

# POZZOLITH® LD21

## Water-reducing, plasticizer / retarder for concrete.

### Description

POZZOLITH LD21 is a versatile product which can be utilised to maintain workability and effect water reduction throughout a range of concrete mix designs and ambient temperature conditions.

POZZOLITH LD21 is a multi-role admixture capable of functioning as a water reducer to enable strength gains, whilst maintaining workability or set retardation.

### Primary uses

- Hot weather concreting.
- To increase workability.
- To increase compressive strength.
- To reduce permeability.

### Typical applications

POZZOLITH LD21 is used wherever effective workability retention and maximum strengths are required such as:

- Hot weather concreting and mass concreting where controlled delays to initial set are beneficial.
- Ready-mix concrete where workability retention coupled with retardation of initial set are beneficial.
- In areas of congested reinforcement where high workability is of benefit.
- Above or below ground waterproofing where maximum impermeability and watertightness are essential.

### Advantages

- Reduces placing problems in hot weather concreting by improving workability and workability retention.
- Increases impermeability and durability.
- Higher early and ultimate strengths.
- Effective over wide range of cement contents.
- Improves surface finish, pumpability and trowelling.
- Enables significant economies in mix designs to be achieved, thereby saving cement.

### Packaging

POZZOLITH LD21 is available in bulk or in 220 kg. drums, and 1100 kg. containers.

### Compatibility

POZZOLITH LD21 can be used with all types of Portland cement including Sulphate Resisting and modified cement (Type II). For use with special cements, contact Degussa's Technical Services Department.

POZZOLITH LD21 should not be mixed with other admixtures. If other admixtures are to be used in concrete containing POZZOLITH LD21, they must be dispensed separately. Consult Degussa's Technical Services Department for advice.

### Typical properties\*

POZZOLITH LD21 acts efficiently 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 dispersal of the cement particles ensures the process of hydration proceeds under optimum conditions.

### Typical properties\*

Colour:	Dark brown liquid
Specific gravity:	1.194 at 25°C
Air entrainment:	1-2% dependent on dosage.
Chloride content:	Nil to BS 5075
Nitrate content:	Nil
Freezing point:	2°C. Can be reconstituted if stirred after leaving to thaw.
Flashpoint:	None

ASTM C-494: Types A, B and D  
BS 5075: Part 1

## Directions for use

POZZOLITH LD21 should be added to the mix with the gauging water after sand, cement, and aggregate have been blended. Alternatively POZZOLITH LD21 can be dispensed after the water has been added to the blended cement and aggregates.

## Dosage

The normal dosage range is 280ml to 900ml 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

POZZOLITH LD21 acts efficiently to give controlled retardation of 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 LD21 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 be adversely affected and will generally be higher than for normal concrete. The retarding effects of very high dosages will be exaggerated with SR cement.

## Dispensing

POZZOLITH LD21 should be dispensed through a proprietary dispenser, such as is available from Degussa. Details available on request.

## Storage

Store under cover, out of direct sunlight and protect from extremes of temperature. Shelf life is up to 1 year 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 Degussa's Technical Services Department.

## Safety precautions

POZZOLITH LD21 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 Degussa representative.

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

## Quality

All products produced by Degussa certified manufacturing facilities, are produced to conform to systems designed to meet internationally recognised quality standards.

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