

CHEMFIT SPERSEPRO 2000

High Range Water Reducing Admixture (Superplasticizer & Set Retarder)

PRODUCT DESCRIPTION

ChemFit SpersePro 2000 is a high-range water-reducing superplasticizer and set-retarding admixture. It is formulated to produce free-flowing concrete with low water content while providing high workability retention over extended periods. This product is ideal for high-performance concrete requiring exceptional slump retention without compromising early or ultimate strength development.

PRIMARY APPLICATIONS

ChemFit SpersePro 2000 is recommended for use in conditions such as:

- High-performance concrete (HPC) requiring high early and ultimate strengths
- Self-consolidating concrete (SCC) with high flowability
- Precast and prestressed concrete elements (columns, beams, panels, piles)
- Ready-mix concrete requiring long slump retention for distant delivery
- Concrete pumped to extreme heights or over long horizontal distances
- Hot weather concreting to combat rapid slump loss
- Dense reinforcement pours where high workability is essential

KEY FEATURES AND BENEFITS

- **High water reduction (25-35%)**– Achieves high early and ultimate strengths with lower cement content
- **Set retardation** – Delays initial and final set for extended transport and placement windows
- **Excellent slump retention**– Maintains workability for 60–90 minutes (depending on dosage & temperature)
- **Free-flowing concrete**– Eliminates vibration in many applications (SCC)
- **Chloride-free**– Safe for reinforced and prestressed concrete
- **Liquid form** – Easy to dispense and batch
- **Improved finish**– Produces dense, cohesive concrete with reduced bleeding and segregation

PHYSICAL AND CHEMICAL PROPERTIES

Property	Specification
Appearance	Liquid
Color	Light amber to straw-colored
Specific Gravity	1.08 – 1.12 at 25°C
pH Value	6.0 – 8.0
Chloride Content	Nil ($\leq 0.1\%$) – Non-corrosive to rebar
Alkali Content	< 1.5%
Freezing Point	0°C
Water Reduction	25 – 35%
Set Retardation (Initial)	60 – 180 minutes vs. plain concrete @ 25°C

PACKAGING AND STORAGE

Packaging:

- 200 L drums
- 1000 L IBCs (Intermediate Bulk Containers)

Storage:

- Store in original sealed containers at +5°C to +40°C
- Protect from direct sunlight, frost, and extreme heat
- If frozen, slowly thaw and agitate before use (do not use direct heat)

Shelf life: 12 months from date of manufacture

DOSAGE AND COVERAGE RATES

The recommended dosage of **ChemFit SpersePro 2000** is 0.6% to 3.0% by weight of cementitious material.

Low dosage (0.6% – 1.2%): Provides standard high-range water reduction with moderate set retardation

Medium dosage (1.2% – 2.0%): Delivers high-range water reduction with extended slump life

High dosage (2.0% – 3.0%): Produces maximum fluidity suitable for self-consolidating concrete with significant set retardation

Per 50 kg cement bag: Dosage ranges from 0.30 to 1.50 kg (approximately 260 to 1,300 ml) per bag

Yield per 200 L drum: Approximately 400 to 2,000 bags of cement (20 to 100 tons of cement), based on 1.0% dosage

Yield per 1000 L IBC: Approximately 2,000 to 10,000 bags of cement (100 to 500 tons of cement), based on 1.0% dosage

NOTE: Concrete trial mixes shall be carried out to confirm optimal dosage for specific project requirements, as coverage varies with total cementitious content including fly ash, slag, and silica fume.

APPLICATION GUIDELINES

ChemFit SpersePro 2000 should be added directly to the mixing water or to the wet concrete after 70% of the mixing water has been added. The concrete should be mixed for a minimum of 2 to 3 minutes to ensure uniform dispersion of the admixture. This product is compatible with all standard Portland cements, blended cements, and most supplementary cementitious materials such as slag, fly ash, and silica fume. Do not premix ChemFit SpersePro 2000 with other admixtures (including air entrainers, retarders, or accelerators) in concentrated form; add them separately to the mix, avoiding contact at the same point. If overdosed, significant set retardation and delayed strength gain may occur, and the concrete should be kept moist during the extended setting period. For best results, add this admixture after other admixtures.

HEALTH AND SAFETY

ChemFit SpersePro 2000 is not classified as hazardous under normal use. However, it may cause mild eye irritation, so if eye contact occurs, rinse thoroughly with water for 15 minutes. For skin contact, wash with soap and water. If swallowed, do not induce vomiting; instead rinse the mouth and drink water, then seek medical advice. Use nitrile gloves and goggles during handling. Refer to the Safety Data Sheet for detailed information.

CLEANG OF TOOLS

Clean all batching equipment, measuring containers, and spillages with water immediately after use. Dried or cured material may require mechanical removal.

APPROVALS AND STANDARDS

ChemFit SpersePro 2000 conforms to the following standards:

- **ASTM C494 / C494M** – Type A (Water Reducing Admixture)

- **ASTM C494 / C494M** – Type F (High Range Water Reducing Admixture)

LEGAL NOTES

All technical data provided in this Product Data Sheet is based on laboratory testing under controlled conditions. Actual field performance may vary due to differences in substrates, application methods, site conditions, and environmental factors. ChemFit makes no warranty of merchantability or fitness for a particular purpose. Users shall conduct their own trials to validate product suitability for the intended application. ChemFit reserves the right to modify product specifications without prior notice. For the most current documentation, request the latest Product Data Sheet and Safety Data Sheet from ChemFit.

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