Rescon T®

03.09

Anti-washout admixture for underwater concrete

AREA OF USE

Rescon T® is an anti-washout admixture in powder form, for use with under water concrete and mortar.

PROPERTIES

Addition of **Rescon T®** makes concrete suitable for all types of underwater applications:

- The cohesiveness of the concrete increases which prevents washout of cement, and does not cloud the water and reduce visibility during placement.
- The concrete is stabilised, separation in water is prevented.
- The concrete becomes self-compacting.
- Stability of concrete during pumping is ensured
- Flow properties are enhanced.

Can be used for all underwater concrete, irrespective of application:

- Constructions
- Concrete bases
- Repairs and renovation

Underwater concrete containing **Rescon T®** is suitable for all the usual methods of underwater placement:

- Pumping
- Tremie
- Bucket and crane
- Concrete chute
- Sack method

DOSAGE

The normal dosage of **Rescon T®** is from 4 to 6 kg/m^3.

FORMULATION TESTS

The proportioning of underwater concrete must always be adjusted to the materials available and the methods of production and application.

The mix proportioning is based upon the documentation of working properties of trial batches. In certain cases trial casting underwater should be performed for verification of concrete characteristics, and to ensure that the combination of concrete and working equipment functi-ons satisfactorily. The picture below shows how the operation and the flow properties are controlled in an L-shaped form.

L-box for testing Rescon T

As a basic principle, a representative from Rescon Mapei AS should give advice during the formulation of under water concrete, if the concrete suppliers themselves do not have the necessary experience.

UNDERWATER CASTING

The concrete should have as little contact with water as possible during the operation. When in contact with water the flow of concrete must be as even and steady as possible.

Generally, placement by pumping is emphasised as a more reliable method than conventional tremie, because the concrete can be subjected to greater forces than those of gravity alone. The placement pipe can then be used at greater depths, which gives a more favourable flow profile with less risk of sedimentation.

The difference between the two methods is particularly large, in favour of pumping, for placement in shallow water, i.e. with shorter pipes. The risk of airlock formation is also eliminated. Pumping, in most cases, also gives a higher rate of placement, resulting in a faster build up.

The flow properties of underwater concrete with **Rescon T®** can be adjusted with all types of superplastici-sing admixtures, except for those which are naphthalene based.

Good workability t-concrete: slump flow > 550 mm

Produsent:
Rescon Mapei AS
Vallsetvegen 6, 2120 Sagstua, Norway
Tlf: +47 62 97 20 00 Fax: +47 62 97 20 99
post@resconmapei.no
www. resconmapei.com

PACKAGING

Rescon T® is delivered in 10 kg bags. The product has a minimum shelf life of 1 year when stored dry, in original unopened packaging.

SAFETY INSTRUCTIONS

For health, safety and environmental information, see separate HSE datasheet at **www.resconmapei.com**.

WARNING

Although the technical details and recommendations contained in this product report correspond to the best of our knowledge and experience, all the above information must, in every case, be taken as merely indicative and subject to confirmation after long-term practical applications; for this reason, anyone who intends to use the product must ensure beforehand that it is suitable for the envisaged application; in every case, the user alone is fully responsible for any consequences deriving from the use of the product.

All deliveries from Rescon Mapei AS are made in accordance with the sale and delivery conditions applicable at the time, and these conditions are taken tobe accepted on placement of an order.

TECHNICAL DATA	
Product specifications	
Type:	*Powder*
Colour:	*Grey/white*

TYPICAL UNDERWATER CONCRETE (kg/m³)

Constituents:	**Conventional under water concrete**	**Under water concrete B30 M60**	**Under water concrete B45 M40**
Cement:	*420*	*380*	*475*
Silica:	*25*	*20*	*35*
Sand (< 8 mm):	*1020*	*860*	*820*
Coarse aggregate (D_{max} 22 mm):	*730*	*860*	*820*
Rescon T ®:		*5*	*5*
Plastisicing admixture:	*3*		
Superplastsicing admixture:	*3*		*2-3*
Total water:	*180*	*218*	*212*
Mass ratio:	*0,39*	*0,53*	*0,39*

Testing at Vattenfall Research and Development AB in compliance with the Swedish Public Roads Administration`s Publication Bro 2002:50

COMPARISON OF RESULTS AND REQUIREMENTS

	Requirement value	**Result value**	**Resultat A or N**
Level difference form type 1 (mm):	*≤50*	*10*	*A*
Level difference form type 1 (mm):	*≤100*	*25*	*A*
Compressive strength 28 days, cubes, average value in compliance with SS-EN 206-1 (MPa):	*≥39*	*40,5*	*A*
Compressive strength 28 døgn, cubes, value in compliance with SS-EN 206-1 (MPa):	*≥31*	*39,4*	*A*
Compressive strength, cylinder, in compliance with BBK (MPa):	*≥30*	*45,8*	*A*
Compressive strength, cylinder, in compliance with BBK (MPa):	*≥23,0*	*42,4*	*A*
Compressive strength, cylinder, variation coefficient in core in compliance with BBK (%):	*≤10*	*8,0*	*A*
Compressive strength, cylinder, variation coefficient in core in compliance with BBK (%):	*≤7*	*4,8*	*A*
Aggregate content of cediment/sludge (weight %):	*≥50*	*>70-80*	*A*

A = Approved
N = Not approved

Produsent:
Rescon Mapei AS
Vallsetvegen 6, 2120 Sagstua, Norway
Tlf: +47 62 97 20 00 Fax: +47 62 97 20 99
post@resconmapei.no
www. resconmapei.com