



Rescon T[®]

**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/m³.

FORMULATION TESTS

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

The choice of composition 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 functions 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[®]*



*Good workability
T-concrete:
slump flow
> 550 mm*

As a basic principle, a representative from 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 superplasticising admixtures, except for those which are naphthalene based.

PACKAGING

Rescon T® is delivered in 10 kg bags and 6 kg bucket.

STORAGE

The product has a minimum shelf life of 1 year when stored dry, in original unopened packaging.

SAFETY INSTRUCTIONS FOR PREPARATION AND INSTALLATION

Instructions for the safe use of our products can be found on the latest version of the SDS available from our website www.mapei.no

PRODUCT FOR PROFESSIONAL USE.

WARNING

Although the technical details and recommendations contained in this product data sheet 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 application: 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.

Please refer to the current version of the technical data sheet, available from our web site www.mapei.no

LEGAL NOTICE

The contents of this Technical Data Sheet ("TDS") may be copied into another project-related document, but the resulting document shall not supplement or replace requirements per the TDS in force at the time of the MAPEI product installation.

The most up-to-date TDS can be downloaded from our website www.mapei.no

ANY ALTERATION TO THE WORDING OR REQUIREMENTS CONTAINED OR DERIVED FROM THIS TDS EXCLUDES THE RESPONSIBILITY OF MAPEI.

All relevant references for the product are available upon request and from www.mapei.no

TECHNICAL DATA (typical values)

PRODUCT IDENTITY

Type:	powder
Colour:	grey/white
Density (g/cm ³):	1,82

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	825
Coarse aggregate (D _{max} 22 mm):	720	860	825
Rescon T®:		5	5
Plastisizing admixture:	3		
Superplastsizing admixture:	3		2 - 3
Total water:	180	218	212
Mass ratio:	0.39	0.53	0.39

TESTING AT VATTENFALL AB IN COMPLIANCE WITH THE SWEDISH PUBLIC ROADS ADMINISTRATION'S PUBLICATION BRO 2002:50

COMPARISON OF RESULTS AND REQUIREMENTS

	Requirement value	Result value	Result 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 EN 206-1 (MPa):	≥ 39.0	40.5	A
Compressive strength 28 døg, cubes, value in compliance with EN 206-1 (MPa):	≥ 31.0	39.4	A
Compressive strength, cylinder, in compliance with BBK (MPa):	≥ 30.0	42.4	A
Compressive strength, cylinder, in compliance with BBK (MPa):	≥ 23.0	39.3	A
Compressive strength, cylinder, variation coefficient in core in compliance with BBK (%):	≤ 10.0	8.0	A
Holding strength, cylinder, variation coefficient in core in compliance with BBK (%):	≤ 7.0	4.8	A
Aggregate content of cediment/sludge (weight %):	≥ 50	> 70 - 80	A

A=Approved • N=Not approved