



# RAZON

## VTNB A-1 ( Superplasticizer for manufacture of dry mix concrete products)

In cement mortar cast concrete products the mortar which is of low water cement ratio (dry mix) is compacted by high frequency vibration or by high pressure.

Increase in water proportion is deleterious and hence the water cement ratio needs to be finely balanced, so that sufficient strength is gained after vibration/pressure cycle. The green strength needs to be adequate for transportation into curing bay without breakage.

### Applications:

VTNB A-1 is specially designed for *manufacture of dry mix concrete* products such as pavers, bricks, concrete tiles, kerb stones, dividers, garden walls etc.

### Advantages of VTNB A-1

- 1.) **Workability:-** Improved workability improved flow, better compaction at low water cement ratios
- 2.) **Cohesion:-** Ensures homogenous concrete mix even in dry mix concretes, hence provides consistency in final product batches inspite of minor changes in raw materials.
- 3.) **Finish:-** Due to enhanced cohesiveness and better flow properties of concrete mortar, smooth surface finish is obtained, providing a more uniform first grade final product
- 4.) **Strength:-** Improved strength within 24 hours, 72 hours and 168 hours, Capable of providing 100% strength in 72 hours even at minimal water/mist curing.
- 5.) **Surface Imperfections:-** VTNB A-1 is designed to eliminate any type of surface imperfections like cracks, honeycombes

etc if at all, ensuring a first grade final product

- 6.) **Consistency:-** VTNB A-1 ensures consistency of final product inspite of small differences between batches.
- 7.) **Colored Concrete:-** The color efficiency is improved with use of VTNB A-1 and lower contents of colour may be used to obtain same effect.
- 8.) **Wastage and rejections:-** Reduced wastage, breakages and rejections between lots of manufactured products hence, improving production economy.
- 9.) Higher rapid strength enables lower lead time, enabling swift dispatch of finished product.

### Dosage & Method of use

Add cement, aggregates and water as per normal practice. Add 300 ml to 1200 ml VTNB A-1 per 100 kg cement. Mix mortar as usual.

The effect of VTNB A-1 is enhanced if it is added after 70% of the mixing has been added to the mortar. Do not add VTNB A-1 to dry mortar / aggregates.

Few trials are essential to determine aggregates, water and VTNB A-1 proportions for best results. The dosage will depend upon the environment, temperature and speed of rotation desired.

Overdosage will decrease the water requirement, modify or decrease the setting times and increase strength of the concrete at all ages. Concrete mixes with overdosage of VTNB A-1 must be cured properly.

## Cement compatibility and dosage:-

OPC: -0.3% - 1.2 % bwoc

PPC:- 0.35% - 1.2% bwoc

Slag Cement :- 0.4% – 1.2 % bwoc

## Standards

ASTM C-494 Type A

IS 9103

## Safety precautions

Due care should be taken during use and storage to avoid contact with eyes, mouth, skin and foodstuffs. If VTNB A-1 splatters into the eye, wash immediately with water and visit a doctor. Wash VTNB A-1 off with running water if it comes in contact with skin /clothes. Seek immediate medical attention if VTNB A-1 is accidentally swallowed and must be treated symptomatically. Keep away from children and animals. Reseal containers after use. For industrial use only. VTNB A-1 is not hazardous or toxic under normal circumstances

**Fire** VTNB A-1 is non flammable.

## Storage and Shelf life

VTNB A-1 must be stored in a cool dry place, preferably protected from sunlight. VTNB A-1 must not be exposed to temperatures below 5°C and above 50 °C. If the product freezes under climatic conditions, thaw and use a mechanical stirrer to homogenize the admixture. Do not use compressed air to mix the contents of VTNB A-1.

Failure to comply with the recommended storage conditions may result in premature deterioration of the product or packaging.

## Packing:

Available in 220 kg barrels, and tanker loads.

No.	PRODUCT DATA	
1	Colour	Clear free flowing fluid.
2	Specific Gravity	1.11-1.15
3	pH	Approx 7
4	Dosage	150 ml to 300ml per bag of cement, depending on mix design & vibration cycle.
5	Packing	220 kg export worthy barrels. Bulk packing available on request
6	Shelf life	12 months when stored in cool & dry place away from sunlight.
7	Cement Compatibility	O.P.C, P.P.C, G.G.B.S. cement.

## OTHER PRODUCTS

- Admixtures for Ready Mix Concrete
- Accelerators for precast concrete
- Mould release agents
- Colour enhancers for coloured concrete
- Glossy Lacquers for plain / colored concrete
- Concrete surface sealers and repellants
- “New / Wet look” coatings for concrete
- Anti Efflorescence admixtures for concrete
- Concrete densifiers and coloured coatings
- Superplasticizer for RCC pipes
- Admixtures for concrete sleepers, and poles
- Admixtures for precast concrete



## RAZON ENGINEERING COMPANY PRIVATE LIMITED

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AN ISO 9001:2008 ACCREDITED MANUFACTURER



It is strongly recommended that site trials be conducted using site conditions and available raw materials to evaluate the product. Since site materials and conditions are beyond our control and since above suggestions and recommendations are based on our site trials and laboratory product evaluation & trials, and since methods of use at site are beyond our control. Hence, no guarantee can either be implied or enforceable