

Technical Datasheet

IZOZEN® IZONEP 503 PK

HIGH PERFORMANCE PLASTICISING AND SLUMP RETAINING CONCRETE ADMIXTURE

Description

IZOZEN® IZONEP 503 PK is a highly effective dual action liquid superplasticiser that imparts excellent slump retention for prolonged periods.

IZOZEN® IZONEP 503 PK provides the following properties:

As a Superplasticiser:

- Workability is greatly improved
- Concrete is placed easily
- Concrete requires less vibrating
- Especially suitable for slender components with densely packed reinforcement
- Improved cohesion of the concrete mix significantly reduces the risk of segregation and allows greater time for placement

As a Water Reducer:

- Impressive water reduction capability
- Final strength improvement

Suitable for use in hot and tropical climatic conditions

Directions for use

The standard rules of good concreting practice for production and placing must be observed when using IZOZEN® IZONEP 503 PK in concrete. Refer to relevant standards. Fresh concrete must be cured properly especially at high temperatures in order to prevent plastic and drying shrinkage. Use IZOZEN® IZOCURE products as a curing agent or apply wet hessian.

Compatibility

IZOZEN® IZONEP 503 PK may be combined with all types of Portland cement (OPC and SRC), concretes containing pozzolanic materials such as; GGBS, PFA, micro-silica.

We recommend to perform trial mixes to establish the required performance when combining IZOZEN® IZONEP 503 PK with the above products or other admixtures. Please consult our IZOZEN Technical Department.

Fields of application

IZOZEN® IZONEP 503 PK can be used as a superplasticizer for the production of free flowing concrete for: Slabs ▪ Foundations ▪ Walls ▪ Columns ▪ Piers ▪ Slender components with dense reinforcement ▪ Piles

It is also used as a water-reducing agent leading to high early strength concrete for:

- Pre-cast concrete elements
- Pre-stressed concrete
- Bridges and cantilever structures

Consumption

0.7 - 2.4 % by weight of binder.

Higher dosages by weight of binder can be used depending on the mix design, raw materials, climatic conditions and concrete requirements. Trial mixes must be performed to establish the exact dosage rate required.

Technical data

Form:	Sulphonated Naphthalene
Colors:	Dark Brown Liquid
Specific Gravity:	~1.20 kg/l (+25 °C)
Total Chloride Ion Content:	Nil
Air contents:	Less than 1%
Flash Point	None
pH-Value	~ 5-8 at 25°C
Solid content by weight	~38%

Packaging

200 L Drum, 1000 L flowbin.
Bulk supply in tanker trucks possible on request

APPROVALS / CERTIFICATES

IZOZEN® IZONEP 503 PK follows the requirements of ASTM C494; Type G

Shelf life – Storage

12 months from date of production if stored properly
Store in undamaged, unopened, original sealed packaging in dry conditions at temperatures between +5 °C and +45 °C.

Protect from direct sunlight and frost.

Remarks

Before pouring suitability tests on the fresh concrete must be carried out.

Due to the extended workability take special care that formwork is properly installed and secured. If frozen and/or if precipitation has occurred, it may only be used after thawing slowly at room temperature and intensive mixing. When using IZOZEN® IZONEP 503 PK a suitable concrete mix must be designed for the local material sources and should be trialed. When accidental overdosing occurs the set retarding effect and workability increases.

Additional air may also be entrained. During this period the concrete must be kept moist in order to prevent premature drying out.

IZOZEN® Health and Safety Message

- Always wear safety goggles, Mask, Helmet when working with hazardous materials.
- Follow safety procedures at all times when using power tools.
- Make sure your work area is tidy and free of trip hazards.
- Watch where you're walking – don't run in the workplace!
- Always use the appropriate lifting technique when moving heavy objects.
- Keep jewelry and other loose objects away from machinery.
- Don't eat or drink near hazardous materials.
- Report unsafe conditions immediately to your supervisor.
- Wear the correct clothing for the job – no loose clothing or jewelry!
- Take regular breaks and stay hydrated while working.
- Always be aware of your surroundings.
- Always use personal protective equipment when working with chemicals.

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The technical information and instructions supplied in this datasheet are based on the knowledge and experience of the Research and Development Department of our company and on results from long-term applications of the product in practice. The recommendations and suggestions referring to the use of the product are provided without guarantee, since site conditions during the applications are beyond the control of our company. Therefore the user is responsible for confirming that the chosen product is suitable for the envisaged application. The present edition of this technical datasheet automatically cancels any previous one concerning the same product. | Edition: 2025