizes the cold joint formation. Cement content of the concrete can also be economized with VITCON 9001 HG due to its high cement dispersion property.

### SPECIFICATIONS

Base	: Sulphonated Naphthalene Formaldehyde
Appearance	: Dark Brown Liquid
Sp. Gravity	: <b>1.22 ± 0.02</b>
pH Value	: 7 ± 1
Chloride content	: Nil
Air content	: < 1%
Shelf life	: 12 months
Storage	: Under shade

**PACKAGING** : 250 Kg. Drums.

### SAFETY

VITCON 9001 HG is non-toxic, non-flammable and non hazardous. However, any splash on the human body should be washed out immediately with plenty of water.

## VITCON 9001 HP

*High Range Concrete Superplasticiser*

### DESCRIPTION

VITCON 9001 is a brown ready to use concrete superplasticiser, conforming to the specifications of ASTM C 494 type G and IS 9103-1999 (Amendment 2003).

### ADVANTAGES

- ✓ Better slump retention, to achieve pumpable concrete.
- ✓ Compatible with all types of cement.
- ✓ Increases ultimate strength with maximum water reduction.
- ✓ Controls set retardation with optimum dosage.

### SPECIFICATIONS

Base	: Sulphonated Naphthalene Formaldehyde
Appearance	: Dark brown liquid
Sp. Gravity	: <b>1.20 ± 0.02</b>
pH Value	: 7 ± 1
Chloride content	: Nil
Air content	: < 1%
Shelf life	: 12 months
Storage	: Under shade

### DOSAGE / USAGE

Generally dosed **0.3 to 2.0% by weight of cement**. Enhanced up to 3.5% depending on climatic situations. But better go for trial mix to determine the optimum dosage.

**PACKAGING** : 250 Kg. Drums.

### SAFETY

VITCON 9001 is non-toxic, non-flammable and non hazardous. However, any splash on the human body should be washed out immediately with plenty of water.

**VITCON 9001 P***Low Grade Concrete Superplasticiser***DESCRIPTION**

VITCON 9001 LG is a light brown ready to use concrete superplasticiser, conforming to the specifications of ASTM C 494 type G and IS 9103-1999. (Amendment 2003).

**ADVANTAGES**

- ✓ Enhances initial workability with lower cement content.
- ✓ Improves retention in flow with time.
- ✓ Compatible with various types of cement.
- ✓ Increases ultimate strength.

**DOSAGE / USAGE**

Generally dosed in the range of **0.3 to 2.2% by weight of cement**. The dosage can further be enhanced to 3.5% at high ambient temperature without any adverse effect. But it is always advisory to go for trial mix to determine the optimum dosage.

**APPLICATION**

Addition of VITCON 9001 LG in the concrete mix reduces the total quantity of water and shows a strong dispersing effect. Cement content of the concrete can also be economized with VITCON 9001 LG due to its high cement dispersion property. The admixures is for low grade of concrete upto M-25.

**SPECIFICATIONS**

Base	: <b>Sulphonated Naphthalene Formaldehyde + Sod. Ligno Sulphonate</b>
Appearance	: Light Brown Liquid
Sp. Gravity	: <b>1.2 ± 0.02</b>
pH Value	: 7 ± 1
Chloride content	: Nil
Air content	: < 1%
Shelf life	: 12 months
Storage	: Under shade

**PACKAGING** : 250 Kg. Drums.

**SAFETY**

VITCON 9001 LG is non-toxic, non-flammable and non hazardous. However, any splash on the human body should be washed out immediately with plenty of water.

**VITCON 9001 PA***High Range Water Reducing Powder Admixture***DESCRIPTION**

VITCON 9001 PA is a high range water reducing powder admixture formulated specially to extend the working time of concrete. It is based on Sulphonated Naphthalene Formaldehyde.

VITCON 9001 PA conforms to specification prescribed in IS 9103 - 1999 & ASTM C 494, Type G .

**TECHNICAL DATA**

Form	Powder
Colour	Brown Grey
Bulk Density, g/cc	0.54 – 0.58
Chloride Content	<0.2%

**USAGE**

VITCON 9001 PA is a unique multipurpose high range water reducer that is particularly suitable for the production of ready mixed concrete. Additionally it provides high water reduction and improved fresh concrete characteristics. VITCON 9001PA is used for the following applications:

- High performance concrete
- Ready mix concrete
- Flowing concrete
- Heavily reinforced concrete
- Pumpable concrete

**ADVANTAGES**

- Produces flowing concrete with controlled delay of slumps loss and workability
- Reduces cracking and permeability of hardened concrete
- Reduces segregation and bleeding in the plastic concrete
- Significantly reduces concrete placement time and cost





**CHARACTERISTICS**

Appearance : Brown color liquid  
 Specific gravity : 1.14~1.16 (at 200C)  
 pH : 6~9  
 Cl- ion content: Nil  
 Solubility : Water soluble

**APPLICATIONS**

- ✓ High strength concrete
- ✓ High slump concrete
- ✓ Flowing concrete.
- ✓ Self consolidating concrete and also for better specific requirements go for our admixture **VITCON 9001 PC**.

**STORAGE**

**VITCON 9001 PCM** should be stored under shade. If frozen, its properties can be recovered after thawing and agitating thoroughly.

**SHELF LIFE**

Shelf life of **VITCON 9001 PCM** is about one year.

**PACKAGING**

210kg of drums bulk.

**CAUTION**

When **VITCON 9001 PCM** gets into eyes, wash it off with clean water immediately and consult a doctor if necessary.

**VITCON 9002 MF**

*Superplasticiser for High Early Strength*

**DESCRIPTION**

VITCON 9002 MF is high range water reducing admixture based on modified polycondensate of sulphonated Naphthalene and Melamine Formaldehyde. VITCON 9002 MF is a brown liquid and dispersed thoroughly with cement particles in concrete. VITCON 9002 MF conforms to ASTM C 494 type F.

**DOSAGE / USAGE**

VITCON 9002 MF gives high workability without loss of strength. It also enables high water reduction to achieve dense concrete with higher ultimate strength. VITCON 9002 MF is very useful in various applications like pumpable concrete, precast and pre-stressed concrete, industrial / commercial flooring and in the areas where early release of shutter is required.

Test result for early shutter releasing usage VITCON 9002 MF :

Test	Dosage (Kg/m <sup>3</sup> )	W/C	Cement Content (Kg/m <sup>3</sup> )	Slump (mm)	Com. Strength. (Kg/cm <sup>2</sup> )			
					1D	3D	7D	28D
Control Mix		0.55	400	100	82	140	243	342
VITCON 9002MF	2.4	0.30	400	115	116	245	340	405

The above tests are carried out at temp.  $27 \pm 2^{\circ}\text{C}$  and relative humidity  $70 \pm 5\%$ .

The above results are based on laboratory experiments on specific conditions and temperature as mentioned above. However the site trials on different condition as well as different source of material may vary. Therefore we recommend the site trial to be conducted to get optimum results of our product.

**FEATURES**

- ✓ High workability without extra water helps to produce self-leveling concrete, which can be poured inside congested reinforcement with minimum vibration to achieve optimum compaction.
- ✓ Improves bonding of concrete with reinforcement steel.



- ✓ Increased dispersion of cement particles decreases internal friction and thixotrophy phenomena of mix reducing segregation of concrete and achieving pumping consistency.
- ✓ Significant water reduction minimizes shrinkage and cracking producing durable impervious concrete.
- ✓ Reduces permeability of concrete against water migration and corrosion of embedded steel.
- ✓ Compatible with all types of cement like OPC, PPC, PSC and SRC.

**APPLICATION**

The optimum dose should be obtained by conducting site trials with particular concrete mix. For guidance add the VITCON 9002 MF at a dose of 200ml to 1000ml per 50kg of cement depending on the uses required.

USES	DOSE
For high workability	<b>200ml to 600ml per 50kg of concrete.</b>
For high compressive strength	<b>400ml to 1000ml per 50kg of cement.</b>

For a maximum dispersion in the concrete mix the measured quantity of VITCON 9002 MF is added with water, which will be used in the concrete.

**SPECIFICATIONS**

- Base : **Sulphonated Naphthalene & Melamine Formaldehyde**
- Appearance : Brown liquid
- Specific gravity : **1.20 ± 0.02**
- Chloride content : Nil
- pH value : 7.5 ± 1
- Shelf life : 12 months
- Storage conditions : Under shade

**PACKAGING** : 250 Kg. Drums.

**SAFETY**

VITCON 9002 MF is non-toxic, non-flammable and non hazardous. However, any splash on the human body should be washed out immediately with plenty of water.

**VITCON 9002 PSC**

*Superplasticiser for Prestressed Concrete*

**DESCRIPTION**

VITCON 9002 PSC is a light brown colored liquid. Its special formula helps in dispersing hydrated cement particles in a rich cement mix with very low water content. By using VITCON 9002 PSC makes the concrete suitable to pour into dense reinforcements. VITCON 9002 PSC conforms to ASTM C 494 type F and IS 9103 - 1999 (Amendment 2003).

**ADVANTAGES**

- ✓ Produces high workable mix with low water .
- ✓ Helps to place concrete inside congested reinforcement.
- ✓ Achieves high early as well as ultimate strength.
- ✓ Makes the concrete more dense - reduces permeability.

**DOSAGE / USAGE**

Generally dosed in the range of **0.5 to 3% by weight of cement**. Enhanced up to 3.5% at higher temperature. But it is always go for trial mix to determine the optimum dosage.

**APPLICATION**

Addition of VITCON 9002 PSC helps to reduce total water demand for concrete enhancing ultimate strength. VITCON 9002 PSC also imparts high cement dispersion in concrete mix achieving a free flow consistency.

**SPECIFICATIONS**

- Appearance : **Sulphonated Naphthalene Formaldehyde & Melamine Formaldehyde**
- Appearance : Light Brown Liquid
- Sp. Gravity : **1.21 ± 0.02**
- pH Value : 7 ± 1
- Chloride content : Nil
- Air content : < 1%
- Shelf life : 12 months
- Storage : Under shade

**PACKAGING** : 250 Kg. Drums.

**SAFETY**

VITCON 9002 PSC is non-toxic, non-flammable and non hazardous. However, any splash on the human body should be washed out immediately with plenty of water.



## VITCON 9001 HG-C15

*Corrosion Inhibitor cum Concrete Superplasticiser*

### DESCRIPTION

VITCON 9001 HG-C15 is a high-grade brown coloured concrete superplasticiser, with built in corrosion inhibitor. Conforming to the specifications of ASTM C 494 type G and IS 9103-1999 (Amendment 2003).

### ADVANTAGES

- ✓ Corrosion inhibition formula resists chloride attack.
- ✓ Enhances slump retention, to achieve pumpable concrete.
- ✓ Increases strength with maximum water retention.
- ✓ Compatible with all types of cement.
- ✓ Enables to place concrete in marine atmospheres.

### DOSAGE / USAGE

Generally dosed in the range of **0.5 to 2.5% by weight of cement**. The dosage can be enhanced to further 3.5% at higher temperature. But it is always advisory to go for trial mix to determine the optimum dosage.

### APPLICATION

VITCON 9001 HG-C15 reduces total water demand in concrete mix enabling to achieve high ultimate strength. With the addition of VITCON 9001 HG-C15, the concrete shows a strong dispersing effect and achieves a flowable consistency. Cement content of the concrete can also be economized with VITCON 9001 HG-C15 due to its high cement dispersion property.

### SPECIFICATIONS

Base	: Sulphonated Naphthalene Formaldehyde
Appearance	: Dark Brown Liquid
Sp. Gravity	: <b>1.22 ± 0.02</b>
pH Value	: 7 ± 1
Chloride content	: Nil
Air content	: < 1%
Shelf life	: 12 months
Storage	: Under shade

**PACKAGING** : 250 Kg. Drums.

### SAFETY

VITCON 9001 HG-C15 is non-toxic, non-flammable and non hazardous. However, any splash on the human body should be washed out immediately with plenty of water.



## VITCON 9001 RCI

Bipolar Roving / Migratory Corrosion Inhibitor Admixture

For Reinforced Concrete  
Corrosion in Reinforced Concrete Structures

### Aggressive Influences on Reinforced Concrete

In reinforced concrete the steel is normally protected against corrosion by the

passivating alkalinity of the cement matrix. Due to the ingress of aggressive

environmental influences the steel can corrode. Three conditions must exist for

reinforcing steel to corrode:

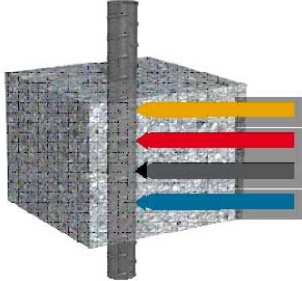
1. The passivation of the steel must have been destroyed by chlorides or by carbonation
2. The presence of moisture as an electrolyte
3. The presence of oxygen

### Carbonation

Carbon dioxide ingress causes carbonation of the cement matrix progressively reducing the passivating alkaline protection of the steel reinforcement to a level where corrosion can occur.

### Chloride attack

Chloride ions from deicing salts or marine exposure are carried into the concrete in solution in water. At the steel surface, even in alkaline concrete, they attack and break down the passivating layer and then accelerate the steel corrosion process.



### The Effect of the Aggressive Influences

#### Chlorides/Carbonation

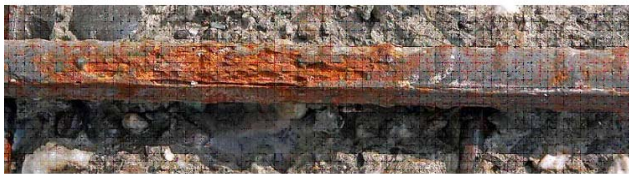
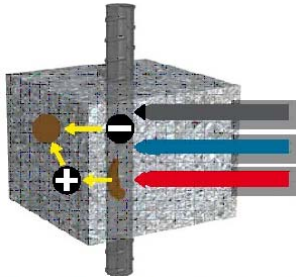
As soon as sufficient chloride ions (from deicing salts or marine exposure) or the carbonation front have reached the steel surface, the passive layer is destroyed and corrosion accelerates.

#### Contact with water (moisture)

The original neutral iron will receive a negative charge as the positively loaded ions have the tendency to dissolve. The water film around the metal turns positive.

#### Contact with oxygen

The oxygen takes on the negative charge of the iron ions which have gone into solution. The result is iron hydroxide, the first stage of rust.



### Corrosion Management with VITCON 9001 RCI

#### DESCRIPTION

VITCON 9001 RCI is a unique blend of non toxic, bipolar roving / corrosion inhibiting concrete admixture, designed for protecting the reinforcement bars in concrete against chloride attack.

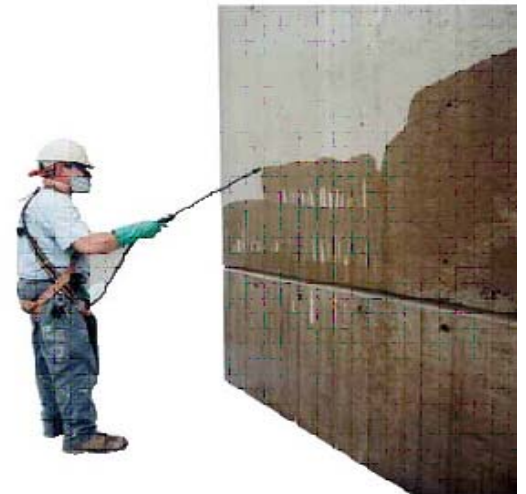
VITCON 9001 RCI is a multifunctional inhibitor which controls the cathodic and anodic reactions. This dual action effect significantly retards both the onset and the rate of corrosion and increases the time to future maintenance. VITCON 9001 RCI is normally applied as part of a corrosion strategy.

It is compatible all component of the Polygon concrete repair and protection systems.

#### Performance and Durability

VITCON 9001 RCI penetrates the concrete and forms an adsorbed protective film on the surface of the steel reinforcement.

The protective adsorbed film of VITCON 9001 RCI reduces the rate of corrosion in carbonated and chloride contaminated concrete.



**The Performance of VITCON 9001 RCI**

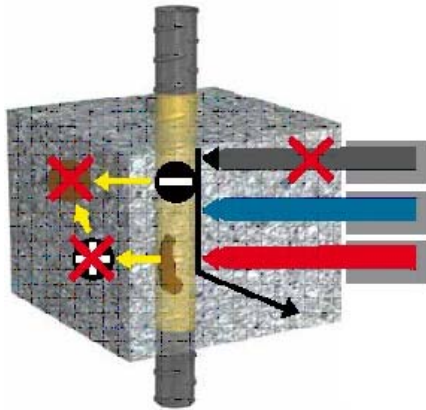
**Protective layer**

VITCON 9001 RCI forms an adsorbed protective film on the reinforcement.

The process of forming this protective film takes place even in carbonated concrete and even with the presence of chlorides in the concrete.

**Delay of the corrosion process**

The dissolution of the iron in contact with water will be reduced thanks to this passivating protective film. This film is also a barrier to the reduction of oxygen which will be prevented.



**APPLICATION METHODOLOGY**

Add VITCON 9001 RCI to the dosing water or added with it in to the concrete mixture.

It should not come into contact with dry cement. It may also be added to the concrete in the transit mixture at the point of discharge.

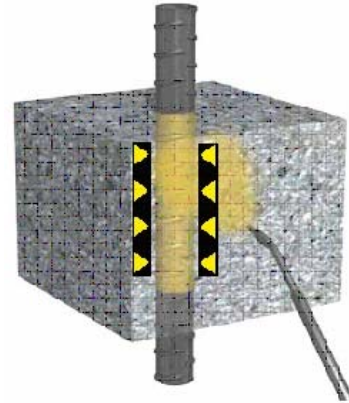
VITCON 9001 RCI is compatible with other admixture, however each admixture should be added to the mix separately.

When VITCON 9001 RCI is used with an air entraining agent then the dosage rate of air entraining agent should be reduced. VITCON 9001 RCI may react with the air entraining agent increasing its air producing efficiency.

Compatible with all types of Portland cement including sulphate resistance cement and not compatible with high alumina cement.

**DOSAGE**

Generally 0.5 – 3 % by weight of cement. It is advisable to carry out a trial to establish the exact & optimal dosage rate depending upon set retardation required.



**Existing Conditions and Aggressive Influences on the Structure**

**New Construction**

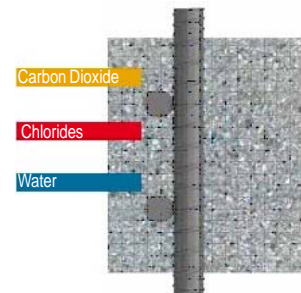
New building/new concrete e.g. high quality architectural concrete without protective coating.

The steel reinforcement is protected by the passivating alkalinity of the cement matrix, pH 12.0 to 13.5.

With the ingress of aggressive environmental influences, steel reinforcement can corrode. The concrete will be carbonated or passivation broken down by penetrating chlorides.

**Objectives and Requirements**

- Increasing service life of structure
- Preservation of architectural aspects
- Preserving protection to reinforcement

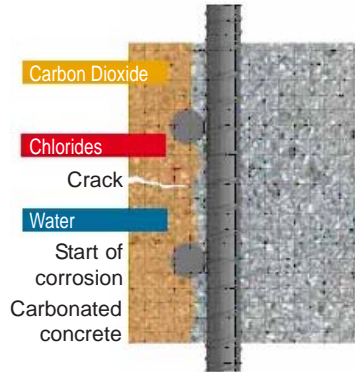




**Well Advanced Corrosion Risk but no Visible Corrosion Damage**

Concrete façade or civil engineering structure without protective coating.

- Steel reinforcement in a carbonated environment
- Perhaps light corrosion already exists
- No visible corrosion damage
- Prevention maintenance
- Protection against possible concrete damage
- Long term protection against further environmental influences (carbonation, deicing salt)

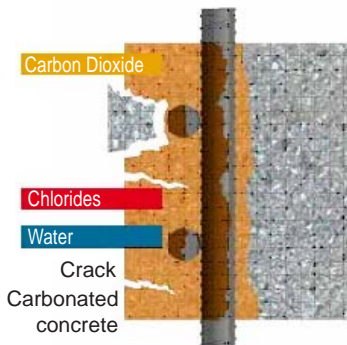


**Visible Corrosion Damage. Concrete Repair Necessary**

Concrete surface (façade or civil engineering structure) without coating but with visible corrosion damage.

e.g. spalling concrete, cracks, etc., concrete repair is necessary.

- Active maintenance
- Structurally sound carbonated/chloride contaminated concrete remains
- Re-passivation of steel
- Protection against the development of latent damage
- Prevent the possibility of incipient anode corrosion
- Long term protection against further environmental influences



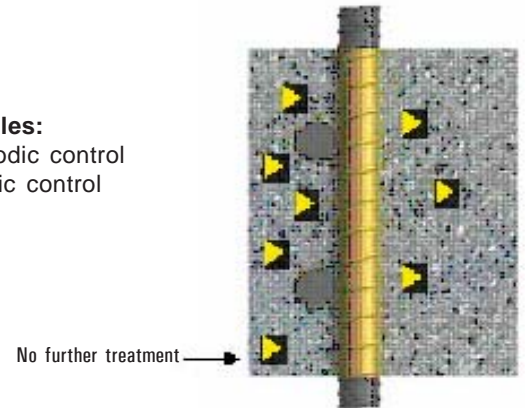
**Reinforcement Protection Principles Using VITCON 9001 RCI**

Principles Based on Remediation Techniques According to EN 1504-9

Corrosion protection will be increased by VITCON 9001 RCI from the beginning, even to concrete surfaces with cracks or inadequate concrete to cover over the reinforcement.

**Principles:**

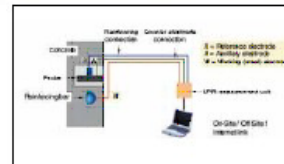
- Cathodic control
- Anodic control



**VITCON 9001 RCI Examples of Uses**



The Polygon Qualitative Colour Test Kit for Penetration Depth testing



Corrosion Rate Maintenance Monitoring System Courtesy of C-Probe Technologies



**VITCON 9001 MC***Concrete Superplasticiser for Mass Concrete***DESCRIPTION**

VITCON 9001 MC is a brown ready to use concrete superplasticiser for mass concreting, conforming to the specifications of ASTM C 494 type G and IS 9103-1999 (Amendment 2003) VITCON 9001 is highly recommended for any type of mass concreting like dams or water retaining structures.

**ADVANTAGES**

- ✓ Enhances workability with lower cement content, improves slump retention with time.
- ✓ Entrained controlled air to reduce heat of hydration and dissipation of heat.
- ✓ Compatible with all types of cement.
- ✓ Increases & achieve ultimate strength.

**DOSAGE / USAGE**

Generally dosed in the range of **0.3 to 2% by weight of cement**. Enhanced up to 2.5% at high ambient temperature without any adverse effect. But it is always advisory to go for trial mix to determine the optimum dosage.

**APPLICATION**

With the addition of VITCON 9001 MC in the total quantity of water can be controlled to get a workable concrete mix. Due to strong dispersion property, cement content can also be reduced in the concrete mix.

**SPECIFICATIONS**

Base	: Sulphonated Naphthalene Formaldehyde
Appearance	: Light Brown Liquid
Sp. Gravity	: <b>1.20 ± 0.03</b>
pH Value	: 7 ± 1
Chloride content	: Nil
Air content	: < 1%
Shelf life	: 12 months
Storage	: Under shade

**PACKAGING** : 250 Kg. Drums.

**SAFETY**

VITCON 9001 MC is non-toxic, non-flammable and non-hazardous. However, any splash on the human body should be washed out immediately with plenty of water.

**VITCON 9001 SPQ***Pavement Concrete Superplasticiser***DESCRIPTION**

VITCON 9001 SPQ is a high range dark brown colored concrete superplasticiser, conforming to the specifications of ASTM C 494 type G and IS 9103-1999 (Amendment 2003).

**ADVANTAGES**

- ✓ Enhances workability with reduced water content. Helps to achieve a cohesive and homogeneous concrete.
- ✓ Stabilizes concrete mixes with low fines content.
- ✓ Increases ultimate strength with maximum water retention.
- ✓ Compatible with all types of cement.

**DOSAGE / USAGE**

Generally dosed in the range of **0.3 to 2.5% by weight of cement**. The dosage can be enhanced to further 3.5% at higher temperature. But it is always advisory to go for trial mix to determine the optimum dosage.

**APPLICATION**

Addition of VITCON 9001 SPQ reduces total water demand in concrete mix enabling to achieve high ultimate strength. VITCON 9001 SPQ also imparts a strong dispersing effect without any segregation or bleeding. It is mostly recommended for PQC concreting.

**SPECIFICATIONS**

Base	: Sulphonated Naphthalene Formaldehyde
Appearance	: Dark Brown Liquid
Sp. Gravity	: <b>1.20 ± 0.02</b>
pH Value	: 7 ± 1
Chloride content	: Nil
Air content	: < 1%
Shelf life	: 12 months
Storage	: Under shade

**PACKAGING** : 250 Kg. Drums.

**SAFETY**

VITCON 9001 SPQ is non-toxic, non-flammable and non-hazardous. However, any splash on the human body should be washed out immediately with plenty of water.

**VITCON 9004***Accelerating Concrete Additive***DESCRIPTION**

VITCON 9004 is a clear chloride free accelerating admixture for concrete and mortar mixes. VITCON 9004 also acts as a water-reducing admixture to enhance significant increase in strength, both in early and ultimate stage. VITCON 9004 is based on selective polymers and is dispersed thoroughly with Portland cement particles in concrete. VITCON 9004 conforms to ASTM C 494 Type C and BS 5075 Part 1.

**ADVANTAGES**

- ✓ Accelerates the setting process.
- ✓ Improves early and ultimate strength of concrete.
- ✓ No chloride additive - can be used safely in RCC & PSC.
- ✓ Enhances productivity in precast industries.
- ✓ Reduces permeability of concrete against water migration.
- ✓ Compatible with all types of cement like OPC, PPC, PSC and SRC except High Alumina Cement.
- ✓ Can also be used for Cement - Fly Ash mixes.

**DOSAGE / USAGE**

Recommended for a dose of **1 to 1.5 Kg per 50kg of cement** depending on the uses required. But the optimum dose can be obtained by conducting site trials with particular concrete / mortar mix.

It is always recommended for a maximum dispersion in the concrete mix the measured quantity of VITCON 9004 should be added with mixing water.

It is also advised not to overdose in the mix. This may result in faster initial acceleration process, without any hamper to ultimate strength to the cured structures.

**TECHNICAL DATA**

Appearance : Clear liquid  
 Specific gravity : **1.14 ± 0.02**  
 Chloride content : Nil  
 pH value : 7.5 ± 1  
 Shelf life : 12 months  
 Storage conditions : Under shade

**PACKAGING** : 30 / 50 / 250 Kg. Drums.

**SAFETY**

VITCON 9004 is non-toxic, non-flammable and non hazardous. However, any splash on the human body should be washed out immediately with plenty of water.

**VITCON 9005 SF***Silica Fume Concrete Additive***DESCRIPTION**

VITCON 9005 SF is a filter powder generated from the reduction of high purity quartz – ferrosilicon metals or silicon metals. VITCON 9005 SF consists primarily of very fine smooth spherical silicon oxide particles with an extremely high surface area. When VITCON 9005 SF is added to concrete, it changes the rheology and reacts with the cement hydration products to dramatically improve physical properties of concrete like strength, durability and impermeability.

**SPECIFICATIONS**

Parameters	VITCON 9005 SF	IS 15388 -2003	ASTM C 1240-2003	EN 13263-2005
SiO <sub>2</sub>	> 85%	> 85%	85% min	> 85%
CaO	0.2-0.7			
Al <sub>2</sub> O <sub>3</sub>	0.4-0.9			
Fe <sub>2</sub> O <sub>3</sub>	1-2			
LOI	< 4%	4% max	6% max	4% max
Moisture	< 3%	3% max	3% max	
Pozzolonic Activity Index	> 105%		105% min	100% min
Specific Surface Area	> 15 m <sup>2</sup> /g	Min 15m <sup>2</sup> /g	Min 15 m <sup>2</sup> /g	Min 15 m <sup>2</sup> /g Max 35 m <sup>2</sup> /kg
Bulk Density	550 to 700 Kg/m <sup>3</sup>	> 550 Kg/m <sup>3</sup>	550 to 700 Kg/m <sup>3</sup>	
Retention in 45 micron sieve	< 10%	max 10%	10% max	
Compressive Strength at 7 days as % of ctrl sample	87%	85% min.		

**DOSAGE / USAGE**

VITCON 9005 SF is usually added to the concrete mix at a ratio of **7% to 8% by weight of cementitious material**. The dosage can be minimized to around 5% in case of ternary blended systems. Moreover, in case of HPC, the dosage can be further increased to 10% by weight of



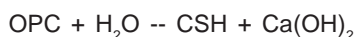
cement. But it is always advisory to go for trial mix to determine the optimum dosage. Addition of VITCON 9005 SF helps to achieve high early strength with reduction in total cementitious material content in comparison with the normal OPC concrete.

### MECHANISM

VITCON 9005 SF improves concrete through two mechanisms :

#### 1. Pozzolonic effect

When water is added to OPC, hydration occurs forming two products, as shown below :



In the presence of VITCON 9005 SF, the silicon dioxide from the VITCON 9005 SF will react with the calcium hydroxide to produce more aggregate binding CSH as follows :



The reaction reduces the amount of calcium hydroxide in the concrete. The weaker calcium hydroxide does not contribute to strength. When combined with carbon dioxide, it forms a soluble salt, which will leach through the concrete causing efflorescence, a familiar architectural problem. Concrete is also more vulnerable to sulphate attack, chemical attack and adverse alkali-aggregate reactions when high amounts of calcium hydroxide is present in concrete.

#### 2. Micro filler effect

VITCON 9005 SF is an extremely fine material, with an average diameter 100 times finer than cement. At a typical **dosage of 8% by weight of cement**, approximately 100,000 particles for each grain of cement will fill the water spaces in fresh concrete. This eliminates bleed and the weak transition zone between aggregate and paste found in normal concrete. This micro filler effect greatly reduces permeability and improves paste-to aggregate bond in VITCON 9005 SF concrete compared to conventional concrete.

The VITCON 9005 SF reacts rapidly providing high early strength and durability. The efficiency of VITCON 9005 SF is 3-5 times that of OPC and consequently concrete performance can be improved drastically.

### ADVANTAGES

Due to its very fine nature and thus greater surface area, VITCON 9005 SF increases the water demand. The use of a super plasticizer to compensate for the higher water demand is universally recommended. Super plasticizers have a greater effect in VITCON 9005 SF concrete than in normal concretes because of larger surface area. It is possible now to dose high dosage of super plasticizers for very low water cement ratios concrete without bleeding and segregation problems encountered with normal OPC concrete. It enables us to produce highly flowable concrete without segregation and very high strength concrete (70 to 120 MPa).

Since VITCON 9005 SF concrete exhibits significantly reduced bleeding, the potential for plastic shrinkage is increased. Thus it is necessary to protect the surface of freshly placed VITCON 9005 SF concrete to prevent rapid water evaporation. Practices outlined in the Guide for Hot Weather Concreting (ACI 305) and for Concrete Floor and Slab Construction (ACI 302) should be followed to provide a good surface. Curing should begin immediately following the finishing operation and can include all types of normal curing such as fogging, water spraying, plastic sheets and curing membranes.

### APPLICATIONS

Because of the pozzolonic and micro filler effect of VITCON 9005 SF, its use in concrete can improve many of its properties opening up a wide range of applications including :

#### 1. Corrosion Resistance

The reduced permeability of VITCON 9005 SF provides protection against intrusion of chloride ions thereby increasing the time taken for the chloride ions to reach the steel bar and initiate corrosion. In addition, VITCON 9005 SF concrete has much higher electrical resistivity compared to OPC concrete thus slowing down the corrosion rate. The combined effect generally increases structure life by 5 – 10 times. VITCON 9005 SF concrete is therefore suitable for structures exposed to salt water, de-icing salts, i.e. Harbour structures, ports, bridges, docks, onshore constructions situated in areas with chlorides in the ground water, soil and in the air.

#### 2. Sulphate Resistance

VITCON 9005 SF concrete has a low penetrability and high chemical resistance that provides a higher degree

of protection against sulphates than low C3A sulphate resisting cements or other cementitious binder systems.

### 3. Heat Reduction

By replacing cement with VITCON 9005 SF and observing the efficiency factor of VITCON 9005 SF, a lower rise maximum temperature and temperature differential will take place for concrete with the same strength. It performs better than slag and fly-ash blends in thick sections. It is also the most effective way of achieving low heat without sacrificing early age strength.

### 4. Waterproof Concrete

Because of its low permeability, VITCON 9005 SF can also be used as an integral waterproofing material for underground structures, e.g. car parking lots.

### 5. High Strength Concrete

VITCON 9005 SF in conjunction with VITCON range of super plasticizers is used to produce very high strength concrete (70 – 120 MPa). High strength concrete provides large economic benefits to developers e.g. reduced column and wall thickness in tall buildings and improved construction schedule.

### 6. Shot Crete

VITCON 9005 SF is used in shot crete whether produced by wet or dry process to reduce rebound loss, to increase application thickness per pass, improve resistance etc.

### 7. Abrasion Resistance

VITCON 9005 SF concrete has very high abrasion resistance. In floor and pavement construction its use saves money and time and improves operational efficiencies for the facility operator. It also improves the hydraulic abrasion-erosion resistance of concrete thus making it suitable for use in dam spillways.

### 8. Chemical Resistance

VITCON 9005 SF concrete is widely used petrochemical industries.

**PACKAGING** : 25 kg. Bags.

### SAFETY

VITCON 9005 SF is non-toxic, non-flammable and non hazardous. However, any splash on the human body should be washed out immediately with plenty of water.

## VITCON 9006 CS

*For Quick Repair of Cement Structure*

### DESCRIPTION

**VITCON 9006 CS** Poly-Crete, a one component Portland cement based concrete mix is the fastest solution for quick repairs of all kinds of cement structures. Settling in 6 minutes after merely adding water it gathers strength rapidly. Providing a fast and efficient method for restoring damaged and cracked concrete structures it clings superbly to old as well as new concrete, brick, stone and steel. Completely hand mouldable to conform to any desired shape and contour **VITCON 9006 CS** Poly-Crete can be applied both above and below water.

### SUGGESTED USES

**VITCON 9006 CS** Poly-Crete is expressly designed for areas where the use of high strength concrete is indicated. Ideal for construction cement boxes, marine dock and pier structures such as seawalls and pilings, **VITCON 9006 CS** Poly-Crete's array of uses branch out to several other applications including repairs for bridge and railway overpass, highways, guard rails to loading docks for truck and rail car. It also provides a low cost answer to municipalities that require quick restoration of streets, expressways, sewers, dams, drains and swimming pools. Thus engineered for all temperatures and surfaces, **VITCON 9006 CS** Poly-Crete provides an instantaneous and secure concrete mix that assures quality and durability.

### PHYSICAL PROPERTIES

Contains no calcium chloride. Approximate 54.5 Kg. per cubic foot density. One 50 Kg. Bag, when mixed with 9.4 Ltrs. of waters will cover approximately a 10 square foot area 1" thick. No apparent heat of hydration generated.

✓ **Packaging** - 25 Kg / 50 Kg bag.

✓ **Shelf Life** - Minimum 1 year when stored in dry area.

**VITCON 9006 CS** Poly-Crete can resist temperatures and high atmospheric changes. The following table shows the compressive and tensile strength reached after periods of curing.

CURING TIME	COMPRESSIVE (PSI)			TENSILE (PSI)		
	Dry Air	High Humidity	Under Water	Dry Air	High Humidity	Under Water
4 Hrs	170	195	120	30	35	20
8 Hrs	565	690	505	100	60	45
1 Day	2870	3300	2950	130	290	310
2 Days	3660	3740	3785	180	320	350
7 Days	4240	4430	5100	400	410	485
12 Days	5010	5250	5930	425	450	505
28 Days	5650	6210	5995	440	450	505

Curing times are controlled by temperatures: Cooler temperatures will lengthen the curing time, while higher temperatures will shorten the curing time.

#### APPLICATION

1. Clean the surface to be repaired from loose particles, oil etc. Chip out concrete to obtain ¼" minimum cross section. Avoid feather edging.
2. Add **VITCON 9006 CS** Poly-Crete to water. For a 50-Kg bag use a ratio of 5.3 Kg **VITCON 9006 CS** Poly-Crete to 1 litre water. Add water sparingly if needed.
3. Knead into a consistency with no lump characteristics. Do not mix longer than 30 to 60 seconds. Limit batch to 100 Lbs. When using a rotary mixer, remove the mix in 60 seconds. Do not retemper.
4. For areas above water, moisten the area to be repaired. Apply and finish within 2 to 3 min. Final finish can be done up to 15 minutes after application. For best results, cover repair overnight with a plastic sheet or wet burlap or apply a standard concrete curing compound to the surface to prevent evaporation of water. For areas under water, remove loose particles, marine growth etc. Mix small batches using water. Press firmly into position.

#### CAUTIONS

Contains silica and Portland cement which may cause skin and respiratory reaction. Symptoms - Irritation of skin, eyes and respiratory system. Precautions - Avoid skin contact, keep container closed and use adequate ventilation and protective respiratory equipment First Aid - If overcome as a result of inhaling, remove to fresh air Wash exposed skin with soap and water after using.

#### WARRANTY

Polygon warrants that its products will be free from defects in workmanship and materials under normal use for a period of one year from the date of shipment by Polygon. There are no express or implied warranties of merchantability or fitness for purpose for this product, which extend beyond the description on the face hereof. Polygon's reliability for breach of this warranty shall be limited to repair or replacement of the defective product (but not including removal of the defective product or installation of replacement products) and Polygon shall not be liable for any incidental and consequential damages for breach of this warranty.



## VITCON 9012 WR

*Concrete Plasticiser*

### DESCRIPTION

VITCON 9012 WR is synthetically make dark brown liquid concrete admixture conforming to ASTM C 494 type A and IS 9103 – 1999 (Amendment 2003) specification. VITCON 9012 WR shows a strong dispersion property with concrete at a lower W / C ratio.

### ADVANTAGES

- ✓ Enables to achieve a workable concrete at low W/C ratio, resulting in higher strength,
- ✓ Reduces permeability of the concrete appreciably.
- ✓ Reduces segregation and bleeding.
- ✓ Helps to achieve an economic cohesive mix at low cement content.

### SPECIFICATIONS

Appearance	: Brown liquid
Sp. Gravity	: <b>1.2 ± 0.02</b>
pH Value	: 7 ± 1
Chloride content	: Nil
Air content	: < 1%
Shelf life	: 12 months
Storage	: Under shade

### DOSAGE / USAGE

Normally dosed **0.3% to 1.5% by weight of cement**. The trial mixes are advisable to optimize the dosage.

### APPLICATIONS

As VITCON 9012 WR is added to the concrete mix, it results in increase in workability and reduction in total water demand in concrete. VITCON 9012 WR is also effective to reduce permeability of concrete lowering its capillary action. It can be used for making any structural concrete like concrete floors, walls or mass concrete.

**PACKAGING** : 35 / 100 / 200 Kg. Drums.

### SAFETY

VITCON 9012 WR is non-toxic and non-flammable. However, any splash on the human body must be washed with plenty of water.

## VITCON 9012 RP

*Retarding Concrete Plasticiser*

### DESCRIPTION

VITCON 9012 RP is dark brown liquid retarding concrete plasticizer conforming to ASTM C 494 type B and IS 9103-1999 (Amendment 2003) specification. VITCON 9012 RP being a perfect blend of set retarding polymers and flow inducers shows a moderate dispersion property as soon as it is added into the concrete mix.

### ADVANTAGES

- ✓ Retards setting time of concrete which will be workable at low W/C ratio.
- ✓ Helps in placing concrete at extreme climatic situations.
- ✓ Reduces permeability of the concrete.
- ✓ Reduces segregation and bleeding.
- ✓ Helps to achieve an economic cohesive mix at low cement content.

### SPECIFICATIONS

Appearance	: Dark Brown liquid
Sp. Gravity	: <b>1.18 ± 0.02</b>
pH Value	: 7 ± 2
Chloride content	: Nil
Air content	: < 1%
Shelf life	: 12 months
Storage	: Under shade

### DOSAGE / USAGE

Normally dosed in the range of **0.5 to 2.4% by weight of cement** depending upon the designed water content and workability as required. The trial design mixes are advisable at site situation to optimize the dosage.

### APPLICATIONS

VITCON 9012 RP shows a moderate increase in workability of the concrete and enhances the placing time as per dosage applied. Reduction in total water demand in concrete ultimately enhances the strength of concrete after 28 days. VITCON 9012 RP is also effective to reduce plastic shrinkage and cold joint formation.

VITCON 9012 RP can be used for making any structural concrete like concrete floors, walls, columns and so on.

**PACKAGING** : 50 / 100 / 200 Kg. Drums.

### SAFETY

VITCON 9012 RP is non-toxic and non-flammable. However, any splash on the human body must be washed with plenty of water.

**VITCON 9014 BLOKMIX***Block Additive***DESCRIPTION**

VITCON 9014 BLOKMIX is a brown liquid concrete additive conforming to ASTM C 494 type A and IS 9103-1999 (Amendment 2003) specification. When added to concrete block mix, VITCON 9014 BLOKMIX shows a strong dispersion property resulting to a highly workable system at a lower w/c ratio.

**ADVANTAGES**

- ✓ Enables to achieve a workable concrete at low w/c ratio
- ✓ Reduces total water demand in concrete resulting in higher strength.
- ✓ Reduces segregation and bleeding.
- ✓ Helps to achieve an economic cohesive mix at low cement content.
- ✓ Reduces bio mass growth in wet condition.

**SPECIFICATIONS**

Appearance : Brown liquid  
 Sp. Gravity : **1.15 ± 0.02**  
 pH Value : 7 ± 1  
 Chloride content : Nil  
 Air content : < 1%  
 Shelf life : 12 months  
 Storage : Under shade

**DOSAGE / USAGE**

Normally dosed **0.3% to 1% by weight of cement** depending upon the designed water content and consistency as required. The trial design mixes are advisable to optimize the dosage.

**APPLICATIONS**

VITCON 9014 BLOKMIX is also effective to reduce permeability of concrete lowering its capillary action. VITCON 9014 BLOKMIX is specifically formulated for making paving blocks and interlocking bricks for pavement construction.

**PACKAGING** : 35 / 100 / 200 Kg. Drums

**SAFETY**

VITCON 9014 BLOKMIX is non-toxic and non-flammable. However, any splash on the human body must be washed with plenty of water.

**VITCON 9015 RETARDSOL***Concrete Surface Retarder*

**DESCRIPTION** : VITCON 9015 RETARDSOL is a light brown ready to use liquid used for retardation of surface concrete to achieve an exposed aggregate finish. VITCON 9015 RETARDSOL is based on solvent free polyhydroxy compound blended with speciality additives, which react with adhered layer of concrete extending the setting time. VITCON 9015 RETARDSOL conforms to the specifications of ASTM C 494 type B and IS 9103-1999 (Amendment 2003).

**ADVANTAGES** : ✓ Helps to achieve exposed aggregate finish on the surface.

- ✓ Compatible with all types of cement.
- ✓ Reduces mechanical and labour cost.
- ✓ Eliminates scrubbling.
- ✓ Eliminates chances of construction joint formation.

**SPECIFICATIONS** : Appearance : Light brown liquid  
 Sp. Gravity : **1.15 ± 0.02**

pH Value : 7 ± 1  
 Chloride content : Nil  
 Air content : < 1%  
 Shelf life : 12 months  
 Storage : Under shade

**DOSAGE / USAGE** : Generally **0.1 to 0.2 kg per square meter depending on porosity substrate**. The dosage can further be varied depending on actual requirements, climatic conditions and type of formwork. But it is always advisory to go for trial mix to determine the optimum dosage.

**APPLICATION** : VITCON 9015 RETARDSOL is applied either by brush or spray on the surface of clean uncontaminated formwork just before placing of concrete. Generally, single coat is advised except for highly absorbent formwork surfaces. The formwork has to be removed as quickly as possible after placement of concrete depending on ambient temperature and placing conditions. Immediately after removal of formwork, the concrete surface has to be washed away with strong water jet to remove retarded concrete. This ultimately results in an exposed aggregate finish at the surface.

**PACKAGING** : 35 / 100 / 200 Kg. Drums.

**SAFETY** : VITCON 9015 RETARDSOL is non-toxic, non-flammable and non hazardous. However, any splash on the human body should be washed out immediately with plenty of water.



## VITCON 100 AR

*Air Entraining Admixture*

### DESCRIPTION

VITCON 100 AR is a synthetic dispersion of resin polymers, which entrain air bubbles in the concrete in minute forms. The homogeneous dispersion of these minute air bubbles in the concrete medium act as filler materials in concrete mixes reducing segregation in concrete. Moreover air bubbles interrupt the capillary system in concrete matrix resulting in resistance against freeze-thaw cycles.

### ADVANTAGES

- ✓ Ideal for mass concrete.
- ✓ Reduces segregation and bleeding.
- ✓ Resists freeze and thaw cycles.
- ✓ Enhances workability.
- ✓ Improves permeability of concrete.

### DOSAGE / USAGE

Generally dosed in between **0.02 % to 0.5 % by weight of cement** depending on requisite air content, climatic conditions and mixing procedures. VITCON 100 AR is compatible with VITCON range of super plasticizers. For usage with other admixtures, it is always advised to carry out compatibility test before finalizing the dosage.

### APPLICATION

VITCON 100 AR is normally added to the gauging water in concrete. Addition of VITCON 100 AR in concrete enables to achieve a better consistency reducing segregation and bleeding. VITCON 100 AR also increases the workability of concrete at a constant W/C ratio.

### SPECIFICATIONS

Appearance	: Colourless liquid
Relative Density	: <b>1.05 ± 0.02</b>
pH Value	: >7
Packing	: 100 / 250 Kg carbuoy
Storage	: Under shade
Shelf Life	: 12 months

**PACKAGING** : 100 / 250 Kg. Drums.

### SAFETY

VITCON 100 AR is non-toxic. However, any splash on the body must be washed with plenty of water.

## VITCON 100 SFA

*Synthetic Foaming Agent*

### DESCRIPTION

VITCON 100 SFA is a synthetic foaming agent used for producing Controlled low density low Strength foam concrete. It can be added directly to the concrete or can be added through foam generating equipment for proper performance. Due to its non-protein based synthesis, it exhibits uniform density throughout the year with no changes with change in weather condition like in case of protein based foaming agents.

### ADVANTAGES

- Entrain air upto 25-30%
- Reduced densities
- Increases yield

### DOSAGE / USAGE

Generally dosed in between **0.5% to 0.6 % by weight of cement** depending on requisite air content, climatic conditions and mixing procedures. Pre trials will be required to be carried out to determine the actual dose. With help of the foam generating equipment low density concrete can be achieved.

### APPLICATION

VITCON 100 SFA is normally added to the gauging water in concrete. Cellular light weight concrete blocks, floor fill, Trench fill/reinstatement, pipe bedding, old storage vessels/ tanks and unstable soil replacement.

### SPECIFICATIONS

Physical appearance	: Light Yellow Translucent liquid
Specific Gravity	: 1.05 - 1.1
pH	: >8.5
Chloride content	: >0:10

**PACKAGING** : 200 Kg. Drums./50 kg carbuoy.

### STORAGE & SELF LIFE :

VITCON 100 SFA should be stored under roof protected from extreme temperatures. In case of packed containers minimum shelf life will be 12 month.



**VITCON 600 FA****Admixture for Foam Concrete****DESCRIPTION**

VITCON 600 FA is a water based chloride free liquid. It is a foam generating and stabilizing admixture for concrete. It provides a heat insulating effect on concrete and reduces the density of concrete.

**TECHNICAL DATA**

Colour	Brown liquid
pH	10 - 11
Compressive Strength	2 – 4 kgf / cm <sup>2</sup>

**USAGE**

- High lightweight concrete
- Squeeze cementing of deplete zones
- Structural and heat insulating foam concrete
- Heat insulating material for reinforced concrete floors, partitions
- Primary cementing of weak formations
- Overcoming lost circulation in cavernous vugs

**ADVANTAGES**

- Lowers density
- Reduces the weight of concrete
- Lowers heat conductivity
- Provides insulation
- Chloride free hence does not corrode the steel reinforcement

**APPLICATION METHODOLOGY**

VITCON 600 FA is a foaming agent which has to be added to cement paste or mortar in special foam concrete mixer. This mixer consists of three drums housing rotating shafts with blades. The resultant foam concrete has to be directly laid on the application sites.

**DOSAGE**

600 ml to 1.2 liter per bag of cement depending upon the desirable density of concrete, cement quality and quantity.

**HEALTH & SAFETY**

- VITCON 600 FA is a non toxic
- Any splashes on the skin should be washed immediately with water
- Splashes on the eyes should be washed immediately with water and seek medical advice immediately.

**PACKING**

Available in 20 kg & 200 kg drum. Bulk packing is available on request.

**STORAGE**

Must be stored in original packing at ambient temperature, dry place under shed. Protect from direct sunlight.

**SHELF LIFE**

6 - 9 months from the date of manufacture in the original sealed container at ambient temperature.

**VITCON 9021 WB***White Pigmented Concrete Curing Compound***DESCRIPTION**

VITCON 9021WB is a ready to use synthetic white-pigmented concrete curing compound conforming to the specifications of ASTM C 309 Type 2. VITCON 9021 WB is especially useful for curing canals, pavement concrete, structural segments, pre-cast elements and so on. VITCON 9021 WB induces high reflection effect and better water retention for curing concrete at tropical atmosphere.

**ADVANTAGES**

- ✓ Improves water retention.
- ✓ High reflectance helps to reduce fast drying of concrete.
- ✓ Easy to spray.
- ✓ Uniform film formation increases ultimate strength.
- ✓ Reduces thermal cracks.

**DOSAGE / USAGE**

Coverage **around 5-6 Sq.mt./kg. depending upon application technique**, substrate porosity. VITCON 9021 WB can be applied either by brush or roller or air-spray.

**APPLICATION**

VITCON 9021 is normally applied over the green concrete just after evaporation of surface water. After drying, VITCON 9021 WB forms a thin film on the concrete surface, which decays with time. The film should be protected from initial heat, rain or any thermal calamity.

**SPECIFICATIONS**

Base	: <b>Water Base</b>
Appearance	: White emulsion
Sp. Gravity	: <b>1.10 ± 0.02</b>
pH Value	: 7 ± 1
Chloride content	: Nil
Water Retention	: 90 - 95 %
Reflection Index	: 60 - 65 % of MgO
Shelf life	: 12 months
Storage	: Under shade

**PACKAGING** : 20 / 100 / 200 Kg. Drums.

**SAFETY**

VITCON 9021 WB is non-toxic, non-flammable and non hazardous. However, any splash on the human body should be washed out immediately with plenty of water.

**VITCON 9021 RB***Resin Based Concrete Curing Compound***DESCRIPTION**

VITCON 9021 RB is a synthetic resin emulsion based concrete curing compound with medium dispersed aluminium flakes. VITCON 9021 RB conforms to the specifications of ASTM C 309 Type 1 and BS 7542. VITCON 9021 RB is especially useful for curing pavement concrete, structural segments, pre-cast elements and so on. The membrane formed by the application of VITCON 9021 RB also imparts high water retention and reflection effect suitable for curing concrete at tropical atmosphere.

**ADVANTAGES**

- ✓ Reduces formation of cracks due to thermal stress.
- ✓ Imparts high water retention efficiency.
- ✓ Reflects sunlight reducing initial drying of concrete.
- ✓ Homogeneous medium dispersed consistency.

**DOSAGE / USAGE**

Generally, VITCON 9021 RB covers **around 5-7 Sq.mt./kg. depending upon application technique**, substrate porosity and climatic conditions. VITCON 9021 RB can be applied either by brush or roller or air-spray. Continuous stirring is recommended before actual application.

**APPLICATION**

VITCON 9021 RB should be applied over the freshly placed concrete. A special care has to be taken to visualize no evaporation of surface water. VITCON 9021 RB forms a thin film on the concrete surface and the film should be protected from initial heat, rain or any thermal calamity. The film decays with time.

**SPECIFICATIONS**

Base	: <b>Resin Based</b>
Appearance	: Light Grey Emulsion
Sp. Gravity	: <b>0.85 ± 0.02</b>
Chloride content	: Nil
Water Retention	: 90 - 95 %
Reflection Index	: 60 - 65 % of MgO
Shelf life	: 12 months
Storage	: Under shade

**PACKAGING** : 35 / 100 / 200 Kg. Drums.

**SAFETY**

VITCON 9021 RB is non-toxic, non-flammable and non hazardous. However, any splash on the human body should be washed out immediately with plenty of water.

**VITCON 9021 AB****Acrylic based Curing and sealing Compound****DESCRIPTION**

VITCON 9021 AB is a high solids copolymer that cures concrete and provides a protective coating for interior and exterior concrete including terrazzo surfaces. It bonds tenaciously to concrete forming an inert, impervious film that is resistant to alkali from fresh cement, salts and many construction stains. It impregnates the top surface of a floor, making it highly resistant to the penetration of dirt and staining materials.

VITCON 9021 AB complies to ASTM C 309 Types 1 & 1D, Class B.

**TECHNICAL DATA**

Drying Time	< 1 hrs	Total Solid, %	30 ± 2
Adhesion to Concrete	Passes	Adhesion to Asphalt Tile	Passes
Alkali Resistance 48 hrs Exposure	Passes	Salt Spray, 500 hrs Exposure	Passes
Flash Point	43 °C	Solvent Resistance	Minimal
Theoretical Coverage m <sup>2</sup> / L	4 – 6 in two coats		

**APPLICATION**

- Industrial floor slabs
- Parking garages
- Exterior pavements and roads
- Warehouses
- Walls and columns
- Dry shake hardened floors
- Terrazzo floors
- Passenger and freight terminals

**ADVANTAGES**

- Higher solids content for increasing curing efficiency
- Provides a clear curing film for new concrete
- Seals all concrete surfaces – old or new and easy to clean
- Hardens new concrete by promoting a proper cure for improved abrasion resistance
- Dustproofs concrete by impregnating surface pores with tough durable film

- Protects fresh concrete from rain damage after drying
- Compatible with many paints, adhesives and resilient floor coverings.

**APPLICATION METHODOLOGY**

- For the best cure of freshly placed concrete, apply VITCON 9021 AB as soon as possible after finishing operations and or immediately after the disappearance of the “sheen” of surface moisture. Application should be made with a high pressure industrial sprayer, lambs wool applicator, short nap roller or brush. Do not cover more area than can be worked in 10 minutes as the VITCON 9021 AB membrane will start to dry.
- When sealing old concrete, the surface must be clean and dry. Remove contaminants and stains such as waxes, grease and oil with strong soaps or caustics rather than acids. Badly worn or porous areas may need a second application to attain a uniform seal and surface gloss. Apply VITCON 9021 AB with a high pressure industrial sprayer, lambs wool applicator, short nap roller or brush.
- Use 2 coats of VITCON 9021 AB
- Do not apply to concrete surfaces at temperature < 10 oC.
- Do not apply over bleed water or free standing water.

**HEALTH & SAFETY**

- Use mask, nose cover and hand gloves during application
- Clean hands with soap water after application
- Ensure adequate ventilation and avoid inhalation of product
- Avoid contact with skin / eyes. In case of unlikely contact with eyes, rinse immediately with plenty of clean water, then cleanse with soap and lukewarm water and seek medical advice. Do not use solvent to clean the contacted area.
- Prevent swallowing. In case of unlikely swallowing, seek medical attention immediately. Do not induce vomiting.



**VITCON 9033 RELOL WEM***Formwork Release Emulsion***DESCRIPTION**

**VITCON 9033 RELOL WEM** is white coloured concentrated mould release emulsion used for formworks used in the construction industry. The concentrated solution has to be diluted with water before applying to get a stain-free release of moulds after placing of concrete. **VITCON 9033 RELOL WEM** is specifically formulated for wooden formworks where release of formworks is extended for extended hours.

**ADVANTAGES :** ✓ Smooth release of formworks.

✓ Non-staining which minimizes cleaning of oils.

✓ Economical - better surface coverage.

**COVERAGE**

**VITCON 9033 RELOL WEM** is ready to use product which can be further diluted with water at a ratio 1:5 by volume before applying on the surface. The dilution ratio can be varied after proper site trials. The solution has to be applied on the face of formwork either with brush or spray or cloth. The coverage is normally 100 – 175 square meter per liter per coat depending on porosity of substrate.

**APPLICATION**

**VITCON 9033 RELOL WEM** is applied on the formwork surface after cleaning the loose particles or any contaminated oils off the surface. Excess thickness may result in surface dusting of concrete. The second coat is only recommended for high absorbent new timber formworks. The coating should be ensured to be uniform all throughout the surface. The coating should be allowed to dry before placing of concrete. The freshly applied formworks have to be protected from rainfall; otherwise the emulsion will be diluted before drying resulting in poor performance.

**SPECIFICATIONS**

Appearance : white coloured liquid

Sp. Gravity : 0.95 ± 0.1

Shelf life : 12 months minimum

Storage : Under shade

**PACKAGING :** **VITCON 9033 RELOL WEM** is available in 35 / 50 / 100 / 200 litre Drums.

**SAFETY :** **VITCON 9033 RELOL WEM** is non-toxic and non hazardous. However, any splash on the human body should be washed out immediately with plenty of water.

**VITCON 9041 RAINKOTE MX B***Integral Waterproofing compound*

**DESCRIPTION :** VITCON 9041 RAINKOTE MX B is a brown coloured liquid to be added to the concrete or mortar for ensuring better waterproofing. VITCON 9041 RAINKOTE MX B has a very good miscibility with cement matrix. If a proper ratio of cement, sand & VITCON 9041 RAINKOTE MX B is maintained, water seepage through structures can be minimized.

**ADVANTAGES**

✓ Reduces permeability in concrete.

✓ Compatible with all types of cement.

✓ Best suitable for water retaining structures.

✓ Prevents seepage in concrete.

✓ Economizes the mix with reduction in cement content.

**DOSAGE / USAGE :** Generally dosed @ **200 ml per 50 kg of cement**. The dosage can also be varied from **0.2 to 1.2% by weight of cement** depending on requirement. But it is always advisory to go for trial mix to determine the optimum dosage. The requisite quantity of VITCON 9001 is generally added to the concrete with gauging water.

**APPLICATION :** VITCON 9041 RAINKOTE MX B is added in the concrete to achieve a non-permeable matrix reducing the water penetration. VITCON 9041 RAINKOTE MX B also shows dispersing effect enabling to reduce the total water demand in concrete. VITCON 9041 RAINKOTE MX B is the best suitable product for producing water retaining structures, terrace slabs, reservoirs and exterior plastering.

**SPECIFICATIONS**

Appearance : Brown liquid

Sp. Gravity : 1.01 ± 0.02

pH Value : 7 ± 1

Chloride content : Nil

Air content : < 1%

Shelf life : 12 months

Storage : Under shade

**PACKAGING :** 20 / 50 / 100 / 240kg HDPE drums.

**SAFETY :** VITCON 9041 RAINKOTE MX B is non-toxic, non-flammable and non hazardous. However, any splash on the human body should be washed out immediately with plenty of water. Local exhaust is recommended for enclosed area.

## VITCON 9042 RAINKOTE MXP

### Powder Based Integral Waterprooing Compound

#### DESCRIPTION

VITCON 9042 RAINKOTE MXP is a off white powder used as an internal barrier against water penetration. It is also increasing the plasticity of mortar, reduces water absorption and thereby guards against freeze thaw damage.

VITCON 9042 MXP will not increase the air content of mortar or concrete. It complies with IS 2645.

#### TECHNICAL DATA

Colour	Off White
Form	Powder
Chloride Content	Nil
Bulk Density, g/cc	1.10 - 1.30

#### APPLICATION

- Used in mass concrete foundation walls, floors that must be water tight, water tanks, terrace slabs
- Used in mortar for setting masonry and blocks

#### ADVANTAGES

- Reduces moisture absorption as much as 60%
- Reduces vapor transmission through walls and slabs
- Reduces capillary action
- Provides greater workability

#### APPLICATION METHODOLOGY

- Add VITCON 9041 MXP 1 kg per 50 kg bag of cement to concrete or mortar

#### COVERAGE

- Generally 2% by weight of cement

## HEALTH & SAFETY

- Use masks and hand gloves during application.
- Clean hands with soap water after application.
- Product should not come in contact with the skin, eye or be swallowed.
- In case of contact with skin, rinse with plenty of clean water then cleanse with soap and water. Seek medical advice if irritation persists.
- In case of contact with eye, rinse immediately with plenty of clean water and seek medical advice.
- If swallowed seek medical attention immediately. Do not induce vomiting.

## PACKAGING

VITCON 9042 RAINKOTE MX. P is available in 25 kg/ 50 kg Bags.

## STORAGE

Must be stored in original packing at ambient temperature, dry place under shed. Protect from direct sunlight.

## SHELF LIFE

12 months from the date of manufacture in the original sealed container at ambient temperature.

## VITCON 2011 POLYKOTE

### Multipurpose Acrylic Polymer Coating For Repairs & Waterproofing

#### DESCRIPTION

VITCON 2011 POLYKOTE is a multifunctional acrylic polymer emulsion for enhancing properties of concrete, mortar and grout through better bonding, waterproofing and improvement in several other properties. VITCON 2011 POLYKOTE is used for permanently bonding plaster to ensure finish of exterior walls, bonding new concrete to damp / dry concrete, making mortar for repairing and for waterproofing.

#### TECHNICAL DATA

Appearance	Free flowing white liquid dries off to colourless
Specific Gravity	1.02 ± 0.02
Solid Content	36 ± 2
UV Resistant	Excellent
Bond Strength (Kg/cm <sup>2</sup> )	8.0 - 8.5

#### USAGE

- Repair mortar for precast structural concrete members, toppings, patches and cracks.
- Toilet, sunken slabs, swimming pools, water tank, sewers, channels, aquariums and terrariums.
- Foundations, repairing walls, planters and concrete terraces, sealing and repair of asbestos panels, pipes and surfaces.
- Durable and aesthetic exterior finish with cement paint.
- Joining old concrete to new concrete.

#### ADVANTAGES

- Easy to use and excellent UV resistant.
- Improves bond strength, facilitating tough and hard wearing surfaces.
- Allows trapped vapour to escape thus preventing peeling / blistering.
- Reduces cracking through increased mortar flexural strength.
- Increases mortar tensile strength.
- Increases mortar wear resistance under rubber wheeled traffic.

## APPLICATION METHODOLOGY

### A. Surface Preparation

- Ensure that structure is at least 3 days old, sound and free from the dirt, soil, oil release agents, laitance and any other foreign materials which may impair the bond, penetration and overall performance of VITCON 2011 POLYKOTE. Do not etch with acid.
- Allow concrete surface to dry. Do not place slurry coat on standing water.
- Remove chemically any efflorescence, form oil, mould etc.
- Ensure to fill cracks / honeycombs / holes/ faulty construction joints with mortar made of VITCON 2011 POLYKOTE, cement and super fine sand in the ratio of 1 : 2 : 3 and allow it to touch dry.
- Pre-wet / dampen all prepared concrete surface before application of VITCON 2011 POLYKOTE. Surface must be damp during application. Do not allow standing water.

### B. Waterproofing Compound

- Prepare a slurry coat in the ratio of 1: 2 (one part of VITCON 2011 POLYKOTE and two parts of cement) and mix them till obtaining homogeneous, lump free mixture with better brushable consistency and apply by brush on the surface. Apply two or more coats depending on the surface condition.
- Ensure time interval of 5-6 hrs between two coats.
- After 6 hrs of air drying the coated surface should be cured by means of spraying water for next 24 hrs. Do not leave coated surface dry during this period. Do not allow the coated surface to be submerged under water during this period.
- Allow to dry for 24 hrs after moist curing. Do not apply water through a hose or pressurized nozzle.
- **Coverage / Dosage** 2.5 kg/sqm for approx 1 mm thickness (2 coats)

### C. Bonding Agent

- Clean the old concrete surface, removing all dirt and soil etc.
- Bond coat with a mixing ratio of 1:2 (one part of VITCON 2011 POLYKOTE and two parts of cement)
- The applied bonding agent should be in tacky condition before topping with new concrete.
- **Coverage / Dosage** 2.5 kg/sqm for approx 1 mm thickness (2 coats)



**D. Repair Mortar**

- Surface should be clean, removing all dirt and soil.
- Bond coat with a mixing ratio of 1:2 (one part of VITCON 2011 POLYKOTE and two parts of cement)
- Repair Mortar with a mixing ratio of 1:2:5 (one part of VITCON 2011 POLYKOTE, two parts of cement and five parts of sand) applied in specified area.
- After the application of Repair Mortar to keep the surface moist for 12-24 hrs.
- **Coverage / Dosage** 2.25 kg/sqm for approx 2 mm thickness (1 coat)

**CLEANING & MAINTENANCE**

- Clean tools and equipment with water before the material hardens.

**PRECAUTION**

- Always take care that after coating protection i.e. either 25 mm or at least 15 mm.

**HEALTH & SAFETY**

- Use mask and hand gloves during application.
- Clean hands with soap water after application.
- Product should not come in contact with the skin, eye or be swallowed.
- In case of contact with skin, rinse with plenty of clean water then cleanse with soap and water. Seek medical advice if irritation persists.
- In case of contact with eye, rinse immediately with plenty of clean water and seek medical advice.
- If swallowed seek medical attention immediately. Do not induce vomiting.

**PACKAGING**

Available in 20 kg container. Bulk packing is available on request.

**STORAGE**

Must be stored in original packing at ambient temperature, dry place under shed. The containers must be protected from direct sunlight. The best use before end date of each batch appears on the product label.

**SHELF LIFE**

12 months from the date of manufacture in the original sealed container at ambient temperature.

**VITCON 2011 POLYKOTE P****Multipurpose Acrylic Polymer Coating For Repairs & Waterproofing****DESCRIPTION**

VITCON 2011 POLYKOTE P is a multifunctional acrylic polymer emulsion for enhancing properties of concrete, mortar and grout through better bonding, waterproofing and improvement in several other properties. VITCON 2011 POLYKOTE P is used for permanently bonding plaster to ensure finish of exterior walls, bonding new concrete to damp / dry concrete, making mortar for repairing and for waterproofing.

**TECHNICAL DATA**

Appearance	Free flowing white liquid dries off to colourless
Specific Gravity	1.03 ± 0.02
Solid Content	42 ± 2
UV Resistant	Excellent
Bond Strength (Kg/cm <sup>2</sup> )	10 - 10.8

**USAGE**

- Repair mortar for precast structural concrete members, toppings, patches and cracks.
- Toilet, sunken slabs, swimming pools, water tank, sewers, channels, aquariums and terrariums.
- Foundations, repairing walls, planters and concrete terraces, sealing and repair of asbestos panels, pipes and surfaces.
- Durable and aesthetic exterior finish with cement paint.
- Joining old concrete to new concrete.

**ADVANTAGES**

- Easy to use and excellent UV resistant.
- Improves bond strength, facilitating tough and hard wearing surfaces.
- Allows trapped vapour to escape thus preventing peeling / blistering.
- Reduces cracking through increased mortar flexural strength.
- Increases mortar tensile strength.
- Increases mortar wear resistance under rubber wheeled traffic.

**APPLICATION METHODOLOGY****A. Surface Preparation**

- Ensure that structure is at least 3 days old, sound and free from the dirt, soil, oil release agents, laitance and any other foreign materials which may impair the bond, penetration and overall performance of VITCON 2011 POLYKOTE P. Do not etch with acid.
- Allow concrete surface to dry. Do not place slurry coat on standing water.
- Remove chemically any efflorescence, form oil, mould etc.
- Ensure to fill cracks / honeycombs / holes/ faulty construction joints with mortar made of VITCON 2011 POLYKOTE P, cement and super fine sand in the ratio of 1 : 2 : 3 and allow it to touch dry.
- Pre-wet / dampen all prepared concrete surface before application of VITCON 2011 POLYKOTE P. Surface must be damp during application. Do not allow standing water.

**B. Waterproofing Compound**

- Prepare a slurry coat in the ratio of 1: 2 (one part of VITCON 2011 POLYKOTE P and two parts of cement) and mix them till obtaining homogeneous, lump free mixture with better brushable consistency and apply by brush on the surface. Apply two or more coats depending on the surface condition.
- Ensure time interval of 5-6 hrs between two coats.
- After 6 hrs of air drying the coated surface should be cured by means of spraying water for next 24 hrs. Do not leave coated surface dry during this period. Do not allow the coated surface to be submerged under water during this period.
- Allow to dry for 24 hrs after moist curing. Do not apply water through a hose or pressurized nozzle.
- **Coverage / Dosage** 2.5 kg/sqm for approx 1 mm thickness (2 coats)

**C. Bonding Agent**

- Clean the old concrete surface, removing all dirt and soil etc.
- Bond coat with a mixing ratio of 1:2 (one part of VITCON 2011 POLYKOTE P and two parts of cement)
- The applied bonding agent should be in tacky condition before topping with new concrete.
- **Coverage / Dosage** 2.5 kg/sqm for approx 1 mm thickness (2 coats)

**D. Repair Mortar**

- Surface should be clean, removing all dirt and soil.
- Bond coat with a mixing ratio of 1:2 (one part of VITCON 2011 POLYKOTE P and two parts of cement)
- Repair Mortar with a mixing ratio of 1:2:5 (one part of VITCON 2011 POLYKOTE P, two parts of cement and five parts of sand) applied in specified area.
- After the application of Repair Mortar to keep the surface moist for 12-24 hrs.
- **Coverage / Dosage** 2.25 kg/sqm for approx 2 mm thickness (1 coat)

**CLEANING & MAINTENANCE**

- Clean tools and equipment with water before the material hardens.

**PRECAUTION**

- Always take care that after coating protection i.e. either 25 mm or at least 15 mm.

**HEALTH & SAFETY**

- Use mask and hand gloves during application.
- Clean hands with soap water after application.
- Product should not come in contact with the skin, eye or be swallowed.
- In case of contact with skin, rinse with plenty of clean water then cleanse with soap and water. Seek medical advice if irritation persists.
- In case of contact with eye, rinse immediately with plenty of clean water and seek medical advice.
- If swallowed seek medical attention immediately. Do not induce vomiting.

**PACKAGING**

Available in 20 kg container. Bulk packing is available on request.

**STORAGE**

Must be stored in original packing at ambient temperature, dry place under shed. The containers must be protected from direct sunlight. The best use before end date of each batch appears on the product label.

**SHELF LIFE**

12 months from the date of manufacture in the original sealed container at ambient temperature.

**VITCON 2011 POLYKOTE E**

**Multipurpose Acrylic Polymer Coating For Repairs & Waterproofing**

**DESCRIPTION**

VITCON 2011 POLYKOTE E is a multifunctional acrylic polymer emulsion for enhancing properties of concrete, mortar and grout through better bonding, waterproofing and improvement in several other properties. VITCON 2011 POLYKOTE E is used for permanently bonding plaster to ensure finish of exterior walls, bonding new concrete to damp / dry concrete, making mortar for repairing and for waterproofing.

**TECHNICAL DATA**

Appearance	Free flowing white liquid dries off to colourless
Specific Gravity	1.02 ± 0.02
Solid Content	30 ± 2
UV Resistant	Excellent
Bond Strength (Kg/cm <sup>2</sup> )	7.0 - 7.8

**USAGE**

- Repair mortar for precast structural concrete members, toppings, patches and cracks.
- Toilet, sunken slabs, swimming pools, water tank, sewers, channels, aquariums and terrariums.
- Foundations, repairing walls, planters and concrete terraces, sealing and repair of asbestos panels, pipes and surfaces.
- Durable and aesthetic exterior finish with cement paint.
- Joining old concrete to new concrete.

**ADVANTAGES**

- Easy to use and excellent UV resistant.
- Improves bond strength, facilitating tough and hard wearing surfaces.
- Allows trapped vapour to escape thus preventing peeling / blistering.
- Reduces cracking through increased mortar flexural strength.
- Increases mortar tensile strength.
- Increases mortar wear resistance under rubber wheeled traffic.

**APPLICATION METHODOLOGY****A. Surface Preparation**

- Ensure that structure is at least 3 days old, sound and free from the dirt, soil, oil release agents, laitance and any other foreign materials which may impair the bond, penetration and overall performance of VITCON 2011 POLYKOTE E. Do not etch with acid.
- Allow concrete surface to dry. Do not place slurry coat on standing water.
- Remove chemically any efflorescence, form oil, mould etc.
- Ensure to fill cracks / honeycombs / holes/ faulty construction joints with mortar made of VITCON 2011 POLYKOTE E, cement and super fine sand in the ratio of 1 : 2 : 3 and allow it to touch dry.
- Pre-wet / dampen all prepared concrete surface before application of VITCON 2011 POLYKOTE E. Surface must be damp during application. Do not allow standing water.

**B. Waterproofing Compound**

- Prepare a slurry coat in the ratio of 1: 2 (one part of VITCON 2011 POLYKOTE E and two parts of cement) and mix them till obtaining homogeneous, lump free mixture with better brushable consistency and apply by brush on the surface. Apply two or more coats depending on the surface condition.
- Ensure time interval of 5-6 hrs between two coats.
- After 6 hrs of air drying the coated surface should be cured by means of spraying water for next 24 hrs. Do not leave coated surface dry during this period. Do not allow the coated surface to be submerged under water during this period.
- Allow to dry for 24 hrs after moist curing. Do not apply water through a hose or pressurized nozzle.
- **Coverage / Dosage** 2.5 kg/sqm for approx 1 mm thickness (2 coats)

**C. Bonding Agent**

- Clean the old concrete surface, removing all dirt and soil etc.
- Bond coat with a mixing ratio of 1:2 (one part of VITCON 2011 POLYKOTE E and two parts of cement)
- The applied bonding agent should be in tacky condition before topping with new concrete.
- **Coverage / Dosage** 2.5 kg/sqm for approx 1 mm thickness (2 coats)

**D. Repair Mortar**

- Surface should be clean, removing all dirt and soil.
- Bond coat with a mixing ratio of 1:2 (one part of VITCON 2011 POLYKOTE E and two parts of cement)
- Repair Mortar with a mixing ratio of 1:2:5 (one part of VITCON 2011 POLYKOTE E, two parts of cement and five parts of sand) applied in specified area.
- After the application of Repair Mortar to keep the surface moist for 12-24 hrs.
- **Coverage / Dosage** 2.25 kg/sqm for approx 2 mm thickness (1 coat)

**CLEANING & MAINTENANCE**

- Clean tools and equipment with water before the material hardens.

**PRECAUTION**

- Always take care that after coating protection i.e. either 25 mm or at least 15 mm.

**HEALTH & SAFETY**

- Use mask and hand gloves during application.
- Clean hands with soap water after application.
- Product should not come in contact with the skin, eye or be swallowed.
- In case of contact with skin, rinse with plenty of clean water then cleanse with soap and water. Seek medical advice if irritation persists.
- In case of contact with eye, rinse immediately with plenty of clean water and seek medical advice.
- If swallowed seek medical attention immediately. Do not induce vomiting.

**PACKAGING**

Available in 20 kg container. Bulk packing is available on request.

**STORAGE**

Must be stored in original packing at ambient temperature, dry place under shed. The containers must be protected from direct sunlight. The best use before end date of each batch appears on the product label.

**SHELF LIFE**

12 months from the date of manufacture in the original sealed container at ambient temperature.

**VITCON 2012 FLEXIKOTE***Acrylic Waterproofing Flexible Coating***DESCRIPTION**

VITCON 2012 FLEXIKOTE is an elastomeric premium quality acrylic based coating best suitable for any waterproofing applications. The high solid acrylic content makes VITCON 2012 FLEXIKOTE more durable and effective for protection of concrete as well as metal structures.

**ADVANTAGES**

- ✓ Excellent resistance to ultraviolet radiation.
- ✓ Excellent bonding to all building substrates.
- ✓ Forms a durable waterproofing breathable coating.
- ✓ Reduces water permeability.
- ✓ Improves resistance to alkali and carbonation effect.
- ✓ Suitable for use in slightly damp conditions.

**APPLICATION****Substrate Preparation**

The substrate to be treated has to be thoroughly cleaned and all loose particles, oil, grease, dust etc. should be removed. The cleaned surface then needs to be washed with clean water.

For hairline cracks on concrete surfaces, thorough cleaning is recommended. But for cracks more than 2 mm has to be opened and cut in a shape of "V" groove. The cut groove is then filled with cement mixed with either VITCON 2013 SBR or VITCON 2011 Polykote depending upon the size and nature of cracks.

**Sealer Coat**

VITCON 2012 FLEXIKOTE has to be diluted with water in a ratio 1:5 by weight. The diluted material has to be coated on masonry substrate either by brush or roller or spray to get a better adhesion.

**First Coat**

After the sealer coat is dried up (approximately 6 to 8 hours after application), the first coat of VITCON 2012 has to be applied.

VITCON 2012 has to be diluted with 10 to 30% clean potable water before application. The dilution varies depending on application areas and substrate requirements. Normally it is recommended to dilute upto 30% for external wall applications and 10% for roofing applications.

**Second Coat**

After the drying for first coat (approximately 6 to 8 hours after application), the second coat has to be applied. Further coats may be applied depending upon substrate conditions.

The coated surface should be allowed to dry for a minimum of 24 hours before putting any external load.

**DOSAGE / USAGE**

Sealer Coat : 125 to 175 Sq.ft. per Kg.  
 First Coat : 65 to 85 Sq.ft. per Kg.  
 Second Coat : 75 to 95 Sq.ft. per Kg.

The above coverage may vary depending on substrate and climatic conditions.

**SPECIFICATIONS**

PROPERTY	TYPICAL VALUE	TEST METHOD
Colour	White	
Viscosity, CPS	50000-70000	Brookfield
Density, kg / l	1.30 (+/0.05)	ASTM-D14785 -16
Application Temp, °C	+5 (minimum)	In-House Test
Curing Time, at 25°C	Approx. 8 Hr. for touch dry	In-House Test
Service Temp, °C	Approx. -5 to 100	In-House Test
Tensile Strength, N/CM2	480	ASTM-D-412
Elongation, at Break %	440	ASTM-D-412
Hardness, Shore A	68	ASTM-D-2240
Permeability	Pass	ASTM-E-398
Dry Pee Adhesion, ibs/sq.in.	65	ASTM-C-297
Flexibility	No cracking of film after 1000 hrs. accelerated weathering conditions and flexed 180 degrees	In-House Test
UV Resistance	2000 hours no deterioration and no colour fade	ASTM-D-822

**PACKAGING** : 20 Kg. Containers.

**SAFETY**

VITCON 2012 FLEXIKOTE is water based and non-hazardous. However, it should not be swallowed or allowed to come in contact with skin and eyes.

**VITCON 2013 SBR***Styrene Butadiene Copolymer Emulsion***DESCRIPTION**

VITCON 2013 SBR is a styrene butadiene copolymer emulsion specially formulated and modified to be compatible with cementitious mixes. The high flexibility of the copolymer makes the product best suitable for any structural repairs and waterproofing applications. VITCON 2013 SBR is also resistant to hydrolysis and suitable to be used in external applications.

**ADVANTAGES**

- ✓ Excellent adhesion to most building materials.
- ✓ Improves bonding to substrate.
- ✓ Induces high tensile and flexural strengths, allowing thin applications.
- ✓ Reduces water permeability.
- ✓ Improves structure durability by reducing the penetration of chlorides and other aggressive chemicals.
- ✓ Suitable for use in damp conditions.

**DOSAGE / USAGE**

VITCON 2013 SBR is normally used in **5-10 litre/50 kg. Cement bag**. VITCON 2013 SBR is compatible with all types of Portland cement, Sulphate Resistant cement and High Alumina cement.

**APPLICATION****A. Concrete Repairs :**

The substrate should be cleaned thoroughly and made sound by chiseling off all the loose particles to expose sound concrete and also corroded steel bars. Clean the rusted steel bars with a wire brush or any other mechanical device.

A primer coat is applied on all the reinforcement and concrete by diluting **1 part VITCON 2013 SBR to 3 parts of water by volume**.

When the primer coat is in tacky condition, a bond coat is to be applied on the surface by mixing cement to VITCON 2013 SBR in the ratio of **1:2:1 (cement VITCON 2013 SBR water)** by weight.

After the drying of bond coat, repair-patching work has to be started with polymer-modified mortar prepared as below :

**First, 1 part of cement to 3 parts of sand / aggregate by weight has to be mixed thoroughly. About 10% to 15% of VITCON 2013 SBR by weight of cement diluted with equal volume of water has to be added to dry cement-sand mix.** Mix them thoroughly to get a uniform

homogeneous consistency. Additional water can be added to achieve any specific desired consistency for troweling. But we recommend a prior consultation before adding any extra water of the mix.

The above PMM has to be cured for 72 hours by light sprinkling of water (mist curing) or by moist hassein bags.

**B. Water Proofing Treatment :**

The substrate has to be properly cleaned and all loose particles materials have to be stripped off to get a sound concrete. The cracks and crevices should be filled with cement slurry / putty containing VITCON 2013 SBR @10% by weight of cement.

A bond coat has to be prepared of cement and **VITCON 2013 SBR by mixing in the ratio of 2:1 by weight**. The bond coat is applied at a thickness of about 1 mm on the prepared surface by 4" soft brush in one direction only. Allow the coating to air dry for about 4 to 6 hours.

Then a second coat of the same mix in the direction right angles to the first coat has to be applied. Allow the second coat also to air dry overnight and then cure for 72 hours by light spray of water (mist curing) or by moist hassein bags.

**SPECIFICATION**

Colour	: White emulsion
Consistency	: Low viscosity liquid
pH	: 8 to 10
Sp. Gravity at 25°C ± 2°C	: <b>1.02 ± 0.01</b>
Viscosity	: 20 to 25 cps
Coverage	: 40 to 50 sq.ft./kg. depending on substrate condition
Application Temp.	: Above 5°C
Shelf Life	: 18 Months under shade

**PACKAGING** : 20 / 50 / 100 / 250 Kg. Drums.

**MIX PROPORTION (By Weight) :**

Composites	VITCON 2013 SBR	Cement	Water
Passivator coat	1	4	3
Bond coat	1	2	1
Water proofing coating	1	2	-

**SAFETY**

VITCON 2013 SBR is water based and non-hazardous. However, it should not be swallowed or allowed to come in contact with skin and eyes.



**VITCON 190 AWP****Single Component UV Resistant Acrylic Waterproofing Coating****DESCRIPTION**

VITCON 190 AWP is a unique elastomeric high build coating based on revolutionary acrylic polymer with quick set capabilities to resist moisture attack. VITCON 190 AWP provides durability, flexibility and excellent weather resistant. VITCON 190 becomes more durable with age. It is easy to apply and is environmentally safe and non polluting. VITCON 190 AWP has inherent waterproofing properties.

**TECHNICAL DATA**

PROPERTY	TEST METHOD	TYPICAL VALUE
Appearance	Visual	White
Specific Gravity	ASTM D14785-16	1.30 ± 0.02
Viscosity, cps	Brookfield Viscometer	10,000-15,000
Tensile Strength at 14 days, mpa	ASTM D2370	0.50
Elongation at 14 days, %	ASTM D2370	200
Hardness at 14 days	Shore A	70 - 75
Adhesion Strength, mpa	ASTM D4541	1.5
Permeability	ASTM E398	Pass
Curing Time at 25 oC, hrs	Internal	Approx 6
UV Resistance	ASTM D822	Excellent

**USAGE**

- Slopes
- Roofs
- domes
- Any complex geometry walls and facades

**ADVANTAGES**

- Very good UV resistance
- Excellent waterproofing properties
- Long durability and good elongation
- Easy application by brush / roller / spray

**VITCON 2009 RAINKOTE***Impregnated Coating***DESCRIPTION**

VITCON 2009 RAINKOTE is a polymer based liquid. On application with simple brush or spray VITCON 2009 RAINKOTE forms a thin elastomeric film covering all hidden cracks and porosity and shielding the wall from penetrating of water for several years. is unaffected by U.V. radiation ensuring longer life. Though the film formed by this material is vapour permeable, but no water can penetrate through the film - essential requirement of any exterior coating. The film keeps fungi & algae away for few years. VITCON 2009 RAINKOTE has a very good penetrating ability.

**APPLICATION**

Remove all loose particles, dust, growing moss and debris from the surface. Wet the surface by spraying water & dry it. Coat the material either by spray or brush. Dipping process is ideal for impregnating bricks, roofing tiles. After coating or dipping a minimum 6-8 hour drying time is required. Within this period no water should come in contact with coated surface. To ensure better water proofing, 24 hours drying time is recommended.

**SPECIFICATIONS**

Appearance : Colourless liquid  
 Sp. Gravity : **1.01 ± 0.02**  
 pH Value : 8 - 9  
 Chloride content : Nil  
 Shelf life : 12 months  
 Storage : Under shade

**DOSAGE / USAGE**

- ✓ Plastered surface : **18-20 Sq.Mtr. per liter**
- ✓ Strongly absorbent bricks : **8-10 Sq.Mtr. per liter**
- ✓ Concrete surface : **45-50 Sq.Mtr. per liter**

**PACKAGING** : 35kg, 50kg and 240kg HDPE Drums.

**SAFETY**

VITCON 2009 RAINKOTE is non-toxic, non-flammable and non hazardous. However, any splash on the human body should be washed out immediately with plenty of water. Local exhaust is recommended for enclosed area.



**VITCON 900 PSF****Polypropylene Synthetic Fibre****DESCRIPTION**

VITCON 900 PSF is a monofilament polypropylene synthetic fibre with special chemical treatment to ensure uniform dispersion in cement/concrete/mortar (plaster) that complies with ASTM C 1116, European standard specification for fibre reinforced concrete and shotcrete.

**TECHNICAL DATA**

Absorption	Nil
Salt Resistance	High
Acid Resistance	High
Alkali Resistance	Full

**TECHNICAL DATA**

- Roof slabs, floor slabs, toilet floor slabs, bathrooms, utility areas & kitchens
- Internal and external plaster
- Basement waterproofing
- Shotcrete & gunite
- Industrial and warehouse flooring
- Deep lift walls
- Rafts
- Overlays toppings
- Concrete tanks & roads

**ADVANTAGES**

- Reinforcement against shrinkage and intrinsic cracking
- Control and mitigates plastic shrinkage cracking in concrete
- Reduces permeability of plaster, thus protects interior paints
- Decreases risk of plastic settlement cracking over re-bar
- Reduces need to water proof plaster, pressure grouting
- Increases surface durability, impact and abrasion resistance
- Makes hardened concrete more tough
- Improves speed and finishing of plasters
- Reduces site labour requirement
- Reduces project costs

**MIXING PROCESS**

- Add VITCON 900 PSF to concrete and mix for 3 - 5 minutes to provide uniform distribution
- For broomed surfaces, broom one in one direction only

**DOSAGE**

Normal for Plaster 100 g/50 kg bag of cement and for concrete, 0.9 - 1.8 kg/m<sup>3</sup> of concrete or at 125 g/50 kg bag of cement for most applications.

**HEALTH & SAFETY**

Contact with concrete may cause irritation, dermatitis or severe alkali burns. There is serious risk of damage to the eyes. Wear suitable waterproof protective clothing, gloves and eye/face protection. In case of contact with eyes, rinse immediately with plenty of clean water and seek medical advice. After contact with skin, wash immediately with plenty of clean water.

**STORAGE**

Must be stored in original packing at ambient temperature, dry place under shed.



## VITCON 2010 SB

### Solvent Based Water Repellent

#### DESCRIPTION

VITCON 2010 SB is a solvent based liquid compound, which penetrates the pores of, treated materials and provides a durable, invisible and highly effective water repellent film.

It is based on silane / siloxane. VITCON 2010 SB generally dries tack free in two to four hrs. It protects masonry surfaces from moisture absorption, dirt and dust. It waterproofs the plaster and resists the growth of fungus on it.

#### TECHNICAL DATA

Colour	Colourless liquid
pH	3 - 6
Specific Gravity	1.03 ± 0.02

#### AREA OF APPLICATION

- To treat above ground masonry surfaces such as bricks, concrete, mortar, stucco etc.
- For interior use, treating the joints of tile surfaces subject to contact with water such as school corridors or washrooms
- On stone surfaces, cladding on exteriors of buildings, concrete panels and all calcareous building materials
- For treating plaster, granite or acoustical concrete per litre and other insulation and in plant treatment of masonry units
- To treat cement painted or sand textured surface painted plaster on outside walls

#### ADVANTAGES

- Invisible or transparent
- Good depth of penetration
- High alkaline resistance
- Strong water repellent characteristics
- Tack free drying
- Effective even on damp substrates
- Reduces cracking and deterioration
- Good depth of penetration
- Keeps masonry clean and anti fungus
- Protects costly exteriors for a long period

#### APPLICATION METHODOLOGY

Cracks and open joints must be tuck-pointed and all loose particles, dirt, greases and wax removed from the surface. VITCON 2010 SB solution will not cover structural defects or bridge cracks.

Should be applied in one liberal coat to dry surfaces only. For best results three days should be lapse after a heavy rain and application should not be made if rain is expected within the next six hours. Either apply by brush or spray.

#### COVERAGE RATE

One litre of VITCON 2010 SB will cover 5 – 6 sqm area depending on the porosity of the surface.

#### PRECAUTION

Exceptionally porous material such as blocks should be filled with slurry of Portland cement before treating with VITCON 2010 SB on very dense surfaces such as hard burned or glazed brick or tile where the run down is too rapid. The coverage should be extended and two coats applied in immediate succession. Protect shrub, grass and other vegetation from VITCON 2010 SB solution.

#### ENGINEERING DATA

##### Water Absorption of Treated Masonry

##### Percent water absorption

Masonry Material	Exposure Hours	Untreated	Treated
Common Brick	24	16.37	00
Common Bricks	168	16.94	0.01
Mortar Cubes	72	9.05	0.65
Indiana Limestone	72	3.77	0.16

All sample given a five second dip in VITCON 2010 SB cured for 40 hrs and then immersed in 1/4 water.

#### ARCHITECTURAL SPECIFICATIONS

All exterior masonry surfaces shall be damp proofed and made water repellent with VITCON 2010 SB. It shall be applied in one copious application in strict accordance with directions of the manufacturer, Polygon Chemicals Private Limited.

#### HEALTH & SAFETY

VITCON 2010 SB is non toxic, nonflammable and non hazardous material. However any splash on the skin should be washed immediately with plenty of water.



**APPLICATION METHODOLOGY**

Cracks and open joints must be tuck-pointed and all loose particles, dirt, greases and wax removed from the surface. VITCON 2010 WB solution will not cover structural defects or bridge cracks.

Should be applied in one liberal coat to dry surfaces only. For best results three days should be lapse after a heavy rain and application should not be made if rain is expected within the next six hours. Either apply by brush or spray.

**COVERAGE RATE**

One litre of VITCON 2010 WB will cover 6 – 7 sqm area depending on the porosity of the surface.

**PRECAUTION**

Exceptionally porous material such as blocks should be filled with slurry of Portland cement before treating with VITCON 2010 WB on very dense surfaces such as hard burned or glazed brick or tile where the run down is too rapid. The coverage should be extended and two coats applied in immediate succession.

**ENGINEERING DATA**

**Water Absorption of Treated Masonry**

**Percent water absorption**

<u>Masonry Material</u>	<u>Exposure Hours</u>	<u>Untreated</u>	<u>Treated</u>
Common Brick	24	16.37	00
Common Bricks	168	16.94	0.02
Mortar Cubes	72	9.05	0.66
Indiana Limestone	72	3.77	0.18

All sample given a five second dip in VITCON 2010 WB cured for 45 hrs and then immersed in 1/4 water.

**ARCHITECTURAL SPECIFICAIONS**

All exterior masonry surfaces shall be damp proofed and made water repellent with VITCON 2010 WB. It shall be applied in one copious application in strict accordance with directions of the manufacturer, Polygon Chemicals Private Limited.

**HEALTH & SAFETY**

VITCON 2010 WB is non toxic, nonflammable and non hazardous material. However any splash on the skin should be washed immediately with plenty of water.

**PACKAGING**

Available in 5 litre 20 litre. Bulk packing is available on request.

**STORAGE**

Must be stored in original packing at ambient temperature, dry place under shed. The containers must be protected from direct sunlight. The best use before end date of each batch appears on the product label.

**SHELF LIFE**

6 months from the date of manufacture in the original sealed container at ambient temperature.

## VITCON SEALANT 9003 PG (GUN GRADE / POURING GRADE)

*Polysulphide Sealant*

### DESCRIPTION

**VITCON SEALANT 9003 PG** are two component sealant based on THIOKOL Polysulphide liquid elastomer. It consists of a 'base' compound and accelerator (curing agent). When two component are mixed together prior to application, a chemical reaction is initiated which cures insitu to a firm, flexible rubber like seal with excellent adhesion to concrete, masonry, wood, glass, acrylic and PVC plastics. It is capable of withstanding repeated extension, compression & cyclic movements without loss of adhesion and resists deterioration by weathering, sunlight, ozone, water, salt, oils and fuels. It is far superior to all the conventional joint sealant material like bitumen, mastics, metallic channels and expansion sheets. Gun Grade is exclusively used for water retaining structure or in vertical movement joints and pouring grade is rigid pavement or in horizontal movement joints.

### FEATURES / ADVANTAGES

- ✓ Cures at ambient temperatures to a tough, elastic and flexible rubber like material.
- ✓ Bonds strongly to most of the building material with the use of recommended primer.
- ✓ Durable, remains unaffected by UV rays, ozone and weathering conditions.
- ✓ Resist to water, salt water, 10% dil. acids except nitric acids, alkalies, most of the common chemicals, vegetable, lubricants, oils and fuels.
- ✓ It performs well in a temperature range from -40°C to 80°C intermittent.
- ✓ Slip resistant (sag) can be applied in a horizontal joints.
- ✓ Movement capability - Provides satisfactory hermetic sealing of the joint subjected to expansion, contraction, vibration and cyclic movement within the following limits.  
Movement joints upto + 25% of the width.
- ✓ Resilient recovers the original width after expansion & contraction without the loosing the surface bond.

- ✓ Excellent repairability property.
- ✓ It can be overcoated by waterproofing compounds.
- ✓ Non toxic.
- ✓ Sealants will not cause staining to concrete masonry or stones.
- ✓ Fuel Resistance.
- ✓ Fire Resistance.

### TYPICAL APPLICATION

- ✓ Sealing of expansion, contraction & construction joints in structure such as,
- ✓ Concrete pavement, highways, runways, airfields, and petrol pumps.
- ✓ Areas, which are affected by fuel, oil, fire etc.
- ✓ Extreme temperature regions.
- ✓ Sealing of water retaining structure joints such as,
- ✓ Water tank, reservoir, aqua ducts, canals, culverts and water treatment plant.

### TYPICAL APPLICATION

Nature	: Two Component
Mixing Ratio	: 92:8
Consistency after mixing	: Flowable paste
Application time (pot life) at 30°C	: 1 - 2 hours
Initial setting time at 30° C	: 24 hours
Complete curing time, at 5° C	: 8 weeks
	at 15° C: 4 weeks
	at 25°C : 2 weeks
	at 30°C : 1 week
Colour-Base compound	: Black
Accelerator (curing compound)	: Dark brown to black
Mix compound	: Black
Sump (sag) resistance	: Sagging

### MECHANICAL PROPERTIES

- ✓ Tensile strength : 3-4 kg/cm<sup>2</sup>
- ✓ Peel strength (concrete) : 2 - 3 kg/cm<sup>2</sup>
- ✓ Hardness SHORE A : 19-22
- ✓ % Elongation : 300% minimum.
- ✓ Recovery : More than 90%
- ✓ Abrasion resistance : Excellent.
- ✓ Chemical and solvent resistance : Excellent.
- ✓ Flame resistance : Excellent.







## VITCON 9045 HARD TOP FLOOR

*Non-metallic Floor Top Hardener*

### DESCRIPTION

VITCON 9045 HARD TOP FLOOR a pre-packed readymade compound with hard granules of predetermined sizes. The physical characteristic of this mineral originated powder mix is to enhance the surface strength of concrete floors and also to impart abrasion resistance against traffic movement.

### ADVANTAGES

- ✓ Increases abrasion resistance of concrete.
- ✓ Enhances resistance against mechanical wear.
- ✓ Easily applicable by spreading over the green concrete.
- ✓ Increases coverage of the given mix quantity.
- ✓ Being non-metallic the product ensures a corrosion resistant hard floor.

### SPECIFICATIONS

Appearance	: Grayish powder.
Hardness	: 7 – 8 (as per Moh's scale)
Water Absorption	: 6.0 – 6.5 % (as per IS 1237)
Abrasion resistance	: ± 1.5 mm (as per IS 1237)
Packing	: 25/50 kg HDPE woven bags
Storage	: Away from moisture & heat
Shelf Life	: 6 months in unopened condition

### DOSAGE / USAGE

VITCON 9045 HARD TOP FLOOR is very suitable for making floors in industrial segment, warehouses, mechanical engineering workshops, precision engineering workshops, parking lots, and garages etc where hard and dust resistant floors are of importance.

### COVERAGE

VITCON 9045 HARD TOP FLOOR should be sprayed with a consumption of 3.5 to 5.5 kg per square meter depending upon the traffic movement and wear resistance required.

### APPLICATION

The preferable requirement of base concrete should be of M20 grade. The concrete should also be dense and homogeneous and well compacted to get a leveled finish.

After laying of fresh mix concrete on the floor, VITCON 9045 HARD TOP FLOOR powder should be sprayed on it at

a stage when a nail impression of 3-4 mm is obtained at a standard pressure. Spreading can be done by hand or by any mechanical spreader at the rate of 3.5 to 5.5 kg per square meter of the floor area. Observe until the mix has been properly moistened by surface water and then smooth out surface with mechanical trowel.

Dewatering of the surface before spreading gives a better result. But we have to ensure that dewatering should be done in a controlled way so that some amount of surface water is available to moisten VITCON 9045 HARD TOP FLOOR powder and also for final finishing.

The applied surface has to be wet-cured by putting moist gunny bags on the surface or by pooling water. A minimum curing period of 3 –10 days is required for best result.

**PACKAGING** : 25 kg. Bag.

### SAFETY

VITCON 9045 HARD TOP FLOOR is non-toxic, non-flammable and non hazardous. However, any splash on the human body should be washed out immediately with plenty of water.

## VITCON GROUT 2053 NSC

*General purpose, free flow, high strength, non-shrink, cementitious grout*

### DESCRIPTION

VITCON GROUT 2053 NSC is a ready to use dry cementitious powder admixed with polymer additives. On addition a controlled amount of free water, VITCON GROUT 2053 NSC produces a free flowing, non-shrink grout for gap thicknesses up to 100mm. The free flow grout exhibit a controlled expansion in the plastic state to counter balance shrinkage effect. Moreover, this also imparts a high strength at early and ultimate stages.

### ADVANTAGES

- ✓ Ready to use product without any hassle.
- ✓ Controlled expansion compensates plastic shrinkage and settlement.
- ✓ Ensures high early and ultimate strength.
- ✓ Chlorides free – no corrosion effect.
- ✓ Reduces permeability to ensure the durability of the hardened grout.
- ✓ Free flow- uniform level of contact with load bearing area.

### DOSAGE / USAGE

VITCON GROUT 2053 NSC is normally used for general purpose grouting where a W/P ratio of **0.15 to 0.16 is recommended**. For special purposes, the W/P can be varied up to 0.14 and 0.18 respectively. But it is always recommended to make trial mix before making actual application at site to optimize the consumption of water.

**For injection grout :** 0.5-2% by weight of dry cement the optimum dosage depends on nature of work.

### APPLICATIONS

#### Surface Preparation :

The substrate – foundation or base plate - must be free from oil, grease or any loosely adherent material. For any defects, it must be cut back to a sound base without any holes. Boltholes and fixing pockets must be blown clean of any dirt or debris.

For base plates, air pressure relief holes should be provided to allow venting of any isolated high spots.

For injection grout VITCON GROUT 2053 NSC is admixed with wet cement milk of suitable consistency and injected under pressure by positive displacement pump through nozzles.

#### Pre-soaking :

The area to be grouted must be cleaned and flooded with enough water. The surplus water should be removed immediately before grouting.

### Formwork :

The formwork must be watertight by using foam rubber strip or mastic sealant beneath the constructed formwork and between joints. But this should ensure to include outlets for pre-soaking.

### Mixing :

The powder grout should be mixed with requisite water with a mechanical grout mixer. a slow speed drill fitted with a high shear mixer is suitable up to 50 kg quantity. For larger quantities, a high shear vane mixer is recommended.

First, premeasured water should be added into the mixer. Then, powder should be slowly added with a continuous mixing. The mixing should take place for a minimum 5 minutes to ensure a smooth even consistency.

### Placing :

The mixed grout should be placed within 15 to 20 minutes of mixing to get an effective expansion.

VITCON GROUT 2053 NSC is recommended for a single pour thickness of maximum 100 mm when used as an underplate grout. For higher thickness, VITCON GROUT 2053 NSC should be mixed with graded aggregates to reduce generation of heat. Typically 10 mm aggregate at a ratio of 50-100% by weight of VITCON GROUT 2053 NSC can be added.

For grouting base plates, bolt pockets must be grouted prior to grouting between the substrate and the base plate.

Pouring of grout should be continuous without any gap to reduce cold joints.

### Curing :

After the completion of pouring of liquid grout, all the exposed areas should be thoroughly cured either with wet hessian cloth or VITCON 2021 WB, a concrete curing compound.

### Cleaning :

All the tools and equipments used for grouting with VITCON GROUT 2053 NSC should be cleaned from with fresh water immediately after use.

**PACKING :** 25 kg. Plastic or Paper Bags.

### **SAFETY**

VITCON GROUT 2053 NSC is should not come into contact with skin and eyes. Avoid inhalation of dust during mixing. It is advised for any contact with skin, wash with plenty of water.

**VITCON GROUT 2052 N**

Normal Free Flow Non-Shrink High Strength Grout

**DESCRIPTION**

VITCON 2052 N is normal free flow non-shrink grout specially designed for use where high strength and normal fluidity is required. It is formulated as a natural aggregate system with a shrinkage compensating binder and is flowable without sacrificing strength or performance capabilities. VITCON GROUT 2052 N is formulated to provide consistency and exacting performance in critical grouting operations. This also can be used as a repair product in various types of application in the projects.

**TECHNICAL DATA**

Colour	Grey
Form	Powder
Flow Rate	10 - 15 cms
Pot Life (Workability)	50 - 60 min.

**APPLICATION**

- Heavy duty grouting of machinery and equipment
- Bridge seats
- Structural Columns
- Bending plates
- Crane rails
- Anchorages

**ADVANTAGES**

- Highly fluid and extremely placeable for easy field use
- High strength for maximum load bearing
- Non-shrink with minimum positive expansion for high tolerance performance
- Non bleeding and non segregating at a fluid consistency
- Does not contain any chlorides or additives which may contribute to corrosion of base structure
- Rapid strength gain to minimize turn around time for equipment regrouts
- Total shrinkage compensation, which provided a maximum bearing surface for the greatest overall support
- Excellent working time at high ambient temperatures.

**APPLICATION METHODOLOGY**

- Ensure that concrete surface is clean, sound, rough and is free from any standing water, oil, dirt, debris, paint, unsound concrete or other contaminants.
- Ensure that surface temperature and ambient temperature is not < 5oC and > 40 oC.
- As a precautionary measure, remove all residue with a vacuum cleaner or pressure washing.
- Pre-soak the pit to be grouted with water to ensure a saturated surface during the grouting process.
- Mix 25 kg VITCON GROUT 2052 N with 3.75 Litre of water. Where grouting is to be done for deeper thickness (Bolt pocket grouting), add about 9 - 10 kg of pea gravel per 25 kg of VITCON GROUT 2052 N.
- Use requisite of water to achieve desired flow level of VITCON GROUT 2052 N. Do not add excess water as this may be lead to bleeding and segregation. Do not add sand/cement to VITCON GROUT 2052 N as this may change its properties.
- Pour grout immediately after mixing from the one side into a watertight shuttering around the machine basement/structure. Ensure that the air dispensed by pouring grout escapes and air entrapment is avoided. The grouting should be continuous and maintain sufficient pressure head to keep grout flowing.
- When grouting base plate, pour grout into the head box and allow to flow under the plate. Straps pre-placed under the plate will aid in working the grout across. Grout should be placed at minimum of 25 mm thick and a maximum of 150 mm per lift when placed in a large mass.
- Bring all VITCON GROUT 2052 N materials as well as foundation and base plate as close to room temperature as possible. Cold temperature will significantly reduce flow characteristics and will enhance difficulty of base plate grouting. Higher temperature will increase initial flow but cut down in working time.
- Ensure proper curing of VITCON 2052 N to achieve optimal durability/performance of grout. Wet cure the grout until forms are stripped. Then cure the grout with high solid curing compounds such as VITCON 9021 AB.









**VITCON 9013 AFS***Alkali Free Accelerator for Dry Shotcrete***DESCRIPTION**

VITCON 9013 AFS is an alkali free accelerator for dry shotcrete mix. The shotcrete mix containing VITCON 9013 AFS reduces further effects of alkali on concrete. The shotcrete mix with VITCON 9013 AFS is highly cohesive and can be shot on any surface.

**ADVANTAGES**

- ✓ Alkali free.
- ✓ Reduces rebound losses and wastages.
- ✓ Induces higher compressive strength.
- ✓ Increases productivity of the shotcrete operation.
- ✓ Increases coverage of the given mix quantity.

**DOSAGE / USAGE**

VITCON 9013 AFS is added to the dry shotcrete mix containing cement and aggregates at a ratio **2 to 6% by weight of cement**. The dry mix should be thorough and uniform before addition of water to the system at the nozzle point.

Initial setting Time : 2 to 6 minutes  
Final Setting Time : 25 to 40 minutes

The above results are variable with cement type, grade, aggregate quality, and climatic conditions and also with dosage of VITCON 9013 AFS.

**APPLICATION**

VITCON 9013 AFS is added to dry shotcrete mix containing cement and aggregates as per grading and strength required. Water is added at the nozzle point ensuring a cohesive mix formation. The increased cohesiveness reduces the rebound losses and ensures faster setting. Moreover, VITCON 9013 AFS enhances the compressive strength of hardened shotcrete and improves surface texture and durability.

**SPECIFICATION**

Appearance : Off White powder  
Bulk Density : **1.6 ± 0.2 g / cc**  
Chloride content : Nil  
Shelf life : 6 - 12 months  
Storage : Under shade

**PACKAGING** : 25 kg. Bags.

**SAFETY**

VITCON 9013 AFS is non-toxic and non-flammable. However, any contact with human body must be washed with plenty of water.

**VITCON 9013 SPA***Powder Accelerator for Dry Shotcrete***DESCRIPTION**

VITCON 9013 SPA is a light grey powder accelerator for dry shotcrete mix. As soon as the shotcrete mix containing VITCON 9013 SPA comes in contact with water at the gun nozzle, water is added to it. The mix with VITCON 9013 SPA becomes highly cohesive and can be evenly shot on any surface.

**ADVANTAGES**

- ✓ Increases cohesiveness of the mix
- ✓ Reduces rebound losses and wastages.
- ✓ Accelerates the setting time.
- ✓ Increases productivity of the shotcrete operation.

**DOSAGE / USAGE**

VITCON 9013 SPA is normally added to the dry mix containing cement and aggregates at a **ratio 2 to 6% by weight of cement**. The powder mix has to be ensured a thorough and uniform before addition of water to the system.

Initial setting Time : 2 to 5 minutes  
Final Setting Time : 25 to 40 minutes

The above results are variable with cement type, grade, aggregate quality, climatic conditions and also with dosage of VITCON 9013 SPA.

**APPLICATION**

VITCON 9013 SPA is added to dry shotcrete mix. Normally water is added at the gun point ensuring a cohesive mix formation. The increased cohesiveness also reduces the rebound losses. Moreover, it enhances the compressive strength of hardened shotcrete and improves its surface texture and durability.

**SPECIFICATIONS**

Appearance : Light grey powder  
Bulk Density : **1.6 ± 0.2 g / cc**  
Chloride content : Nil  
Shelf life : 6-12 months  
Storage : Under shade

**PACKAGING** : 25 kg. Bags.

**SAFETY**

VITCON 9013 SPA is non-toxic and non-flammable. However, any contact with human body must be washed with plenty of water.

**VITCON 9013 LSA***Liquid Set Accelerator for Shotcrete*

**DESCRIPTION :** VITCON 9013 LSA is a liquid set accelerator used to produce shotcrete. The product has a multiple applications like acceleration in setting, increasing workability at low W/C ratios and improving cohesion to the surface. VITCON 9013 LSA is chloride free and made up of polymers compatible with all shotcrete mix designs in any part of the country.

**ADVANTAGES :** Shotcrete with VITCON 9013 LSA sets in 2-3 minutes depending upon the dosage, thus ensuring the shotcrete quickly secured in place.

- ✓ Increase cohesiveness of shotcrete to the substrate on addition of VITCON 9013 LSA restricts the rebound losses in shotcreting to less than 6%.
- ✓ VITCON 9013 LSA helps in achieving thicker layer of shotcrete in single shot operation there by enabling more shotcreting in lesser time.
- ✓ Reduced rebound wastage, increased productivity and reduced direct placing costs contribute heavily to achieve economics.

**DOSAGE / USAGE :** VITCON 9013 LSA is generally dosed @ **2-6% by weight of cement directly at shotcreting water pump**. It is always advisable to conduct site trials to optimize the dosage. VITCON 9013 LSA is compatible with our VITCON range of superplasticizer, which are added to the shotcrete for slump retention.

**APPLICATION :** As VITCON 9013 LSA is dosed at the shotcrete gun nozzle in the wet shotcreting process, it immediately accelerates the shotcrete setting and aids in forming an even layer on the surface with or without steel reinforcement. At the same time it enhances the hardening thus giving high early strength it reduces rebound losses thereby helping techno-economics.

**SPECIFICATIONS :**

Appearance	: Milky white liquid
Sp. Gravity	: <b>1.20 ± 0.02</b>
pH Value	: 10 - 12
Chloride content	: Nil
Air content	: < 1%
Shelf life	: 12 months
Storage	: Under shade

**PACKAGING :** 35 / 100 / 200 Kg. Drums.

**SAFETY :** VITCON 9013 LSA is non-flammable. However, any splash should be washed out immediately with water.

**VITCON 2023 PRIMER SB***Solvent Base Bituminous Primer***DESCRIPTION**

VITCON 2023 Primer SB is a cold applied bituminous primer, which can be applied either by brush or spray.

**DOSAGE / USAGE**

VITCON 2023 Primer SB is conventionally used as a primer on steel and concrete substrate before applying torch-bond membranes. It provides excellent adhesion to concrete and improves bond between base surface and subsequent overcoats.

**ADVANTAGES**

- ✓ Economical and easy availability.
- ✓ Excellent resistance to corrosion elements.
- ✓ Sufficient pot life.
- ✓ Easy application - Single component.

**TECHNICAL DATA**

Viscosity (in Ford Cup. No.4, at 25°C):	20 ± 2 Second
Specific Gravity (at 25°C)	: <b>1.10 ± 0.10</b>
Superficial drying time (at 25°C)	: 120 Minutes
Complete Drying time (at 25°C)	: 24-36 Hours
Finish Appearance	: Semi-gloss
Dry Film Thickness	: 100-150Micron

**APPLICATION METHOD**

VITCON 2023 PRIMER SB is to be applied by brush roller or spray without adding any thinner. VITCON 2023 PRIMER SB is generally consumed at 200 to 400 gm/m<sup>2</sup> depending on porosity of concrete.

**TECHNICAL RECOMMENDATION**

Before applying the primer stir it or shake it. Do not dilute product by any thinner, which may cause alteration in product consistency.

**PACKING :** 20 Kg. Metal Cans.

**STORAGE**

Keep in cool places and airtight containers.

**SAFETY PRECAUTIONS**

Avoid direct contact with skin. If there is any splash in body, wash with mild soap and plenty of water and take medical attention immediately.

## VITCON 7001 ANCHOR C

*Non-shrink Cementitious Anchor Capsule*

### DESCRIPTION

VITCON 7001 ANCHOR C is a ready to use cementitious powder base anchoring capsule with a perforated skin. VITCON 7001 ANCHOR C imparts controlled expansion characteristics stabilising the grout system to achieve high early strength. VITCON 7001 ANCHOR C is mostly used for fixing of steel rock bolts or wooden dowels to control rock strata during tunnelling and mining.

### ADVANTAGES

- ✓ Ready-made dry capsule - easy to apply.
- ✓ Non-shrink - reduces development of cracks and ensures effective contact.
- ✓ Chloride free.
- ✓ Thixotropic property reduces loss of grout during overhead applications.

### APPLICATION

- ✓ Drill the hole up to desired depth and diameter as per specification.
- ✓ A thorough cleaning of the hole with compressed air and / or water and bottlebrush to ensure sound surface before application.
- ✓ Before application, the capsule is submerged in water for a minimum of 3 minutes to allow sufficient water to be absorbed through perforated skin ensuring the formation of non-shrink thixotropic grout. Water submerging is ensured when there is release of air bubble from the capsule.
- ✓ Remove extra water from the surface of the capsule and insert calculated number of wet capsules till the depth of hole. The insertion is ensured with the help of a stemming rod or similar items.
- ✓ The rock bolt or dowel is inserted and pushed to the bottom of the hole with the aid of a rotator machine.
- ✓ Rotation is recommended at a speed of 150-400 rpm.
- ✓ Detach drill from spinning adaptor.
- ✓ Remove adapter.

### SPECIFICATIONS

Appearance : Perforated Cartridge  
Shelf life : 3 months  
Storage : Under shade and away from moisture

### PACKAGING : Available Dimensions

- ✓ 25 mm diameter X 300 / 450 / 500 mm length
- ✓ 32 mm diameter X 250 / 300 mm length

**SAFETY :** VITCON 7001 ANCHOR C is non-toxic, non-flammable and non hazardous. However, any splash on the human body should be washed out immediately with plenty of water.

## VITCON 7002 ANCHOR R

*Rock Anchoring Resin Capsule*

### DESCRIPTION

VITCON 7002 ANCHOR R is a ready to use polyester resin based anchoring capsule with measured proportion of catalyst and non-reactive filler. VITCON 7002 ANCHOR R provides a unique method of anchoring bolts into rock or concrete, used during tunnelling for rock stabilization.

### ADVANTAGES

- ✓ Ready to use product.
- ✓ Fast development of strength.
- ✓ Easy to apply with permanent anchorage.
- ✓ Resists natural and atmospheric effects.

### APPLICATION

- ✓ Drill the hole up to desired depth and diameter as per specification.
- ✓ A thorough cleaning of the hole with compressed air and / or water and bottlebrush to ensure sound surface before application.
- ✓ Insert calculated number of capsules till the depth of hole.
- ✓ The bolt is attached to rotator machine through a spinning adaptor and rotated progressively through capsules until bottom of the hole is reached.
- ✓ Rotation is recommended for at least two to three seconds at a speed of 150-250 rpm.
- ✓ Detach drill from spinning adaptor.
- ✓ Leave the bolt undisturbed until resin gets set totally.
- ✓ Remove adapter.

### SPECIFICATIONS

Appearance : Cartridge  
Gel Time : 2 to 3 minutes at 30° C  
Tensile Strength : 50 N/sq. mm.  
Compressive Strength : 110 N/sq. mm.  
Shelf life : 3 months  
Storage : Under shade and away from moisture

### PACKAGING : Available Dimensions

- ✓ 25 mm diameter X 300 / 450 / 500 mm length
- ✓ 32 mm diameter X 250 / 300 mm length
- ✓ 38 mm diameter X 300 mm length
- ✓ 40 mm diameter X 300 mm length

**SAFETY :** VITCON 7002 ANCHOR R is non-toxic, non-flammable and non hazardous. However, any splash on the human body should be washed out immediately with plenty of water.

**VITCON 14001 MEM***Polymer Modified Bitumen Membrane***DESCRIPTION**

VITCON 14001 MEM is a pre-fabricated polymer modified bitumen membrane designed for economy and easy applications. VITCON 14001 MEM has two different types one is reinforced with non-woven polyester fabric names as VITCON 14001 MEM "P" and second one is reinforced with a glass fiber mat named as VITCON 14001 MEM "G". The reinforcement is impregnated and coated on both sides with polymer-modified bitumen.

**DOSAGE / USAGE**

VITCON 14001 MEM is ideal for a wide range of waterproofing applications including roofs, basements, tunnels, car parks and reservoirs.

**ADVANTAGES**

- ✓ Total impermeability.
- ✓ Good bond ability & seam integrity.
- ✓ Stability at high temperature.
- ✓ Good flexibility.
- ✓ Compatible with all normal roofing and building components.

**APPLICATION**

VITCON 14001 MEM is installed by torch welding method, loose-laid or fully bonded to substrate. When loose-laid, only laps are bonded together. Peripheries and protrusions are sealed according to specifications.

**COVERAGE (Approx.)**

- Flat Areas : **1.15 m<sup>2</sup> / m<sup>2</sup> per layer with 10 cm side laps and 15 cm end laps.**
- Base Flashing : **100 x 35 cm with 15 cm end laps; 0.40 m<sup>2</sup> per Linear M.**

Coverage may vary as per site requirement with an average wastage factor of 3 to 5 %.

**TORCHING GUIDELINES**

The underside of the membrane should be torched just enough to superficially melt the bitumen. Excessive heating may damage the reinforcement.

Overlaps should be re-heated from the top and resealed with a trowel to ensure seam integrity.

**GENERAL DATA**

- Nominal Roll Length : 10 M  
 Nominal Roll Width : 1 M  
 Nominal Thickness : 3, 4, 5 mm  
 Reinforcement : Non-woven polyester / Glass fiber mat

**FINISHES**

VITCON 14001 MEMB is available in two basic finishes :

- ✓ Black smooth finish with polyethylene surfaces for covered applications.
- ✓ Granule surfacing for exposed applications.

**INSTALLATION TOOLS**

Gas torch, Knife, Trowel, Measuring tape, Marking string, Gloves.

**TECHNICAL SPECIFICATION**

Property	Typical Value		Test Method
	14001 MEMB-P	14001 MEMB-G	
Reinforcement	Polyester	Glass Fiber	
Softening point °C	150	150	ASTM D 36
Penetration @ 25°C dmm	20	20	ASTM D 5
Tensile strength, L/T, N/5 CM @ 23°C	650 / 450	350 / 300	ASTM D 5147
Elongation, L/T, %@23°C	40 / 45	3.0 / 3.3	ASTM D 5147
Tear strength, L/T, N	300 / 250	60 / 80	ASTM D 5147
Heat resistance, @ 80°C	No flow	No flow	ASTM D 5147
Cold flexibility, °C	0-(-2)	0-(-2)	ASTM D 5147
Lap joint strength L/T, N5 M @ 23°C	650 / 450	350 / 300	CGSB-37-GP-56M



**VITCON 150 EFC***Two Component High Solids Epoxy Floor Coating***DESCRIPTION**

VITCON 150 EFC is a high build Epoxy floor coating with high resistance to abrasion and provides dust free floor surface. The cured surface is hard and gives smooth finish. VITCON 150 EFC provides joint less, monolithic, smooth, nonporous and hygienic floor, which is easy to clean and maintain. It has excellent resistance to abrasion. It cures to give a semi gloss finish.

**TECHNICAL DATA**

Pot Life at 30 oC	3.30 - 4 hrs	Time between coats	8 – 12 hrs
Adhesion to concrete	Excellent	Tack free time	4 – 6 hrs
Water absorption	Nil	DFT	200 μ
Curing Time			
Foot Traffic	24 hrs	Coverage gms / sqm	300 in two coats
Vehicle Traffic	72 hrs		
Full cure	7 days		

VITCON 150 EFC resists Citric Acid 10%, Hydrochloric Acid 10%, Lactic Acid 10% and Sulphuric Acid 10%

**APPLICATIONS**

- Area requiring hygienic monolithic floor like pharmaceutical industries, operation theatres & corridors in hospitals and nursing homes, laboratories, bottling plants, dairies, breweries, fermentation floors in tea garden, food processing – fisheries, meat processing and pickles etc.
- Nuclear plants, control panel rooms and computers
- Industries mainly electric and electronic industries, picture tube manufacturing plants, textile mills, portable water and food storage
- Oil rigs
- Automobile workshops

**ADVANTAGES**

- Prevents bacterial growth
- Easy to clean
- Provides smooth monolithic surface when used on metallic surface and simultaneously prevents corrosion.

**APPLICATION METHODOLOGY**

- VITCON 150 EFC should be applied only if the moisture content of the floor is below 5% when applied over concrete, the surface must be sound, free from dust, laitance and other contaminants
- For best bond, concrete surface must be textured by shot blasting / scarifying
- Remove oil and greases by washing with liquid detergent followed by acid wash or by burning
- Allow the floor to dry before priming
- Remove old painting using surface grinder
- Well prepared surface should be primed by brush or roller using VITCON EPOXY PRIMER at a rate of 250 gms per sqm.
- Allow the primer to dry for 6 – 8 hrs
- Stir the Component A and Component B separately. If setting is observed in the Component A, loosen the settled material with the help of hand stirrer followed by power driven stirrer for quick homogenous mixing. Mix hardener gradually into the base under continuous stirring
- After mixing apply VITCON 150 EFC by brush or roller to the required thickness on the dried primer
- VITCON 150 EFC is a high build coating. It is advisable to apply two coats at right angles to each other. This way the second coat will cover any blemishes of the first coat. Allow first coat to become tack free before the second coat is applied. Generally second coat is applied after overnight curing of first coat.

**LIMITATIONS**

- Do not apply VITCON 150 EFC on surfaces known to, or likely to, suffer from rising dampness, potential osmosis problems or having relative humidity greater than 75%
- Do not apply VITCON 150 EFC to asphalt, weak or infirm concrete, unmodified sand / cement / screeds, PVC tiles or sheets or substrates known to move substantially e.g. steel walkways. Do not apply VITCON 150 EFC at temperature < 10 oC or > 45 oC
- In common with all epoxy materials some light shade changes may be experienced over the long term when placed in adverse exposure conditions. Any such change in shade is not regarded as being detrimental to performance.



