

PADRAPAT PARS

Products for Concrete Placing



PADRA-Flow GHS-129

General purpose high performance superplasticizer

DESCRIPTION

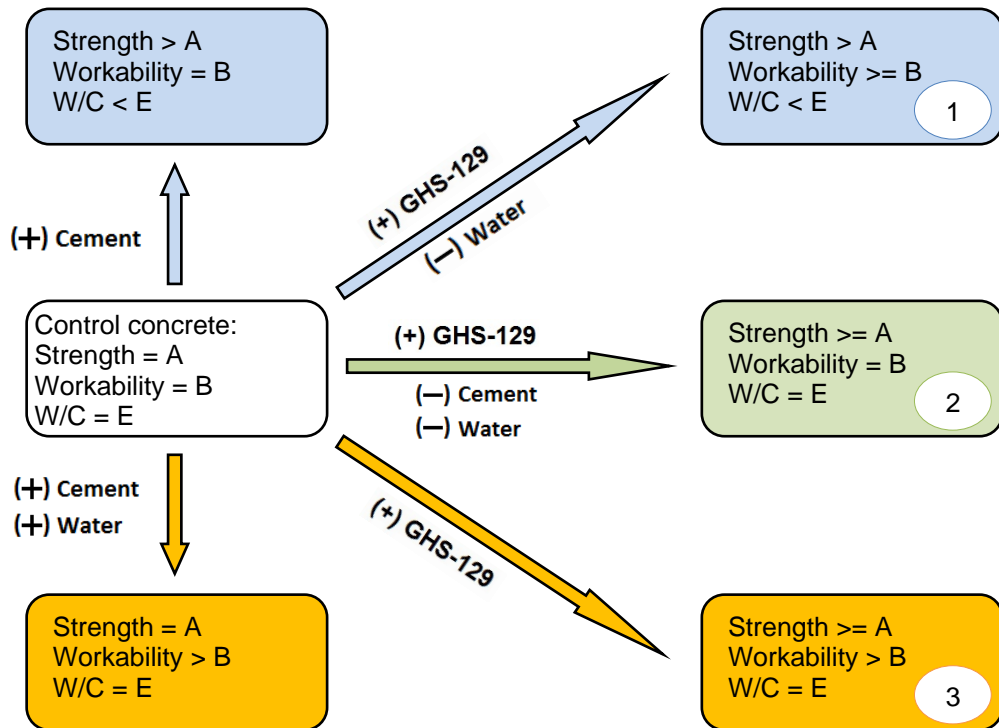
PADRA-Flow GHS-129 is a normal setting time high range water reducing admixture based on special synthetic polymers.

PADRA-Flow GHS-129 complies with ASTM C494 Type F.

USES

PADRA-Flow GHS-129 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-Flow GHS-129 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-Flow GHS-129 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-Flow GHS-129

ADVANTAGES

PADRA-Flow GHS-129 is a general purpose superplasticizer has three main advantages in cementitious concretes and mortars.

1. PADRA-Flow GHS-129 improves workability and rheological properties of concrete and mortar in fresh state without significantly affecting the setting characteristics.
2. Adding of the PADRA-Flow GHS-129 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-Flow GHS-129 has a significant role in sustainable development by decreasing raw material consumption and lowering production of greenhouse gases. Generally, PADRA-Flow GHS-129 can be useful for producing environment friendly concretes.

Therefore, the main advantages of PADRA-Flow GHS-129 can be classified as follows:

- Improved workability and rheology characteristics.
- Improves strength gain in cold climates.
- 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	Transparent
Appearance	Liquid
Density (at 25 °C)	Approximately 1.21~1.23 kg/l
Air entrainment	Maximum 1%
pH	7.5 – 8.5
Polymer content	41 ± 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-Flow GHS-129

HOW TO USE

Adding and mixing	To achieve optimum efficiency, it is recommended that PADRA-Flow GHS-129 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-Flow GHS-129 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-Flow GHS-129 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-Flow GHS-129, 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-Flow GHS-129 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 NSS-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-Flow GHS-129 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-Flow GHS-129 is between 0.60 ~ 2.50% 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-Flow GHS-129 is available in 25 kg pails and 250 kg drums. It can be supplied in 1250 kg containers as request.

Safety precautions

PADRA-Flow GHS-129 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.