Shield SPG 26AD

High Range, Water-Reducing and Retarding Superplasticizer for Concrete

MICSHIELD®

TECHNICAL DATA SHEET

Description

Shield SPG 26AD a highly efficient liquid superplasticizer designed for producing free-flowing and self-compacting concrete, or for use as a water-reducing agent to enhance ultimate strength, especially in hot and humid conditions.

Uses

- Used in the production of high-strength concrete.
- Applicable for manufacturing pumpable concrete.
- Used in pre-stressed concrete works.
- Enables the production of water-impermeable concrete.
- Suitable for exposed concrete applications.

Characteristics / Advantages

- Enhances cement hydration.
- Reduces segregation and greatly improves workability and pumpability.
- Retards the setting time of concrete.
- Improves water impermeability.
- Facilitates concrete compaction.
- Minimizes shrinkage during setting, helping to prevent cracks.
- Compatible with all types of Portland cement.
- Free of chlorides and other corrosive ingredients.

Standard Compliance

- ASTM C494/C494M: Type G
- EN 934-2: Tables 11.1 and 11.2

Packaging

Shield SPG 26AD is supplied in 1000-liter tanks. Bulk delivery on request.

Typical Properties

Appearance / Color	Dark brown liquid
Specific Gravity @ 23°C	1.23 ± 0.02
Freezing Point	0℃
Chloride Content (EN 480-10)	Nil
Nitrate Content	Nil

Application Instructions

1. Direction of Use

Shield SPG 26AD should be added either to the gauging water of the concrete mix or to the ready-mixed concrete on site, just before discharge. In this case, the concrete truck mixer should rotate additionally for 3 minutes, to achieve uniform dispersion of the admixture into the concrete mass.

2. Dosage

0.60 – 3.00% by weight of cement and supplementary cementitious materials.

It is always recommended to carry out trial mixes, since the exact dosage rates depend on many factors such as required slump, quality of cement and aggregates, water/cement ratio, ambient temperature etc.

- An excessive dosage may cause retardation of setting time, without negatively affecting the final strength of concrete.
- Never add **Shield SPG 26AD** to dry cement or dry aggregates.
- It must be considered that a low water/cement ratio increases the water impermeability of concrete.

3. Dispensing

Shield SPG 26AD is best dispensed into the mixer via automated dosing equipment as part of the batching process or, alternatively, added to the gauging water or simultaneously poured with it into the concrete mixer at the batching plant.

Shield SPG 26AD is suitable for use with all types of Portland cement (OPC and SRC) and cement blends with supplementary cementitious materials such as GGBS, PFA, and micro-silica.

4. Concrete Placement and Curing

When using **Shield SPG 26AD** in concrete, it is important to observe the rules for best-demonstrated concreting practices in production, placing, and curing. ACI Manual of Concrete Practice can provide valuable guidance.

Fresh concrete must be cured properly especially at high temperatures in order to prevent plastic and drying shrinkage. Apply a curing compound or use wet hessian and polythene.

5. Cleaning

Collect and dispose of spillage. Do not discharge into drains or watercourses or onto the ground. Soak up with an inert absorbent or container and remove in the best available method.

Shelf Life and Storage

Shield SPG 26AD has a shelf life of 12 months when stored in its original unopened packaging in cool and dry conditions, protected from direct sunlight, heat, and moisture. Shelf life may be reduced if the recommended storage conditions are not followed.

Safety Instructions

Refer to the most recent Material Safety Data Sheet for information and advice on the safe handling, storage and disposal of the product.

Limitations

- The mix design must be proportioned for the local materials used and trial mixes performed to verify admixture dosage to give the required concrete properties.
- If frozen and/or if precipitation has occurred, only use the admixture after it has been totally thawed and mixed.
- Do not add directly onto dry cement or aggregates.
- When using high-workability concrete, take special care that formwork is properly installed and secured.
- If the setting time of the concrete is extended, ensure proper curing. In this case, other properties may not be affected, and a higher ultimate strength can be achieved.
- Check compatibility when using with other admixtures.

Technical Support

Refer to technical information, method statement, or contact technical support team for any inquiry.

Address: Manaseer Group, 8th Circle, King Abdullah II St. 302
P.O. Box 925988 Amman, 11110, Jordan
Phone +962 6 5800600
Fax. +962 6 5833890
Email: info.shield@manaseer-ic.com
Website: www.manaseergroup.com

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