

Water reducing/plasticizing admixture



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

Description of Product

POZZOLITH[®] 320N is a ready-to-use, liquid admixture for making more uniform and predictable quality concrete.

POZZOLITH[®] 320N complies with:

- EN 934-2
- ASTM C-494 Type A

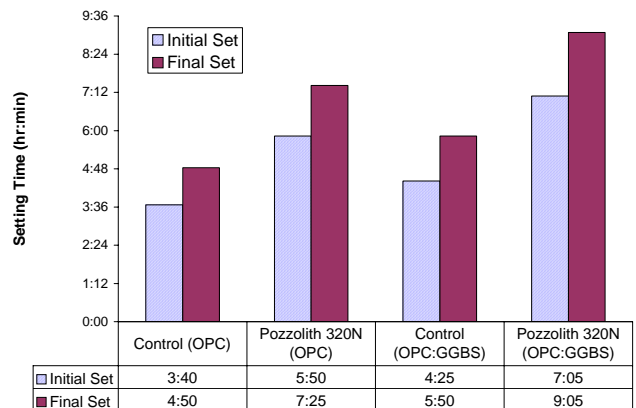
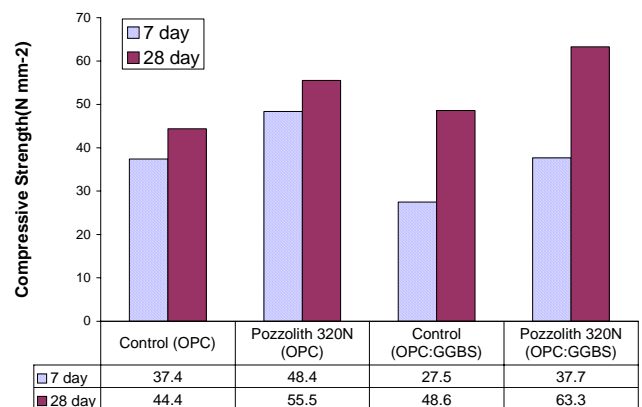
Fields of Application

- Increased Compressive Strength or increased workability
- Relative Durability to Damage from Freezing and Thawing - well above industry standards
- Reduced Water Content Required for a given workability
- Normal Setting Characteristics

Features and Benefits

Concrete with POZZOLITH[®] 320N admixture sets at a rate comparable to plain concrete while providing the following special qualities:

- Improved Workability or reduced water content
- Reduced Segregation
- Superior Finishing Characteristics for flatwork and cast surfaces
- Effective as a Single Admixture or as a Component in a POZZOLITH[®] admixture System.



Technical Data/Typical Properties

Appearance	Brown liquid
Specific gravity @ 20°C	1.20 g/cm ³
pH-value	5.0
Alkali content (%)	Less than or equal to 0.5
Chloride content (%)	Less than or equal to 0.10
Chlorine content (%)	Less than or equal to 0.10

Typical Results

Ambient Temperature of 22°C

- Results from trials using Reference CEM 1 and GGBS replacement (50%)
- Cement content 300 kg/m³ and 60 ±10 mm slump.
- POZZOLITH® 320N at 0.6% by weight of cement.

Graph 1 - Compressive strength results for CEM 1 and CEM 1:GGBS (50:50 blend) mixes using POZZOLITH® 320N @ 0.6% by weight of cement.

Graph 2 - Initial and final setting time results for CEM 1 and CEM 1:GGBS (50:50 blend) mixes using POZZOLITH® 320N @ 0.6% by weight of cement.

Note: The above results are representative of concrete mixes using the **highest** specified dosage of admixture. Results show little effect on setting time compared to a control mix.

Similar trends can also be observed at lower than average temperatures.

Laboratory test results for concrete mixes using POZZOLITH® 320N with different cement types, mix designs and cement replacements. Test work carried out at 20°C ambient temperature.

Cement type A

	Dosage Ltr / 100 kg	CEM 1 Kg/m ³	w/c Ratio	Slump mm	Density Kg/m ³	Compressive Strength (N/mm ²)	
						7 day	28 day
Control	-	250	0.61	55	2364	24.0	36.0
POZZOLITH® 320N	0.32	253	0.57	50	2384	28.5	41.7
Control	-	350	0.44	60	2392	43.0	60.5
POZZOLITH® 320N	0.32	352	0.42	65	2398	51.0	67.9

Cement type B

	Dosage Ltr / 100 kg	CEM 1 Kg/m ³	w/c Ratio	Slump mm	Density Kg/m ³	Compressive Strength (N/mm ²)	
						7 day	28 day
Control	-	257	0.56	45	2364	26.5	39.5
POZZOLITH® 320N	0.32	257	0.50	50	2350	33.0	46.0
Control	-	353	0.50	50	2368	42.0	56.2
POZZOLITH® 320N	0.32	359	0.44	50	2382	54.0	68.9

Cement type B with 30% PFA replacement

	Dosage Ltr / 100 kg	CEM1/PFA Kg/m ³	w/c Ratio	Slump mm	Density Kg/m ³	Compressive Strength (N/mm ²)	
						7 day	
Control	-	177/76	0.62	50	2350	17.0	28.9
POZZOLITH® 320N	0.32	181/77	0.50	50	2364	23.0	37.8
Control	-	250/107	0.38	55	2371	32.0	50.4
POZZOLITH® 320N	0.32	250/107	0.33	50	2353	43.0	63.1

Cement type A with 40% GGBS replacement.

	Dosage Ltr / 100 kg	CEM1/GGBS Kg/m ³	w/c Ratio	Slump mm	Density Kg/m ³	Compressive Strength (N/mm ²)	
						7 day	
Control	-	150/100	0.63	45	2368	12.0	29.0
POZZOLITH® 320N	0.32	152/101	0.58	55	2382	15.5	36.9
Control	-	211/141	0.44	60	2392	28.5	46.8
POZZOLITH® 320N	0.32	213/142	0.40	60	2401	33.0	53.1

Application Procedure

POZZOLITH® 320N admixture is recommended for use in concrete where improved, normal setting characteristics are desired.

As a result of the above advantages, this admixture improves pumped concrete, shotcrete (wet mix), and conventionally placed concretes. It improves the placeability and finish of plain, reinforced, precast, prestressed, lightweight or normal weight concrete.

POZZOLITH® 320N admixture can be used with air entraining cements and air-entraining admixtures approved under AASHTO, ASTM and CRD specifications - including those manufactured by BASF IBC Admixture Systems Limited - when air-entrained concrete is desired. When used in conjunction with another each admixture must be dispensed separately into the mix.

This admixture can be used in either white or coloured architectural concrete.

Dosage

For most concrete mixes using average concrete ingredients, POZZOLITH® 320N admixture is recommended for use at a rate of:

By Volume - 0.15 to 0.50 litres per 100 Kg of cement (binder).

By Mass - 0.18 to 0.60 kg per 100 Kg of cement (binder).

Due to variations in job conditions and concrete materials, dosage rates other than the recommended amounts may be required. In such cases, consult your local BASF IBC Admixture Systems representative.

Trial mixes should be made with job materials and approximating job conditions to determine dosage rates and performance.

Packaging

POZZOLITH® 320N admixture is supplied in 210 litre drums and bulk.

Shelf Life

12 months if stored according to manufacturer's instructions in unopened containers.

Storage

POZZOLITH[®] 320N 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 IBC Admixture Systems Technical Services Department.

Watchpoints

If POZZOLITH[®] 320N admixture has frozen, thaw at temperatures above 2°C and completely reconstitute by mild mechanical agitation. Do not use pressurised air for agitation.

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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 IBC Admixture Systems Limited" (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.