

Water reducing/plasticizing admixture

CE Approved – Certificate No. 0086-CPD-469071
EN934 part 2 table 2

Description of Product

POLYHEED[®] 444 is an economic water reducing admixture, which disperses and deflocculates the cement particles within a concrete mix. It can be used to improve workability, without the addition of extra water, or to allow reductions in the free water content of the concrete mix. .

POLYHEED[®] 444 complies with:

- EN 934 - 2 table 2

Fields of Application

- General Ready Mixed Concrete production.
- In concrete brick and block manufacture.
- Wherever reduced water content would be of benefit to increase impermeability.
- In hot weather to extend workability.

Features and Benefits

- To increase/extend workability.
- To increase compressive strength.
- To effect cement economies.
- To reduce water content.
- Significantly improves the workability therefore easing placing.
- Improves the cohesive properties of the concrete, helping to reduce segregation and bleeding.
- Enables economies in mix designs to be achieved thereby saving cement.

Technical Data/Typical Properties

Appearance	Brown liquid
Specific gravity @ 20°C	1.09± 0.01 g/cm ³
pH-value	5.0 ± 1.5
Alkali content (%)	Less than or equal to 0.50
Chloride content (%)	Less than or equal to 0.10

Application Procedure**Application**

POLYHEED[®] 444 can be used with all types of EN 197 cements. POLYHEED[®] 444 should not be pre-mixed with other admixtures. If other admixtures are to be used in concrete containing POLYHEED[®] 444 they must be dispensed separately.

Dosage

POLYHEED[®] 444 should be added to the concrete mix during the mixing cycle at the same time as the water and the aggregates. Never add POLYHEED[®] 444 to the dry cement.

For optimal performance start dispensing the admixture after 60% of the mixing water addition.

Field trials should be conducted to determine the optimum addition rates of POLYHEED[®] 444. As a starting point the following dosage rate is recommended;

By Volume - 0.40 to 1.00 litres per 100 kg of cement (binder).

By Mass - 0.436 to 1.090 kg per 100 kg of cement (binder).

Dispensing

POLYHEED[®] 444 should be dispensed through a proprietary dispenser. Details are available on request from BASF Construction Chemicals.

Shelf Life

Minimum 18 months when stored in accordance with the Manufacturer's instructions.

Packaging

POLYHEED[®] 444 is supplied in Bulk, 1000-litre IBC's and 25-litre containers.

Storage

POLYHEED[®] 444 must be stored in a place where temperature does not drop below +5°C. If product has frozen, thaw at +3°C and agitate until completely reconstituted. 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 Construction Chemicals Technical Services Department.

Watchpoints

A severe over-dosage of POLYHEED[®] 444 will result in the following:

- Retardation of initial set
- Increase in air entrainment
- Increase in workability

Providing concrete is properly cured, the ultimate strength of the concrete will not be adversely affected and will generally be higher than for normal concrete.

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POLYHEED[®] 444, BASF plc, Construction Chemicals, Version 1**Health and Safety**

*For full information on Health and Safety matters regarding this product the relevant Health and Safety Data Sheet should be consulted.

The following general comments apply to all products.

As with all chemical products, care should be taken during use and storage to avoid contact with eyes, mouth, skin and foodstuffs, (which may also be tainted with vapour until the product is fully cured and dried). Treat splashes to eyes and skin immediately. If accidentally ingested, seek medical attention. Keep away from children and animals. Reseal containers after use.

Spillage

Chemical products can cause damage; clean spillage immediately.

DISCLAIMER

"BASF plc, Construction Chemicals " (the Company) endeavours to ensure that advice and information given in Product Data Sheets, Method Statements and Material Safety Data Sheets (all known as Product Literature) is accurate and correct. However, the Company has no control over the selection of its products for particular applications. It is important that any prospective customer, user or specifier, satisfies him/her-self that the product is suitable for the specific application. In this process, due regard should be taken of the nature and composition of the background/base and the ambient conditions both at the time of laying/applying/installing the material and when the completed work is to be brought into use.

Accordingly, no liability will be accepted by the Company for the selection, by others, of a product, which is inappropriate to a particular application.

Products are sold subject to the Company's standard conditions of sale and all customers, users and specifiers, should ensure that they examine the Company's latest Product Literature.