

# POZZOLITH<sup>®</sup> 55R

Set retarding admixture with water reducing/plasticising capability

## Description

POZZOLITH 55R is a powerful retarder and auxiliary plasticiser which disperses and deflocculates cement particles whilst delaying the hydration process, thereby retarding the initial and final set. It can be used to improve workability without the addition of extra water, or to allow reductions in the free water content in conjunction with high range water reducing agents.

## Uses

- For extended workability retention of high strength, low W/C ratio mixes.
- Hot weather concrete where control of initial and final set is important.
- White cement concrete
- Slipformed concrete
- Self compacting concrete in hot weather conditions - as retarding component in the mix

## Advantages

- Increases density of concrete reducing permeability and thus increasing durability.
- Allows a reduction in free water.
- Highly effective in high cement content low water cement ratio mixes where its use enables concrete to be made more workable without loss in strength, density and durability.
- Enables controlled extension of initial set.
- The retarding action allows continuous concrete pours to be made, thus reducing the number of construction joints needed.
- The strength gain of concrete containing POZZOLITH 55R is enhanced. After retardation of initial and final set, a more rapid hardening of the concrete occurs, and the effect on stripping time is negligible.

## Typical Properties

Aspect	: clear/pale straw free flowing liquid
Relative Density	: 1.15 ± 0.02 at 25°C
Chloride ion content	: < 0.2%
pH	: ≥6

## Standards

- ASTM C 494: Type B & D
- EN 934-2:T8 & T10
- IS 9103: 1999

## Direction for use

POZZOLITH 55R 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 POZZOLITH 55R to dry aggregate or cement is not recommended.

## Dosage

Field trials should be conducted to determine the optimum addition rates of POZZOLITH 55R. As a guide to these trials, a dosage range of 100 to 500ml per 100kg of cementitious material is recommended as a starting point. Because of variations in concrete materials, job site conditions, and/or applications, dosages outside of the recommended range may be required. In such cases, contact your local BASF representative.

For addition information on POZZOLITH 55R admixture or on its use in developing concrete mixes with special performance characteristics, contact your local BASF representative.

## Effects of over dosage

A severe over-dosage of POZZOLITH 55R can result in the followings:

- Long extension of initial and final set
- Bleed/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.

In the event of over dosage, consult your local BASF representative immediately.

## Compatibility

POZZOLITH 55R 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.

POZZOLITH 55R is also compatible with slag and pozzolans such as fly ash and silica fume.

## Corrosivity – Non Corrosive

POZZOLITH 55R admixture will neither initiate nor promote corrosion of reinforcing steel embedded in

concrete, prestressed concrete or concrete placed on galvanized steel floor and roof systems. Neither calcium chloride nor any calcium chloride-based ingredients are used in the manufacture of POZZOLITH 55R admixture. In all concrete application, POZZOLITH 55R admixture will conform to the most stringent or minimum chloride ion limits currently suggested by construction industry standards and practices.

#### Rate of hardening

The temperature of the concrete mix and the ambient temperature (forms, earth, reinforcement, air, etc.) affect the hardening rate of concrete. At higher temperatures, concrete hardens more rapidly which may cause problems with placing and finishing. One of the functions of POZZOLITH 55R admixture is to retard the set of concrete. Within the normal dosage range, it will generally extend the working and setting times of concrete containing normal portland cement approximately 1 hour to 6 hours compared to a plain concrete mix, depending on materials at site and temperatures. Trial mixes should be made with site materials & approximating the job site conditions to determine the dosage required.

#### Packaging

POZZOLITH 55R is available in 20kg and 235kg drums.

#### Storage and Shelf life

POZZOLITH 55R 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 12 months when stored as above.

Failure to comply with the recommended storage conditions may result in premature deterioration of the product or packaging. For specific storage advice consult your local BASF representative.

#### Safety precautions

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 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. For further information refer to the material safety data sheet. MSDS available on demand or on BASF construction chemicals web site.

#### Note

All BASF Technical Data Sheets are updated on regular basis; it is the user's responsibility, to obtain the most recent issue.

Field services where provided, does not constitute supervisory responsibility, for additional information contact your local BASF representative.

#### Disclaimer

Whilst any information contained herein is true, accurate and represents our best knowledge and experience, no warranty is given or implied with any recommendations made by us, our representatives or distributors, as the conditions of use and the competence of any labour involved in the application are beyond our control.

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