Wett 3510

lycarboxylate Ether (PCE) Based Superplasticizer for Concrete and Mortar Admixture

Description

It is a high-performance polycarboxylate ether (PCE)-based superplasticizer for concrete and mortar.

It reduces the water/cement ratio in concrete and mortar mixtures, provides high workability, maintains consistency for an extended period, and ensures high early and ultimate strength development.

Properties and Advantages

- Maintains the consistency of mortar for a long period
- High water reduction capability
- Extended workability time (slump retention control)
- High early and ultimate strength gain
- Low segregation and bleeding
- High flowability (suitable for self-compacting concrete)
- Improves concrete impermeability
- High performance at low dosage
- Optimized cement dispersion
- Longer consistency retention
- Reduced vibration requirement
- More homogeneous concrete structure
- Lower risk of cracking

Application Areas

- Ready-mix concrete production
- Pumped concrete
- High-performance concrete (HPC / UHPC systems)
- Self-compacting concrete (SCC)
- Precast concrete elements
- Bridge, viaduct and infrastructure concretes
- Industrial floor concretes
- Thin-section and heavily reinforced concrete
- Cement-based mortar systems

Compatibility and Limitations

The product is compatible with the following materials:

- All Portland cement-based binder systems (CEM I, CEM II, CEM III)
- Fly ash
- Microsilica (silica fume)
- Ground granulated blast furnace slag (GGBFS)
- Lime-based binder systems
- Other PCE (polycarboxylate ether) based superplasticizers (subject to pre-blend testing)
- Naphthalene sulfonate (SNF) based water-reducing admixtures (limited and controlled use)

Prior laboratory compatibility testing is recommended before direct use with the following materials and conditions:

- High-dosage aluminate-based accelerators
- Aggressive accelerator systems without controlled set retarders
- Special high-organic-content admixtures (may cause stability issues)
- Simultaneous use of multiple polymer-based admixture technologies at high dosage
- Low-quality or highly variable mineralogical composition cements.

Surface Preparation

All aggregates, cement, and mixing water used in concrete production must be clean and free from foreign substances (such as clay, organic matter, oil, salts, etc.).

For optimal performance of the mix:

- Aggregate surfaces must be clean and have an appropriate particle size distribution
- Mixing water should be potable quality and free from oil, acid, alkali, and chlorides
- Cement and mineral additives must be fresh and comply with relevant standards
- Mixing equipment (mixer, truck mixer, etc.) must be completely free from old concrete residues
- It is recommended that the entire system is dry and clean before mixing to ensure homogeneous dispersion of the admixture

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Application and Dosage

The product is added to the concrete either together with the mixing water or at the final stage of the mixing process, in accordance with the concrete mix design.

Points to consider during application:

- Recommended dosage should be in the range of 0.8% – 2.0% of the cement weight.
- The product can be added directly to the mixing water or introduced into ready-mixed concrete.
- For best performance, ensure homogeneous dispersion of the admixture within the concrete.
- In high-performance concrete applications, it is recommended to add the admixture together with the last 20–30% of mixing water.
- If necessary, field dosage adjustments may be made to improve workability.
- After addition of the admixture, mixing should continue for at least 60–90 seconds (depending on mixer type).
- When used in combination with other admixtures, addition sequence and compatibility testing must be considered.

Packaging

- 215 kg drum
- 1000 kg IBC tank

Precautions

- Overdosing may cause setting retardation
- In excessively hot conditions, loss of consistency may accelerate
- A trial mix should be carried out before application
- Compatibility testing is recommended when used with other admixtures
- Final performance depends on cement type, aggregate structure, water/cement ratio, and site conditions; therefore, on-site trial application is strongly recommended prior to use

Technical Properties

Color and Appearance	Brown liquid
Chemical Structure	Modified Polycarboxylate Ether copolymer
Density	1,06-1,08 gr/cm³
Viscosity	50 – 300 mPa·s
pH Value	4-6
Solid Content	%40-% 50
Alkali Content	≤ %0,5
Chloride Content	<%0,1
Formaldehyde Content	No / not detectable
Freezing Point	~ -3°C
Water Reduction Rate	Standard ready-mix concrete: 25%–35% High-strength concrete (HPC): 30%–40% Self-compacting concrete (SCC): 35%–50% Ultra-high performance concrete (UHPC): 45%–55%
HS Code (GTIP Code)	3824.40.00.00.00

Not: Values were obtained at 23±2°C temperature and 50±5% relative humidity.

Storage and Shelf Life

- The product should be stored in its original, unopened manufacturer's packaging.
- The storage area should be dry, cool, and well ventilated.
- The product should not be exposed to direct sunlight, rain, or excessive humidity.
- Storage temperature should be between +5°C and +30°C.
- It must be protected from freezing; freezing may irreversibly affect the product structure and performance.
- Packaging should be stored in an upright position and preferably on pallets.
- The product should not be stored together with or in close contact with different chemicals.
- Container lids must be kept tightly closed during storage.
- Products stored for a long period should be mixed until homogeneous before use.
- Under proper storage conditions, the shelf life is 12 months from the production date.

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- Products with expired shelf life should be evaluated for performance before use.Açılmış ambalajlar mümkün olan en kısa sürede tüketilmelidir.

Cleaning of tools

All tools used should be cleaned with warm water immediately after application.

Safety Precautions

- Keep out of reach of children.
- Do not swallow.
- Keep away from food.
- Do not inhale or allow contact with skin.
- May cause allergic reactions.
- In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
- Use gloves, goggles, and protective clothing during application.
- Wash hands with plenty of water after application.
- For detailed safety information, read the Material Safety Data Sheet (MSDS)

Quality certificates

- CE (EN 934-2)
- ISO 9001
- ISO 14001

9001:2015 14001:2015

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