

Superplasticising Concrete Admixture

DESCRIPTION

TamCem 23SSR is a new generation superplasticiser for concrete. It contains polycarboxylate ether polymers and is specially formulated to give exceptionally high water reduction, greater workability and extended slump retention. It is a non-chloride liquid admixture which has been formulated to comply with the requirements of EN 934-2 (Table 3.1 and 3.2) and ASTM C 494 for Type F high range water reducing / superplasticizing admixtures. TamCem 23SSR is compatible with all cements meeting recognised international standards.

Using water to increase the workability of concrete can severely weaken the setting strength. TamCem 23SSR polycarboxylate disperses cement by combining the traditional effect of electrostatic repulsion with 'steric hindrance' facilitated by the molecular structure of polycarboxylate ether-based technology. This provides greater dispersion compared with electric only repulsion from those conventional BNS and SMF based superplasticisers.

TamCem 23SSR requires a lower dosage compared to conventional superplasticisers but provides greater workability characteristics for high slump, flowable, self compacting concrete with greatly reduced water demand.

KEY BENEFITS

- > High water reduction that enhances high early and ultimate strengths, low permeability and make the concrete more durable
- > High flowability provides easy placement and compaction
- > Excellent cohesion, zero segregation and minimal bleed water despite the concrete having extremely high levels of workability
- > Exceptional slump retention; enhanced easier placement and delivery control especially under hot climate conditions
- > High elastic modulus, low shrinkage and creep are achievable with proper controlled coarse and fine aggregates
- > Superior finishes with reduced honeycombing

TYPICAL APPLICATIONS

- > High performance concrete
- > Mixing logistics efficiency during large pour
- > Highly flowable concrete
- > Highly durable concrete
- > High strength concrete
- > Ready-mixed concrete
- > Self compacting concrete
- > Mass concrete
- > Pumped concrete and wet sprayed concrete
- > Long distance transportation
- > Less environmental impact

TECHNICAL DATA

TamCem 23SSR	
Form	Liquid
Colour	Straw
Density (g/cm ³)	1.07
Chloride Ion Content	< 0.01%
All at 25°C	

All technical data stated herein is based on tests carried out under laboratory conditions.

APPLICATION GUIDELINES

Dosage can be adjusted to meet mix design requirements or to specific job site conditions. Trial concrete mixes must be carried out to determine the appropriate dosage.

An independent dispenser and feed line must be used during the application. TamCem 23SSR can be added to the mixed concrete or into the mixing water, but addition to any dry concrete mix is not recommended.

Typical dosage is 1000 ml / 100 kg of cementitious binder. Should application conditions require a higher dosage rate such as with self-compacting concrete (SCC) applications, consult your local Normet representative.

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Example of TamCem 23SSR test data in comparison with traditional admixture for wet sprayed concrete.

Mix Proportion	Test Mix A	Test Mix B
Cement	470 kg/m ³	470 kg/m ³
Steel Fibre	0 kg/m ³	0 kg/m ³
Coarse aggregate (Max. 10mm)	420 kg/m ³	420 kg/m ³
Fine aggregate (River Sand)	1280 kg/m ³	1280 kg/m ³
Water	188 kg/m ³	195 kg/m ³
Water/Cement ratio	0.400	0.415
Admixture	TamCem 23SSR	Traditional BNS Superplasticiser
Dosage by weight of binder	1.00%	1.84%

PACKAGING

TamCem 23SSR is supplied in IBCs, drums and bulk. Packaging size may vary subject to local regulations and requirements, please contact your local Normet representative for more details.

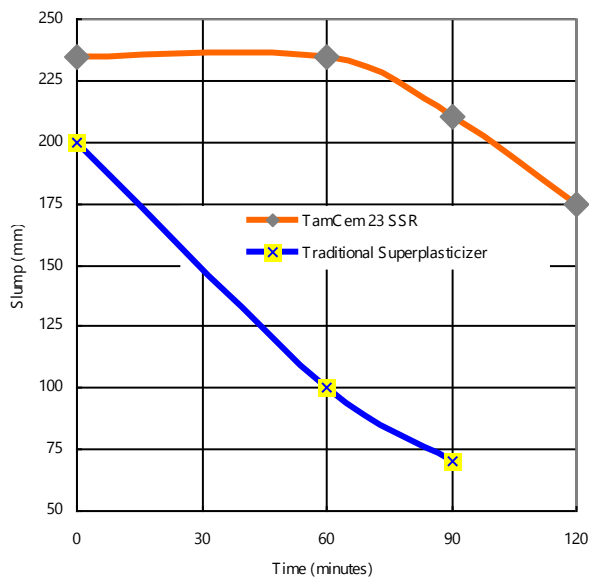
STORAGE

TamCem 23SSR should be kept dry and out of direct sunlight, stored at room temperature above 0°C. If these conditions are maintained and the product packaging remains sealed, then a shelf life of one year can be expected.

TamCem 23SSR will freeze at approximately -4°C but will return to full functionality after thawing and thorough mild mechanical agitation.

HEALTH & SAFETY

TamCem 23SSR should only be used as directed. We always recommend that the Safety data sheet is carefully read prior to application of the material. Our recommendations for protective equipment should be strictly adhered to for your personal protection. The Safety data sheet is available upon request from your local Normet representative.



TamCem 23SSR is compatible with most TamCem admixtures; please consult your local Normet representative if required.

Do not blend with other superplasticisers, water-reducers and/or set accelerators.

Whilst any information and/or specification contained herein is to the best of our knowledge, true and accurate, we always recommend that a trial be carried out to confirm suitability of the product. Please note regional climatic conditions may cause a variation in the performance of the product. No warranty is given or implied in connection with any recommendations or suggestions made by us or our representatives, agents or distributors. The information in this data sheet is effective from the date shown and supersedes all previous data. Please check with your local Normet office to confirm that this is current issue.