

Description

Glenium 3400 NV ready-to-use high-range water-reducing admixture is a patented new generation of admixture based on polycarboxylate chemistry. Glenium 3400 NV admixture is very effective in producing concretes with different levels of workability including applications that require self-consolidating concrete (SCC). Glenium 3400 NV admixture is particularly effective in producing concrete mixtures that provide longer “working time” for placement and finishing operations, without compromising very high early strength requirements. Glenium 3400 NV admixture meets ASTM C 494/C 494M requirements for Type A, water-reducing, and Type F, high-range water-reducing, admixtures.

Applications

Recommended for use in:

- Concrete with varying water reduction requirements (5-40%)
- Concrete applications requiring very high-early strength development
- Concrete where high flowability, increased stability and durability are needed
- Rheodynamic[®] SCC
- 4x4[™] Concrete for fast track construction

GLENIUM[®] 3400 NV

High-Range Water-Reducing Admixture

Features

- Maximum dosage effectiveness for a given water reduction
- Controlled rheology
- Improved retention of slump and workability
- Strength enhancement package

Benefits

- Can be used in a wide variety of concrete mixtures as a Type A or Type F admixture
- Extremely high early strength development
- Improved finishability and surface appearance
- May reduce/eliminate need for vibration and heat curing
- Improves overall production cost efficiencies
- Increases productivity

Performance Characteristics

Compressive Strength: Concrete produced with Glenium 3400 NV admixture achieves significantly higher early compressive strength compared to plain concrete and concrete mixtures containing naphthalene, melamine, and early generation polycarboxylate high-range water-reducing admixtures.

Mixture Data: Laboratory Evaluation: Cementitious Material: 700 lb/yd³ (415 kg/m³), Water/Cementitious Materials: 0.40, Ambient temperature: 70 °F (21 °C).

Compressive Strength, psi (MPa)

Mixture	12 h	24 h
Conventional Polycarboxylate	3930 (27.1)	5690 (39.2)
Glenium 3400 NV admixture	4260 (29.4)	6480 (44.7)

Mixture Data: Field Evaluation: Cementitious Materials: 700 lb/yd³ (415 kg/m³), Water/Cementitious Materials: 0.37, Cure Time: 19.75h.

Compressive Strength, psi (MPa)

Mixture	Ambient Cure	Sure Cure System
Conventional Polycarboxylate	4660 (32.1)	5600 (38.6)
Glenium 3400 NV admixture	5550 (38.3)	6670 (46.0)

Product Data: GLENIUM® 3400 NV

Slump Retention: Glenium 3400 NV admixture was developed to provide extremely high-early strength concrete that exhibits good slump and workability retention characteristics, relative to other high-early strength-producing high-range water-reducing admixtures. A field trial mixture is recommended to ensure that the desired slump at a specific time period is achieved.

Guidelines for Use

Dosage: Glenium 3400 NV admixture has a recommended dosage range of 2-12 fl oz/cwt (130-780 mL/100 kg) of cementitious materials. For most applications, dosages in the range of 2-6 fl oz/cwt (130-360 mL/100 kg) will provide excellent performance. For very high performance and Rheodynamic Self-Consolidating Concrete mixtures, up to 12 fl oz/cwt (780 mL/100 kg) of cementitious materials can be utilized. 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 Construction Chemicals representative.

Mixing: Glenium 3400 NV admixture can be added with the initial batch water or as a delayed addition. However, optimum water reduction is generally obtained with a delayed addition.

Product Notes

Corrosivity – Non-Chloride, Non-Corrosive: Glenium 3400 NV admixture will neither initiate nor promote corrosion of reinforcing steel embedded in concrete, prestressing steel or of galvanized steel floor and roof systems. Neither calcium chloride nor other chloride-based ingredients are used in the manufacture of Glenium 3400 NV admixture.

Compatibility: Glenium 3400 NV admixture is compatible with most admixtures used in the production of quality concrete, including normal, mid-range and high-range water-reducing admixtures, air-entrainers, accelerators, retarders, extended set control admixtures, corrosion inhibitors, and shrinkage reducers.

Do not use Glenium 3400 NV admixture with admixtures containing beta-naphthalene sulfonate. Erratic behaviors in slump, workability retention and pumpability may be experienced.

Storage and Handling

Storage Temperature: Glenium 3400 NV admixture must be stored at temperatures above 40 °F (5 °C). If Glenium 3400 NV admixture freezes, it can be thawed by warming and reconstituted by mechanical agitation. **Do not use pressurized air for agitation.**

Shelf Life: Glenium 3400 NV admixture has a minimum shelf life of 6 months. Depending on storage conditions, the shelf life may be greater than stated. To ensure the longest shelf life potential, recirculation is recommended. Please contact your BASF Construction Chemicals representative regarding suitability for use and dosage recommendations if the shelf life of Glenium 3400 NV admixture has been exceeded.

Packaging

Glenium 3400 NV admixture is supplied in 55 gal (208 L) drums, 275 gal (1040 L) totes and by bulk delivery.

Related Documents

Material Safety Data Sheets: Glenium 3400 NV admixture.

Additional Information

For additional information on Glenium 3400 NV admixture or its use in developing concrete mixtures with special performance characteristics, contact your BASF Construction Chemicals representative.

The Admixture Systems business of BASF Construction Chemicals is a leading provider of innovative additives for specialty concrete used in the ready mix, precast, manufactured concrete products, underground construction and paving markets throughout the NAFTA region. The Company's respected Master Builders brand products are used to improve the placing, pumping, finishing, appearance and performance characteristics of concrete.

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