

ARACO SP 451

High-Range, Water-Reducing Superplasticizer

Product Description

ARACO SP 451 is high range Super plasticizer admixture with a unique formulation. This special formulation designed specifically for the use with hydraulic binders.

ARACO SP 451 has a strong dispersant action with the finer elements of concrete. This formulation enables **ARACO SP 451** to enhance the concrete workability and its mechanical strength properties.

ARACO SP 451 does not contain calcium chloride or any other intentionally added chlorides and will not initiate or contribute to corrosion on steel reinforcement present in the concrete.

ARACO SP 451 meets the requirements for ASTM C-494 Types G

Applications

ARACO SP 451 is recommended as an effective Super plasticizer for promoting high quality concrete properties, Such as:

- Walls, columns and slender components packed reinforcement
- Beams and ceilings
- Floor slabs and foundations.
- Bridges and cantilever structures.

Dosage

- Optimum dosage of **ARACO SP 451** should be determined in trial mixes.
- As a guide, the following dosages are recommended as a starting point for any trial: In normal concrete, a dosage of between 0.8 – 2.5 % by weight of cement
- Please consult ARACO's Technical Services Department for further information.



Package: 1000 lt. flow bins Bulk.

Product Advantages

- Optimizes cement utilization
- High density and impermeable concrete through very high-water reduction.
- Substantial improvement in workability without increase of w/c ratio
- Minimizes segregation and bleeding problems by improving cohesion.
- Improved durability
- Improves shrinkage and creep behaviors.
- Normal set without retardation
- Improved resistance to wear and abrasion
- Lower pumping pressure
- Higher ultimate strengths

Compatibility

ARACO SP 451 can be used with all types of Portland cement and cement replacement materials.

ARACO SP 451 should not be used in conjunction with other admixtures unless ARACO technical department approval is obtained.

Overdosing

When accidental overdosing occurs will result in:

- Increase in workability
- Initial and final set retarding.
- Increase in air-entrainment.

Setting Time

Although the setting time is dependent on the dosage of **ARACO SP 451**, the following factors should be considered:

- Retardation is increased with lower levels of tricalcium in the cement.
- Lower temperatures will delay the setting time.
- SRC cement gives higher retardation level than ordinary cement.
- Using more than one type of admixture in the same concrete mix could affect the setting time.
- Retardation level is increased when cement replacement materials are used in the concrete mix.

Technical Data

Test

Density	1.195±0.01	ASTM C494
---------	------------	-----------

Chloride content	NIL	BS 5075
------------------	-----	---------

PH	7 ± 2
----	-------

Freezing Point	0 °C
----------------	------

Recommended Dosage	0.8 - 2.5 % by weight of cement.
--------------------	----------------------------------

- Dosage rates are dependent on the type of effect quality of cement & aggregates, W/C ratio and ambient temperature.
- In many cases it is advisable to carry out trial mixes.

Product Data

Composition	Modified Synthetic polymers
-------------	-----------------------------

Appearance	Brown Liquid
------------	--------------

Storage condition	Store in a dry area between 5C and 35C. Protect from direct
-------------------	---

Shelf Life	12 months minimum from production date if stored properly in original unopened packaging.
------------	---

Safety Instructions

The product may cause skin irritation. Wear gloves and goggles and apply barrier cream to your hands. In contact with eyes or mucous membrane. flush immediately with plenty of warm water and seek medical attention without delay.

Legal Notes

The information, recommendations, and application are based on ARACO current knowledge and experience of the products when properly stored, handled, and applied under normal conditions. ARACO products are guaranteed against defective materials and manufacture and sold subject to standard conditions. Users should always refer to the most recent technical data sheet for the product concerned, copies of which will be supplied on request.

More from ARACO

A wide range of construction chemical products is manufactured by ARACO which include:

- Premixed mortar
- Tile adhesives & Grout
- Concrete Repair
- Flooring systems
- Protective Coating
- Waterproofing
- Bonding Agents
- Concrete Admixtures
- Surface Treatments
- Grout & Anchors
- Sealants
- Sports Flooring