

POZZOLITH[®] 390N

Water reducing multi dosage plasticiser to produce low slump loss flowable concretes.

Description

POZZOLITH 390N is a water reducing, plasticising admixture for the production of low slump loss, high workability concrete.

POZZOLITH 390N is formulated for use over a wide dosage range. POZZOLITH 390N can match the performance characteristics of many superplasticisers at lower dosage and cost.

At the lower end of the dosage range POZZOLITH 390N will substantially increase and extend workability of given water cement ratio. Alternatively, the water cement ratio can be reduced whilst maintaining a given slump.

The water reduction capability, slump and extension of workability, increase with dosage. At higher dosage rates, POZZOLITH 390N will enable water reductions and the production of flowing concrete normally only available from superplasticisers.

Uses

POZZOLITH 390N is formulated for use by commercial ready-mix operators, who can benefit from its multiple role characteristics by minimising admixture stock.

Advantages

- In areas of congested reinforcement where high workability will ease placement and compaction.
- Hot weather concreting where extension of workability and controlled delays to initial set are beneficial.
- To effect reductions in the water cement ratio enabling either higher strength or cement economy.

Typical Properties

Aspect	: Dark brown free flowing liquid
Relative Density	: 1.18 ± 0.02 at 25°C
pH	: ≥6
Chloride ion content	: < 0.2%

Standards

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

Direction for use

POZZOLITH 390N 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 390N to dry aggregate or cement is not recommended. Automatic dispensers are available.

Dosage

Optimum dosage of POZZOLITH 390N should be determined with trial mixes. As a guide, a dosage range of 300ml to 1000ml per 100kg of cementitious material is recommended. Higher dosages may be required when certain combinations of materials and conditions are present or water reduction in excess of 15% is required. 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 390N 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 390N can result in the following:

- Long extension of initial and final set
- Increase in air entrainment
- 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 390N 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 390N is also compatible with slag and pozzolans such as fly ash and silica fume.



The Chemical Company

Corrosivity – Non Corrosive

POZZOLITH 390N 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 390N admixture. In all concrete application, POZZOLITH 390N 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 390N 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 5 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.

Workability

POZZOLITH 390N ensures that concrete remains workable in excess of 2 hours at +25°C. Workability loss is dependent on temperature, and on the type of cement, the nature of aggregates, the method of transport and initial workability.

It is strongly recommended that concrete should be properly cured particularly in hot, windy and dry climates.

Please use Masterkure 111CF, evaporation reducer to prevent quick moisture loss from the surface of the flat works such as pavements in the dry, windy and hot climates.

Packaging

POZZOLITH 390N is supplied in 245 kg drums or in bulk on request.

Storage and Shelf life

POZZOLITH 390N 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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Page 2 of 2

