

ISO TARD T111[®]

ISOTEC

SET RETARDING, PLASTICIZING ADMIXTURE FOR TBM BACKFILL GROUT

FEATURES

ISO TARD T111[®] is a special retarder and plasticizer for TBM backfill grouts. It is a non chloride liquid admixture formulated to give water reduction, greater workability and extended open time.

ISO TARD T111[®] is a high performance admixture especially designed for conditioning annular grout mixes injected behind the segmental concrete lining of TBM constructions.

ISO TARD T111[®] extends the hydration process by retarding both initial and final set times and enhances strength through cement particle dispersion. In TBM backfill grouts the setting and hydration control can be regulated using silicate accelerators such as **ISO SHOOT S101**.

ADVANTAGES

- TBM backfill grout admixture.
- Hot weather concrete and grouting.
- Peak temperature controlled concrete.
- Ideal for long distance transportation of ready mixed concrete.
- Mixing logistics efficiency during large pour.
- High performance concrete.

APPLICATION

ISO TARD T111[®] is recommended for all areas of use of high-performance concrete, it provides

- Good cohesion, no segregation and minimal bleed water with extremely high levels of workability.
- Controllable, long open time, enhanced placement and delivery control.
- Provides low viscosity.

- High elastic modulus, low shrinkage.
- Generates good pumping abilities.
- Increasing the compressive, tensile and flexural strength of annular grout mixes.
- Superior surface finishes.

PACKAGING

ISO TARD T111[®] is available in IBC and other pack size.

PRODUCT DATA

Homogeneity	Homogenous
Colour	Brown to Dark Brown
State	Liquid
Density (20°C)	1.09 ± 0.02
pH-value	5.5 ± 2
Chloride content	chloride free acc. to BS EN 934-2
Alkali content (Na ₂ O equivalent)	< 8.5 mass-%

Dosage

The dosage can be adjusted to meet the mix design requirements or to specific job site conditions. Due to the different compositions of annular grout mixes, the necessary dosage quantity varies and needs to be determined in field trials.

An independent dispenser and feed line must be used during the application.

ISO TARD T111[®]

The ISOTEC logo consists of the word "ISOTEC" in white, bold, sans-serif capital letters, centered within a red shield-shaped background.

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Effect of Overdose

Overdose of **ISO TARD T111[®]** may result in delay of initial setting, higher workability and may result in increased air content.

Compatibility

ISO TARD T111[®] is suitable for concrete designs containing OPC or SRC cement, micro-silica or silica fume, fly ash (PFA), Bentonite and ground granulated blast furnace slag (GGBS).

Standard specifications

ISO TARD T111[®] complies with the requirements of EN 934-2 and ASTM C494 for Type B retarding.

Method of Use

ISO TARD T111[®] can be added to the mixed concrete/grout, or into the mixing water, but addition to any dry concrete/grout mix is not recommended.

In forced action mixers the mixing time should be at least 60 seconds per m³.

Precaution

ISO TARD T111[®] should not be used in conjunction with any naphthalene based admixture.

When using other admixtures in the same concrete mixture, the products should be added separately and must not be blended prior to addition.

Using more than one admixture requires suitability and preliminary tests in order to ensure the required combination of its effects is attained.

Storage

ISO TARD T109[®] should be stored at a temperature above °10 C.

Do not store the product at high temperatures over a long period of time.

Store under cover, out of direct sunlight and protect from extremes of temperature.

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Shelf Life

Approx. 1 year from date of production if stored properly.

Health, safety & environment

ISO TARD T111[®] is classified as non hazardous according to the CLP regulations.
See safety data sheet for further information

Legal Notes

The information provided in this data sheet, are given in good faith based on our current knowledge and experience of the product when properly stored, and applied by professional applicator, and under normal conditions in accordance with the mentioned recommendations. In practice under actual site condition differences are such that no warranty can be issued nor any liability can be taken, arising out of any legal relationship whatsoever. The product must be tested onsite to check its suitability for the intended application and purpose



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