

# INNO-MIX FOX ADMENT PC FM301

## High Rate Water Reducer / New Generation Superplasticizer Admixture

### Description

**FOX ADMENT PC FM301** is a polycarboxylic ether based, new generation super plasticizer concrete admixture developed for the ready-mixed concrete and precast industry where high water reduction, prevention of loss of consistency in concrete, early and final high strength and durability (TS EN 206-1) is required.

### EN 934-2:2009+A1:2012

### Chart 3.1, 3.2 and 7:

### High Rate Water Reducing / Superplasticizer and Hardening Accelerating Concrete Admixture

### ASTM C 494 type F:

**It conforms to High Water Reducing Concrete Admixture standards.**

### Usage places

- Precast and prefabricated concrete production,
- In concrete where early strength is required in winter,
- On site concrete castings
- 18 - 24 hours and 28 days of high-strength concrete production,
- Self-compacting and compacting concrete production,
- Ready-mixed concrete without pump,
- It is used in the production of flowable consistency rheoplastic precast concrete elements without segregation.

### Advantages

- Compared with conventional super plasticizers (Naphthalene Sulphonate or Melamine Sulphonate), it further increases the early-final compressive and tensile strength, adherence and impermeability of the produced concrete to steel.
- Improves the mechanical properties of concrete such as carbonation, chlorine ion attack, resistance to aggressive chemicals, shrinkage and creep.
- Low water/cement ratio low decomposition risk, it can obtain reoplastic concrete.
- Enables early high strength concrete production even at low temperatures.
- Reduces pouring, compaction and curing time in prefabricated concrete production.
- Increases production efficiency.
- Particularly suitable for the prefabricated sector and ready-mixed concrete (slump protected) and on-site concrete mixtures,
- Self-compacting high quality concrete is obtained with the lowest water/cement ratio.
- Makes concrete impermeable,
- Homogeneous and cohesive concrete,
- Especially high early strength is obtained in concrete,
- Improves the surface appearance of precast concrete,
- Does not contain chlorine.

### Technical Specifications

|                           |            |   |   |
|---------------------------|------------|---|---|
| Structure of Material     |            | Polycarboxylic Ether Based  |   |
| Density                   |            | 1,10 gr/m <sup>3</sup>  |   |
| Color                     |            | Yellowish   |   |
| Chlorine Content          | EN 480-10  | <%0,1   |   |
| Alkaline Content          | EN 480-12  | <%3   |   |
| Water Reducer             |            | Control Mixture ≥12% Witness Sample   |   |
| Increase of Consistency   | EN 12350-5 | Increase of spreading ≥160 mm   |   |
| Protection of Consistency |            | The consistency of the mixture after 30 minutes is that of the initial consistency of the witness concrete should not fall below. |   |
| Resistance to Pressure    | EN 12390-3 | 1 day   | Control Mixture ≥140% Witness Sample      |
|                           |            | 2 days  | Control Mixture ≥130% Witness Sample/ 5°C |
|                           |            | 28 days   | Control Mixture ≥115% Witness Sample      |
| Air Content               | EN 12390-3 | ≤%2   |   |

The above values are given at +23°C and 50% relative humidity. High temperatures shorten the time, low temperatures lengthen the time.



## Application Method

### Mixing

Binder (such as cement, micro silica, fly ash, slag) and aggregate should be mixed until a homogeneous mixture is obtained.

After adding 50-70% of the water to be added to the mixture, **FOX ADMENT PC FM301** should be added to the mixture together with the remaining water. **FOX ADMENT PC FM301** should be mixed preferably for 60 seconds or for the time determined in laboratory experiments to ensure homogeneous distribution in the mixture.

### Compatibility with Other Materials

**FOX ADMENT PC FM301** can be used in compatibly with the following materials.

- Compatible with all cement types.
- It can be used with micro silica, fly ash and slag where high binding material is required.
- It is used together with air-entraining additives in order to increase the freeze-thaw resistance.
- It is used with micro silica to increase the performance of concrete and increase its durability in aggressive environments. (TS EN Environmental requirement XA1 to XA3 according to 206-1.)
- To prevent rapid reduction of concrete mixing water; Shrinkage is prevented by using **FOX BINDER FM125**.
- It is used together with synthetic and steel fibers against cracks caused by plastic shrinkage.
- In environments with high temperature and intense air flow; to prevent the evaporation of the mixing water in the concrete, **FOX PL-CURE FR811, FOX HYDROCURE FR761,**
- It is used by selecting the appropriate curing materials such as **FOX ACURE FR570**.
- **FOX ADMENT PC FM301** is not compatible with Naphthalene Sulfanate based superplasticizers.

### Coverage

**FOX ADMENT PC FM301**, For 100 kg binder (cement-micro silica-fly ash-slag), it is recommended to use 0.5-1.0 kg depending on the desired workability and binder type. Usage dosage should be determined by laboratory tests according to concrete class and properties.

### Considerations

- Concrete design and additive usage dosage should be determined by laboratory tests to be made beforehand, according to the desired concrete class and properties.
- The binder (cement-micro silica-fly ash-slag) determined as a result of laboratory tests should be mixed until a fine and coarse aggregate, homogeneous and dry mixture is obtained. If **FOX ADMENT PC FM301** is added to the dry mixture without adding mixing water, the additive will be absorbed in the mixture and **FOX ADMENT PC FM301** will not be uniformly dispersed. Even if all of the mixing water is added on top of it, the targeted concrete class and properties will not be achieved. Since the mixture will need additional water, the amount of water in the design saddles will be suspended and the mechanical properties of the concrete will remain below the targeted additive value. For this reason, concrete additives should not be added directly to the dry mix.
- The amount of additive in the mixture is calculated by multiplying the sum of the cement and secondary binders (such as micro silica, fly ash, slag) in the mixture with the additive dosage ratio.
- If more additives are used than the recommended dosage range, the setting time of the mixture may be prolonged. In such cases, the concrete should be kept moist and cured during mold removal.
- **FOX ADMENT PC FM301** is suitable for use in cold and hot climates

### Packaging

20 kg plastic drum

220 kg barrel

### Shelf Life

Shelf life is 12 months from the date of production when stored properly at +5°C to +30°C at room temperature, away from direct sunlight.

### Storage

The product should be stored in its original package, in a cool and dry place protected from frost. For short term storage, maximum 3 palletes should be placed on top of each other and the shipment should be made on a 'first come, first go' basis. Palletes should not be placed on top of each other during long term storage.



### Health and Safety Precautions

It is dangerous to approach the application sites with fire. Fresh air should be circulated in the storage and the application sites. During the application, a protective apparel, protective gloves, goggles and masks which comply with the Occupational Health and Safety Rules should be used. Due to the irritation effect of the uncured materials, the mixture should not come into contact with skin and eyes; in case of a contact, the affected area should be washed with plenty of water and soap; in case of swallowing, a physician should be consulted immediately. No food or beverages should be brought to the application area. The product should be stored and kept out of reach of children. For detailed information please consult the Material Safety Data Sheet.

### Disclaimer

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**EN 934-2:2009+A1:2012**

**FOX ADMENT PC FM301**

High Rate Water Reducer / New Generation Superplasticizer  
Admixture

Tables 3.1, 3.2, 7

Chlorine Content / < 0.1%

Alkali Content / < 3%

Corrosion behavior /

Includes components from EN 934-1:2008-Annex A.1.

Dangerous Materials / Examine Technical Data Sheet

