

Ultra high range retarding superplasticising ready-mix concrete admixture based on PCE

DESCRIPTION

DUCONMIX RSP PCE 890-S is differentiated from the traditional superplasticizer in that is based on a unique polycarboxylic ether polymer with lateral chains. This greatly improves the cement dispersion. At the starting of the mixing process an electrostatic dispersion occurs, but the presence of the lateral chains, linked to the polymer backbone, generates a steric hindrance which stabilized the cement particle's capacity to separate and disperse. This mechanism considerably reduces the water demand in flow able concrete.

RECOMMENDED USE

- Long-distance transporting
- Pumped concrete
- Ready mixed concrete
- High workability without segregation or bleeding
- High performance concrete for durability
- Congested/complex reinforced sections
- Mixes requiring >20% water reductions

FEATURES AND BENEFITS

- High workability for longer periods
- Lower pumping pressure
- Higher ultimate strengths
- Good dispersion even in mixes with high fines
- Resistance to segregation even at high workability
- Longer workability with extended setting
- Reduced water content for a given workability
- Increased ease in finishing concrete

PERFORMANCE TEST DATA

Aspect	Light Brown Liquid
Specific Gravity	1.08 ± 0.01 at 25°C
pH	≥6
Chloride ion Content	<0.2%

TEST CERTIFICATION/APPROVALS

- ASTM C-494 Type G
- EN 934-2: T3.1/3.2
- IS 9103:1999

DOSAGE

Optimum dosage of **DUCONMIX RSP PCE 890-S** should be determined with trial mixes. As a guide, a dosage ranges of 200g to 600g per 50kg of cementitious material is normally recommended. Because of variations in concrete materials, job site conditions, and/or applications, dosages outside of the recommended range may be required in such cases.

Over dose effects:

- Reduced permeability
- Long extension of initial and final set
- Increase in air entrainment
- Bleed or segregation of mix, quick loss of workability
- Increased plastic shrinkage

A slight overdosing may not adversely affect the ultimate strength of the concrete and can achieve higher strengths than normal concrete, provided it is properly compacted and cured. Due allowance should be made for the effect of fluid concrete pressure on form work, and stripping times should be monitored.

Statement of Responsibility (Disclaimer)

The technical information and application advise are based on present state of our best scientific and practical knowledge. As the information herein of a general nature, no assumption can be made as to a products suitability for a particular use or application and no warranty as to its accuracy, reliability or completeness either expressed or implied is given other than those required by law. The user is responsible for checking the suitability of products for their intended use.

Ultra high range retarding superplasticising ready-mix concrete admixture based on PCE

APPLICATION

DUCONMIX RSP PCE 890-S is a ready to use liquid which is dispensed into the concrete together with the mixing water. The plasticizing 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 **DUCONMIX RSP PCE 890-S** to dry aggregate or cement is not recommended. Thorough mixing is essential and a minimum mixing cycle, after the addition of this admixture, of 60 seconds for forced action mixers is recommended.

COMPABILITY

DUCONMIX RSP PCE 890-S is not compatible with Melamine or Naphthalene based admixtures and should not be used in conjunction in the same mix. It's compatible with lingo-sulphonates and carboxylic acid based plasticiser and retarders and also with most type of air-entrainers, accelerators, retarders, extended set-control admixtures, corrosion inhibitors, and shrinkage reducers. **DUCONMIX RSP PCE 890-S** is also compatible with slag and pozzolans such as fly ash, metakaolin and silica fume.

PACKAGING

DUCONMIX RSP PCE 890-S is available in 250kg drums or bulk.

WORKABILITY

DUCONMIX RSP PCE 890-S ensures that rheoplastic concrete remains workable in excess of 3 hours at +25°C. Workability loss is dependent on temperature, and on the type of cement, the nature of aggregates, the method of transportation and initial workability. It is strongly recommended that concrete should be properly cured particularly in hot, windy and dry climates.

STORAGE/ SHELF LIFE

DUCONMIX RSP PCE 890-S 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 cover, out of direct sunlight and protect from extremes of temperature.

Shelf life is 24 months when stored as above.

PRECAUTION

As with all chemical products, care should be taken during use and storage to avoid contact with eyes, mouth, skin and foodstuffs (which can also be tainted with vapor 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.

Statement of Responsibility (Disclaimer)

The technical information and application advise are based on present state of our best scientific and practical knowledge. As the information herein of a general nature, no assumption can be made as to a products suitability for a particular use or application and no warranty as to its accuracy, reliability or completeness either expressed or implied is given other than those required by law. The user is responsible for checking the suitability of products for their intended use.