

PADRAPAT PARS

Products for Concrete Placing



PADRA-Rheo NNS-135

Normal setting SNF based superplasticizer

DESCRIPTION

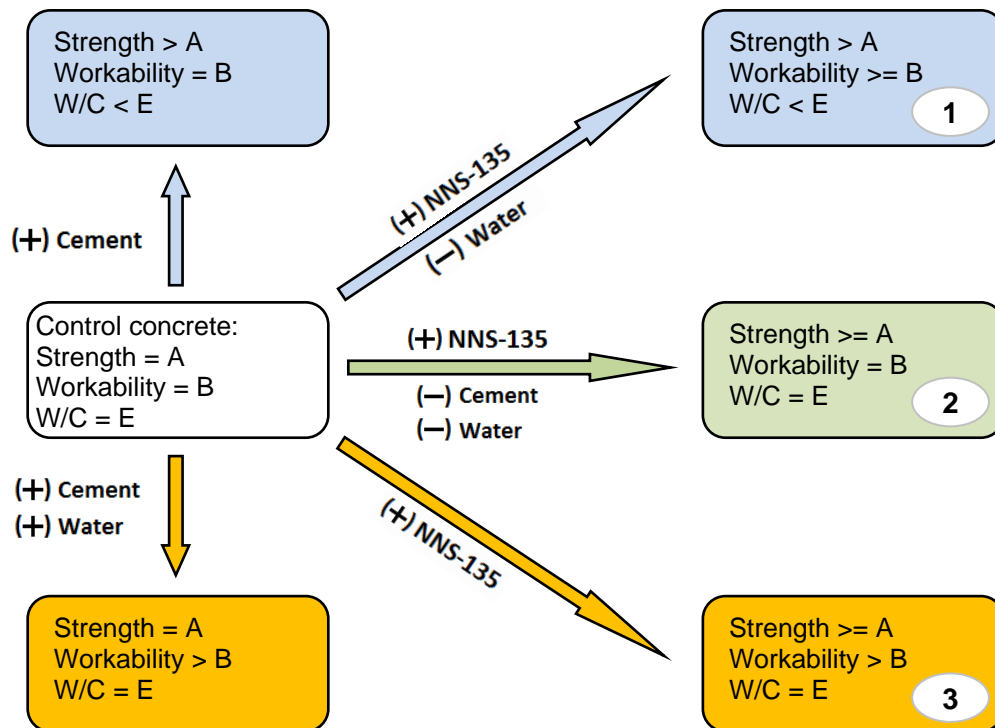
PADRA-Rheo NNS-135 is a normal setting time high range water reducing admixture based on sulphonated naphthalene formaldehyde (SNF) synthetic materials.

PADRA-Rheo NNS-135 complies with ASTM C494 Type F.

USES

PADRA-Rheo NNS-135 is a versatile high range water reducing admixture for use in **all type of concrete** which allows mixing water to be reduced considerably at a given workability without significantly affecting the setting characteristics of the concrete. In practice, this effect can be utilized in three ways:

1. By the addition of the PADRA-Rheo NNS-135 with a reduction in the water-cement ratio, a concrete having the same workability as (or greater than) the control concrete can be obtained, with compressive strengths at all ages which exceed those of the control.
2. A concrete with similar workability and strength development characteristics can be obtained at lower cement contents than a control concrete without adversely affecting the durability or engineering properties of the concrete.
3. If the PADRA-Rheo NNS-135 is added directly to a concrete as part of the gauging water with no other changes to the mix proportions, a concrete possessing similar strength development characteristics is obtained, yet having a greater workability than the control concrete.



PADRA-Rheo NNS-135

ADVANTAGES

PADRA-Rheo NNS-135 is a general purpose superplasticizer has three main advantages in cementitious concretes and mortars.

1. PADRA-Rheo NNS-135 improves workability and rheological properties of concrete and mortar in fresh state without significantly affecting the setting characteristics.
2. Adding of the PADRA-Rheo NNS-135 with a reduction in the water-cement ratio followed by proper curing practice, will improve micro-structure of hardened concrete resulting in enhancement of mechanical strengths as well as durability characteristics of concrete. Durability enhancement of concrete will result to increase service life of concrete structures.
3. Decreasing of cement content obtains through use of PADRA-Rheo NNS-135 has a significant role in sustainable development by decreasing raw material consumption and lowering production of greenhouse gases. Generally, PADRA-Rheo NNS-135 can be useful for producing environment friendly concretes.

Therefore, the main advantages of PADRA-Rheo NNS-135 can be classified as follows:

- Improved workability and rheology characteristics.
- Reducing water content up to 20% without loss of workability.
- Reducing cement content.
- Reducing water-cement ratio.
- Increased mechanical strengths.
- Improved micro-structure, provided that proper curing practices are adopted.
- Enhanced durability.
- In normal dosages has no adverse effect on air content.
- Has no significant effect on setting characteristics of the concrete
- Suitable for use for all concrete types.
- Compatible with other types of admixtures (testing is recommended).
- Allows the production of flowable concrete.

TECHNICAL INFORMATION

Color	Brown
Appearance	Liquid
Density (at 25 °C)	Approximately 1.18~1.20 kg/l
Air entrainment	Maximum 1%
pH	7.5 – 8.5
Solid content	31 ± 1 %
Chloride content	Less than 0.1%
Freeze point	-2 °C

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



PADRA-Rheo NNS-135

HOW TO USE

Adding and mixing To achieve optimum efficiency, it is recommended that PADRA-Rheo NNS-135 is added to the mix with gauging. When two or more admixtures are used, they must be added to the mix separately and must not be mixed with each other prior to adding to the concrete mix. Add PADRA-Rheo NNS-135 to the concrete mixture using a dispenser designed for water reducing admixtures, or add manually using a suitable measuring device that ensures accuracy within $\pm 3\%$ of the required amount. When using PADRA-Rheo NNS-135 to produce flowing concrete at site using ready mix trucks, it can be added to the concrete via the feed hopper at the rear of the truck. Mix before discharge for at least 3 minutes at 10 rpm to produce a fully homogenous mix. It is recommended to consider the amount of water in PADRA-Rheo NNS-135, or at least half of admixture's weight, as a part of mixing water.

Application Remarks When accidental overdosing occurs, the setting time may be increased. During this period the concrete must be kept moist in order to prevent premature drying out. In mixes with low amount of fine which are susceptible to segregation, high dosages of PADRA-Rheo NNS-135 may result to segregation or bleeding. In such a case, the grading of aggregates should be modified via adding fines or cohesion of mix has to be improved through using viscosity modifier agents (VMA) like PADRA-Visc VMA-151. For a given air entraining in concrete mixtures containing PADRA-Rheo NNS-135, the amount of air entraining admixture is somewhat less than the amount required in plain concrete. **Note:** All technical data stated in this product data sheet are based on laboratory tests. Actual measured data may vary due to circumstances beyond of our control.

Compatibility PADRA-Rheo NNS-135 is compatible with all PADRA's admixtures. Please consult our technical services department for any special usage.

Cleaning Clean all equipment and tools with water immediately after use.

Dosage

The recommended dosage of PADRA-Rheo NNS-135 is between 0.60 ~ 1.80% by weight of cement. It is strongly recommended to carry out trial mixes to establish the exact dosage rate required.

Storage / Shelf life

Store under cover, out of direct sunlight. Protect from extreme temperature. Avoid of freezing. The shelf life is at least 12 months from date of production when stored as mentioned.

Packaging

PADRA-Rheo NNS-135 is available in 20 kg pails and 200 kg drums. It can be supplied in 1100 kg containers as request.

Safety precautions

PADRA-Rheo NNS-135 contains no hazardous substances requiring labeling. Although the product is non-toxic and non-hazardous, in generally, it is recommended to protect skin and eyes from contact with it. Wear gloves and goggles. In contact with eyes or mucous membrane, flush immediately with plenty or warm water and seek medical attention without delay.

Dispose of in accordance with local regulations.

