

BUILDING CHEMICALS

SPECIALISTS

UNIPLAST SCS45

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New Generation (Polycarboxylate Ether) Concrete Admixtures
Set Retarding / High Range Water Reducing / Superplasticising Concrete Admixture

USES

- To provide acceleration of strength gain at early ages and significant increases in strength at all ages by reducing the w/c ratio of a concrete mix.
- Particularly suitable for precast concrete and high early strength requirements.
- To significantly improve workability of site mixed and precast concrete without increasing water.
- To provide enhanced durability by increasing ultimate strengths and reducing concrete permeability.
- To extend working time

ADVANTAGES

- Chloride free, safe to be used in reinforced and prestressed concrete.
- Major reductions in w/c ratio, which allow the production of high strength concrete without excessive, cement contents.
- Use in production of **Self Compacting** concrete permits easier construction with quicker placing and compaction without increasing water content.
- Increased workability levels are maintained for longer than with other similar admixtures.
- Improved cohesion and particle dispersion minimize segregation and bleeding and improves pump ability.
- Minimise transportation delay problems

STANDARD COMPLIANCE

UNIPLAST SCS45 complies with **CYS EN934-2:2009 +A1:2012**

Table 11.1 - Specific requirements for set retarding / high range water reducing / superplasticizing admixtures (at equal consistence) and

Table 11.2 - Specific requirements for set retarding / high range water reducing / superplasticizing admixtures (at equal w/c ratio).

UNIPLAST SCS45 is certified by **CERTIF** (Certification Organization) with the Certificate of the **Factory Production Control** with Certificate Number **1328 - CPR - 0063** and bears **CE marking**.

PROPERTIES

Appearance: **Liquid**
Colour: **Yellowish**
Specific Gravity: **1,05± 0,01** at 20°C
pH: **5,50± 1,0**
Chloride Content: **Chloride Free**

PRODUCT DESCRIPTION

UNIPLAST SCS45 is a superplasticiser based on selected synthetic **polycarboxylate ether polymers** which is easily dispersed in water.

UNIPLAST SCS45 entrains less **than 2%** of additional air to concrete at normal dosages.

UNIPLAST SCS45 disperses the fine particles of cement in the concrete mix, enabling the water content to perform more effectively. The very high levels of water reduction possible allow major increases in strength obtained.

DOSAGE

Trials should be carried out with the proposed concrete mix in order to determine the optimum dosage of **UNIPLAST SCS45**.

For normal concrete a dosage between **0.15 to 0.50 litres/50 kg of cement** be used, and for high strength concrete, dosage **between 0.25 to 0.75 litres/50 kg of cement**.

Dosages outside the typical ranges quoted above may be used if necessary and suitable to meet particular mix requirements, provided that adequate supervision is available.

UNIPLAST SCS45 is compatible with all types of cement which are produced in Cyprus and performs extremely well with **microsilica**. It can also be combined with all other Concrete Admixtures manufactured by our company

DISPENSING

UNIPLAST SCS45 is measured using a suitable dispenser. To obtain the best results it should always be added to the concrete mix dissolved in the water.

An overdose of double the intended amount of **UNIPLAST SCS45** will result in retardation. Provided that adequate curing is maintained, the final strengths of the concrete will be achieved.

An overdose will greatly increase the plasticising effect of the admixture and will allow an increased water reduction. This will have the effect of increasing ultimate strength and partially or fully offsetting the effect of any increased air entrainment.

CURING

Good curing will always lead to low permeability concrete and good curing practice should be always maintained especially at high temperatures and when increased dosages of **UNIPLAST SCS45** are used. Curing membrane, water spray or wet hessian should always be used.

COMPARATIVE RESULTS between
control (only water) & Test with UNIPLAST SCS45 at equal consistence

	Dosage SCS45 (Litres)	Cement Content (Kg/m ³)	W/C ratio	Reduce Water %	Air Content (%)	Slump (mm)	Compress. Strength in 28 days (N/mm ²)
Control (only water)	-	350	0,55	-	1,9	120	30,0
Test (with SCS45)	3,5	350	0,37	33%	3,0	180	50,0

PACKAGING - STORAGE

UNIPLAST SCS45 is delivered in **210** Litres metal drums, **1000** Litres plastic containers.

UNIPLAST SCS45 has a minimum shelf life of 12 months provided is stored between **2° C** and **40° C**. The material freezes at **-4° C**. It is necessary to protect material from direct sunlight and frost.

PRECAUTIONS

UNIPLAST SCS45 is water based and is non-flammable.

UNIPLAST SCS45 should not be swallowed. Contact with skin and eyes should be avoided. Always wear suitable protective gloves and eye/face protection. In the event that it comes in contact with the skin rinse thoroughly with plenty of water. In case of contact with eyes rinse immediately with water and seek medical attention immediately.

For more information on secure management and storage please request the **SAFETY DATA SHEET**.



ISO 9001

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