

REC NEPHTHAPLAST 124

High-range water reducing/superplasticizing admixture For ready mix concrete

PRODUCT

Rec Nephthaplast 124 is a chloride-free, high-range superplasticizer based on synthetic polymers that has a strong dispersing power over the fine particles of concrete, thus allowing the concrete to achieve higher mechanical properties.

Rec Nephthaplast 124 secures a powerful deflocculating and dispersing action of cement, which facilitates the production of fluid, self-consolidating concrete without segregation.

PROPERTIES

Rec Nephthaplast 124 provides the following properties:

- Increase concrete cohesion
- Enhances compressive, tensile, and flexural strengths at all ages
- Produces flowable concrete
- Development of High strength, especially at low W/C, can be significantly increased
- Provide High workability
- Ease of placing and compaction without segregation
- Good adhesion - ease of pumping
- Good workability - excellent surface appearance
- Minimal bleed water - excellent concrete quality
- Cement content optimized for desired mechanical strength
- Early strength development
- Concrete placement at cold weather conditions
- Concrete placement at hot weather conditions
- Improvement of concrete workability on site, used for retempering concrete workability on site
- Compatible with concrete mixes containing GGBS, PFA, silica fume and other supplementary cementitious materials
- Fluid concrete, in particular when there is a requirement to maintain fluidity over time

SCOPE OF USE

Rec Nephthaplast 124 is recommended for all types of portland cement, sulfate resisting cement, silica fume, GGBS, Fly Ash and other supplementary cementitious materials in the following areas:

- Heavily reinforced concrete works
- Paving and industrial floor
- Ready mixed concrete
- All concrete requiring a fluid consistency
- Concrete with low W/C
- Prestressed concrete
- Shotcrete
- Slipform concrete applications
- Structures with congested reinforcement where vibratory efforts are ineffective

- Concrete with high resistance against aggressive media
- High Performance concrete
- High Durability concrete
- Pervious concrete
- Long hauling concrete deliveries

CHARACTERISTICS

Appearance	Liquid (Brown)
Specific gravity at 25°C	1.27 - 1.28
Chloride content	NIL - BS 5075/EN 934-2

APPLICABLE STANDARDS

Rec Nephthaplast 124 complies with:

- ASTM C - 494 - Type D&G.
- BS 5075 Part 1
- BS EN 934, Part 2. Tables 3.1 & 3.2
- ASTM C1017 Type I & II

INSTRUCTIONS FOR USE

Rec Nephthaplast 124 is totally miscible in water. No extension to the batching time is necessary. Do not add to dry cement. Rec Nephthaplast 124 can be used on site to produce fluid concrete to a required workability. Make sure that the concrete is agitated for not less than 2 minutes at 15- 20 rpm before casting.

DOSAGE

Trials should be conducted to determine the optimum dosage of Rec Nephthaplast 124 for a particular mixture. This may be changed to higher dosage in high ambient and mixture temperature conditions.

Rec Nephthaplast 124 is typically used at dosages of 800 to 1600 mL per 100 kg of cementitious material. Other dosages are acceptable with prior testing and confirmation of the desired performance with specific materials being used. For any concrete application including highly flowable concrete mixes with slump exceeding 200 mm, the dosage of Rec Nephthaplast 124 will vary depending on the mix design, local materials, and individual needs of the concrete producer. Trial mixes should be run to verify plastic and hardened performance with local materials.

Rec Nephthaplast 124 has a linear dosage response so the dosage amount can be precisely tailored to the degree of water reduction or slump characteristics required for the application. Dosage rates vary depending upon the amount of plasticity and/or water reduction desired. Various concrete materials, slump, ambient air temperature, additions of pozzolanic



REC NEPHTHAPLAST 124

materials, mixing time, and type and brand of cement will affect dosage rates.

It is suggested that trial mixes be conducted in order to determine the required dosage for optimum performance with your concrete components. In a high performance, low water cement ratio concrete, a dosage up to 2.5 litre / 100kg total cementitious material can be practiced.

EFFECTS OF OVER DOSING

Rec Nephthaplast 124 can be used at high dosage rates without any retardation. A severe over dosage of

Rec Nephthaplast 124 will result in the following:

- Very slight delay of the initial and final setting times of the concrete mixture.
- Increase in workability
- Higher Ultimate strength when curing practices are implemented as per ACI 308R
- No more severe side effects are known with the history of Rec Nephthaplast 124

COMPATIBILITY

Rec Nephthaplast 124 is compatible with all types of Portland cement, class C and F fly ash, silica fume, ground granulated blast furnace slag, fibers and approved air entraining, accelerating, retarding, and high-range water-reducing admixtures.

Rec Nephthaplast 124 can be used in all types of Portland and sulfate-resisting cements, including those containing supplementary cementitious materials. For use with other cements, contact the company's technical service department.

Rec Nephthaplast 124 should be dispensed directly into the mixer and should not be pre-mixed with other admixtures. If other admixtures are to be used in concrete containing Rec Nephthaplast 124 they must be dispensed separately. Consult the company's technical dept. for advice.

PACKAGING

Rec Nephthaplast 124 is supplied in:

Bulk, barrels

Storage tanks can be provided for bulk use.

STORAGE

Rec Nephthaplast 124 can be stored up to 1 year from manufacturing date under cover, out of direct sunlight and protected from extreme temperatures.

HEALTH & SAFETY

In case of frost, the product recovers its properties after

progressive thawing and homogenizing by agitation. In case of contact with skin or eyes, rinse thoroughly with water. If irritation persists, seek medical attention. If swallowed, do not induce vomiting and seek medical attention.

QUALITY STATEMENT

All our products are manufactured to comply with our internal QA/QC program and quality management system to ensure consistency and quality.

DISCLAIMER

While the company guarantees its products against defective materials, the use and application of these products are made without guarantee since the conditions of their application are beyond its control. It is recommended to verify with the company that the product is suitable for the intended use, and that this Data Sheet version is the latest one. The company may modify it without prior notice. Technical characteristics are listed for guidance only. For more information, please contact the company's office in your location.

NOTE

The information included on this Technical Data Sheet is the sole property of Reckon Chemicals Pvt Ltd. The unauthorized disclosure, use, dissemination or copying (either whole or partial) of this data sheet or any information it contains, is prohibited and subject to legal pursuit.