



TECHNICAL DATA GUIDE - CONCRETE & CEMENT ADDITIVE

EZY CRETE

Mineral activated additive for cement & concrete

DESCRIPTION

EZY CRETE is a mineral activated powder product with various enzymes to induce cement and cementitious particles. These active chemicals react with the moisture in fresh concrete and with the by-products of cement hydration to cause a catalytic reaction, which form a zig zag tiny crystal between the cementitious materials to create better bonding. Thus, the concrete becomes permanently densified across all direction. The concrete is also protected from deterioration due to harsh environmental conditions. EZY CRETE has been specially formulated to meet varying project and temperature conditions

TYPICAL APPLICATIONS

- Mineral admixtures in Ready mix concrete
- Cement additive for OPC / PPC / Flyash / GGBFS
- Optimized cement content for economical mix design
- High performance concrete with low w/c ratio
- OPC/double mixes with M-sand/CRF/ both combinations with finer passing material of 150micron
- Ready mixed concrete with long hauls
- Pumped concrete / Mass concrete pours
- Pumped concrete of long placements on transit with TM
- Maintaining good cohesion of concrete rheology
- Maintain a constant workability and slump retention to aid placement with controlled bleed
- High density concrete to achieve lesser RCPT value

FEATURES AND BENEFITS

- Reduces incidence of plastic shrinkage cracks
- Reduces over all concrete mix cost
- Increases 7 & 28-days strength of concrete
- Enable to use higher flyash & GGBS in saline areas.
- Induces considerable strength gain even after 56 days...
- Outperforms in finer CRF mixes with extended slump
- Higher ultimate strength & durability, reduced curing time
- Aids adequate water reduction and heat reduction.
- Aids cohesion, enhances concrete rheology & eases pumping of concrete.
- Added to the concrete at the time of batching and therefore not subject to any climatic restraints.

PERFORMANCE TEST DATA / SPECIFICATION CLAUSE

Aspect	FREE Flowing white powder
Bulk density	1100kg/ m3
Chloride ion content	0.01
Moisture content % by mass (1.0 max)	0.05
IS	IS 16715

MECHANISM OF WORKING

EZY CRETE is a heterogeneous blend of oxides of calcium, silicon and aluminum with no deleterious impurities , works as a dispersant by preventing the flocculation of fine particles of cement. These dispersants are basically surface-active chemicals consisting of molecules, having hydrophilic group. The polar group in the chain gets adsorbed on the surface of the cement grains. The polar hydrophilic group at the tip projects outwards from the cement grain. The hydrophilic tip is able to reduce the surface tension of water and the adsorbed polymer keeps the cement particles apart by electrostatic repulsion. With the progress of hydration, the electrostatic charge diminishes and flocculation of hydrating product occurs.

DOSAGE AND DIRECTIONS FOR USE

Optimum dosage of **EZY CRETE** should be determined by trials. Normal dosages range between 0.6% - 2.0% by weight of total Cementitious material. Exact dosage rate depends on

- Quality & quantity of binders & W/C ratios
- Gradation of fine aggregates
- Ambient temperature

The correct quantity of **EZY CRETE** should be measured based on aggregates quality – You may use slump retaining retarder for slump retention – As per IS 4926 Clause 5.2.2





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EFFECTS OF OVER DOSE

A Severe overdose of **EZY CRETE** can result:

- Higher water demand and stiff mix with flash setting time based on the degree of overdose
- Sticky & powdered mix
- However, a slight overdose may not affect ultimate strength of concrete and can achieve higher strength than normal concrete

DOSING OF ADDITIVE

The sequence of procedures for addition will vary according to the type of batch plant operation and equipment. The following are some typical mixing guidelines. For more detailed information on dosing procedures, contact Step In representative.

Ready mix plant – DRY/ WET batch operation: Add **EZY PLAST** in powder form to the Pan mixer directly based on sequence of batching. For truck addition drive the truck under the batch plant and If required pre-mix the gauged powder with required water with thin slurry consistency, add the mixture inside the loaded ready-mix truck in accordance with standard batching practices.

Considering challenges at sites we have formulated this product for easy dispersion- it can be dosed directly during concrete batching at batching plant or it can be dosed at site too during unavoidable on transit concrete. These carefully selected components disperse well on low slump concrete and enhance the slump to workable condition. This polymer will not delay concrete retardation and ultimate strength and works adversely performs by offering ON TIME set and similar strength – please connect with STEP IN representative for further dosing assistance.

COMPATIBILITY

EZY CRETE is compatible to be used in combination with all superplasticizers confirms to IS 9103, accelerators, curing compounds, retarders, extended set control admixtures, corrosion inhibitors and shrinkage reducing admixtures.

WORKABILITY

EZY CRETE formulated with very minimal dosage compared to micro silica or other mineral admixtures. Hence it won't affect workability of concrete – workability loss is depending on mix, ambient temperature, cement type, aggregate absorption, and control slump of concrete.

It is advisable to design a minimum control slump or wet mix of 40mm slump to offer an optimized, economical and performing mix.

PACKING

EZY CRETE is supplied in 25 kg packets and 1 kg packs

STORAGE / SHELF LIFE

EZY CRETE should be stored in a shaded cool and dry place. Shelf life of **EZY CRETE** is 12 months from the date of manufacture if kept in unopened, undamaged, original sealed packaging and kept within the range of 10°C to 50°C.

Failure to comply with recommended storage may deteriorate the product or packing.

HEALTH & SAFETY

EZY CRETE is eco-friendly powder product, non-flammable and non-hazardous. However, it should not be swallowed or allowed to come into contact with eyes. Suitable protective gloves and goggles should be worn. Splashes on the skin should be removed with water. In case of contact with eyes rinse immediately with plenty of water and seek medical advice. If swallowed, seek medical attention immediately - do not induce vomiting. For further information refer to the material safety data sheet.

DISCLAIMER

The information given is based on data and knowledge considered to be true and accurate and is offered for the user's consideration, investigation and verification. Since the conditions of use are beyond our control we do not warrant the results to be obtained. Please read all statements, recommendations or suggestions in conjunction with our conditions of sale including those limiting warranties and remedies which apply to all goods supplied by us. No statement, recommendation or suggestion is intended for any use which would violate or infringe statutory obligations or any rights belonging to a third party. The use of this product is beyond the manufacturers control and liability is restricted to the replacement of material proven faulty. The manufacturer is not responsible for any loss or damage arising from incorrect usage. Specifications are subject to change.

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