



# MEHS Chem Industry

Constructing better tomorrow

## MEHS 4900PCE

High early strength, high range water reducing/superplasticising, admixture for precast concrete

### Description

**MEHS 4900PCE** is a unique combination of the latest generation superplasticisers based on a modified Polycarboxylic Ether (PCE) polymer with long lateral chains. The product has been primarily developed for applications in ready mix and site-batched concrete. **MEHS 4900PCE** combines the properties of water reduction and workability retention and also allows to produce high performance concrete.

### Uses

- **MEHS 4900PCE** is suitable for making precast concrete elements at all workability's including Rheoplastic or Super workable concrete having fluid consistence, no segregation, a low water cement ratio and consequently high early and long term strengths.
- **MEHS 4900PCE** may be used in combination with VMA (Viscosity Modifying Agent) for producing Rheodynamic concrete, capable of self-compaction, even in the presence of dense reinforcement without the aid of vibration, for making precast elements.
- As a component of Zero Energy System.
- Concreting in cold weather.
- Water reduction capacity is more than 30%.

### Advantages

- Achieve high early strengths.
- Produces Rheoplastic and Rheodynamic concretes having a low water cement ratio.

- Optimize curing cycles by reducing curing time or curing temperatures.
- Eliminate heat curing.
- Increase productivity/ reduction in cycle time.
- Improve surface appearance.
- Produce durable precast concrete elements.
- Improved engineering properties, compared to traditional superplasticiser such as early and ultimate compressive and flexural strengths, reduced shrinkage and low permeability.

### Technical Data

Color : Light Brown

Form : Liquid

Specific Gravity : 1.09±0.02 at 25° C

Salt Scaling Resistance : Excellent

Chloride Content : 0.0%

### Standard Compliance

**MEHS 4900PCE** complies with IS 9103 & EN 934-2. **MEHS 4900PCE** conforms to ASTM C-494 Type 'F'.

### Dosage

The optimum dosage is best determined by site trials with the concrete mix which enables the effects of workability, strength gain or cement reduction to be measured. As a guide, the rate of addition is generally in the range of 400 ml to 1200 ml per 100kg Cement. In high performance

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concrete a dosage upto 1800ml per 100kg of cementitious material can be added subject to prior site trials. For good quality workable concrete the ideal dose of **MEHS 4900PCE** lays from 0.7% to 1.2% by weight of cement used in the mix design.

### Over Dosing

An over dose of double the recommended amount of **MEHS 4900PCE** will result in very high workability and some retardation of setting time will occur. However, the ultimate compressive strength will not be impaired. Delay setting of Concrete may occur due to over dosing.

### Compatibility

**MEHS 4900PCE** is compatible with most admixtures used in the production of quality concrete including normal, other mid-range and high-range water-reducing admixtures, air entrainers, accelerators, retarders, extended set control admixtures, corrosion inhibitors, and shrinkage reducers and all types of Water Integral admixtures. **MEHS 4900PCE** is also compatible with slag and pozzolans such as fly ash, metakaolin and silica fume.

### Packaging

**MEHS 4900PCE** is supplied in 250kg drums.

### Shelf Life & Storage

**MEHS 4900PCE** has a minimum shelf life of 12 months from the date of manufacture when stored

under normal temperature. **MEHS 4900PCE** must be stored where temperatures do not drop below +5°C. If product has frozen, thaw at +5°C or above and completely reconstitute using mild mechanical agitation. Do not use pressurized air for agitation. Store under Failure to comply with the recommended storage conditions may result in premature deterioration of the product or packaging.

### Application

**MEHS 4900PCE** is a ready-to-use liquid which is dispensed into the concrete together with the mixing water. The plasticising effect and water reduction are higher if the admixture is added to the damp concrete after 50 to 70% of the mixing water has been added. The addition of **MEHS 4900PCE** to dry aggregate or cement is not recommended.

### Precautions

**MEHS 4900PCE** is Non Toxic & Non Flammable. As with all chemical products, care should be taken during use and storage to avoid contact with eyes, mouth, skin and food stuffs (which can also be tainted with vapour until product fully cured or dried). Treat splashes to eyes and skin immediately. If accidentally ingested, seek immediate medical attention. Keep away from children and animals. Reseal containers after use. Do not reuse containers for storage of consumable item.

**Disclaimer:** All recommendations, statements and technical data contained herein are based on tests we believe to be reliable and correct, MEHS Chem Industry warrants its products to be free of manufacturing defects and that, at the time and place of shipment, our material will meet current published physical properties when applied within MEHS directions and tested in MEHS standards. As MEHS has no control over the use to which others may put its products. Responsibility remains with the architect or engineer, contractor and owner for the design, applications and proper installation of each product. Nothing contained herein shall be construed to be a recommendation to use or as a license to operate under or to infringe any existing patents.

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