

POZZOLITH[®] LD50

Low dosage, high performance plasticising and strength increasing admixture for concrete with set retardation properties

Description

POZZOLITH[®] LD50 is a high performance concrete plasticiser and water reducing agent. Unlike conventional lignosulphonate plasticisers it possesses the ability to increase early and ultimate strengths even at constant water cement ratios.

POZZOLITH[®] LD50 is designed to optimise hydration of the cement paste, subject to the mix design. When compared to a control concrete 28 days strengths are achievable in 7 days and similarly 7 days strengths are achievable within 3 days.

POZZOLITH[®] LD50 is a versatile product which can be utilised throughout a varying range of temperatures. It can be used as a standard plasticiser in the low dosage range through to a powerful retarder at the high dosage range.

Primary uses

- To increase workability.
- To increase compressive strength.
- Hot weather concreting.
- To effect cement economies.

Typical applications

POZZOLITH[®] LD50 is used wherever optimum workability and maximum strengths are required such as:

- In areas of congested reinforcement where high workability is of benefit.
- Hot weather concreting where controlled delays to initial set are beneficial.
- Readymix concrete where workability retention coupled with retardation of initial set are beneficial.

- Concrete mixes containing mineral admixtures such as PFA, where maximum workability and maximum strength gain is beneficial.

Advantages

- Highly effective over wide range of cement contents.
- Higher early and ultimate strengths.
- Low dosage.
- Improves workability whilst at the same time increasing compressive strength.
- Permits water reduction, in the region of 10% to 15%.
- Increases impermeability and durability.
- Reduces placing problems in hot weather concreting by improving workability and workability retention.
- Improves surface finish, pumpability and trowellability.
- Enables significant economies in mix design to be achieved thereby saving cement.

Packaging

POZZOLITH[®] LD50 is available in bulk or in 210 litre drums.

Standards

ASTM C494: Types A, B and D
BS 5075: Part 1

Compatibility

POZZOLITH[®] LD50 can be used with all types of Portland cement including sulphate resisting and modified cement (Type II). For use with special cements contact BASF ME's Technical Services

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Department. POZZOLITH[®] LD50 should not be premixed with other admixtures.

If other admixtures are to be used in concrete containing POZZOLITH[®] LD50, they must be dispensed separately. Consult BASF Technical Services Department for advice.

Typical properties

Properties listed are only for guidance and are not a guarantee of performance

| | |
|-------------------|---|
| Colour: | Brown liquid |
| Specific gravity: | 1.215 at 25°C |
| Air entrainment: | Less than 1% |
| Chloride content: | Nil to BS 5075: 1982 |
| Nitrate content: | Nil |
| Freezing point: | 0°C. Can be reconstituted if stirred after leaving to thaw. |
| Flashpoint: | None |

Action

POZZOLITH[®] LD50 acts on the cement particles by combining the effects of powerful plasticising and deflocculating agents. It considerably improves the workability of concrete mixes without the addition of extra water. The improved dispersion of the cement particles ensures the process of hydration proceeds under the optimum conditions.

Directions for use

POZZOLITH[®] LD50 should be added to the concrete mix during the mixing cycle at the same time as the water or the aggregates. Never add POZZOLITH[®] LD50 to the dry cement. No extension to normal mixing times is necessary.

Dosage

The normal dosage range is 120 to 400ml per 100kg of cement. Higher dosages may be required when certain combinations of materials and conditions are present.

In all cases we recommend trial mixes are carried out to determine the correct levels of admixture required to achieve the desired concrete properties.

Setting time

POZZOLITH[®] LD50 provides controlled retardation to initial set. Setting times of concrete mixes are related to cement type and ambient temperature.

Effects of over dosage

A severe over dosage of POZZOLITH[®] LD50 will result in the following:

- Retardation of initial and final set.
- Slight increase in air entrainment.
- Increase in workability.

Providing it is properly cured, the ultimate strength of the concrete will not normally be adversely affected and will generally be higher than for normal concrete. The retarding effect of over dosage will be exaggerated with SRC cement.

Dispensing

POZZOLITH[®] LD50 should be dispensed through a proprietary dispenser, such as is available from BASF. Details upon request.

Storage

Store under cover, out of direct sunlight and protect from extremes of temperature.

Failure to comply with the recommended storage conditions may result in premature deterioration of the product or packaging. For specific storage advice consult BASF's Technical Services Department.

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Safety precautions

POZZOLITH[®] LD50 is not a fire or health hazard. Spillages should be washed down immediately with cold water. For further information refer to the material safety data sheet.

Note

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

BASF reserves the right to have the true cause of any difficulty determined by accepted test methods.

Quality and care

All products originating from BASF's Dubai, UAE facility are manufactured under a management system independently certified to conform to the requirements of the quality, environmental and occupational health & safety standards ISO 9001, ISO 14001 and OHSAS 18001.

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As all BASF technical datasheets are updated on a regular basis it is the user's responsibility to obtain the most recent issue.

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