

MasterMatrix UW 444

Underwater concrete admixture

Complies with BS 8443:2005 - Specification for establishing the suitability of special purpose concrete admixtures - Table 2 - Underwater Concrete Admixtures

DESCRIPTION AND WHERE TO USE

MasterMatrix UW 444 anti-washout admixture is a ready to use, powdered admixture specially developed for concrete placed underwater. Concrete treated with MasterMatrix UW 444 exhibits superior resistance to washout of cement and fines.

MasterMatrix UW 444 admixture is recommended for use in all types of concrete pumped or placed underwater, where thixotropic action is desired. MasterMatrix UW 444 admixture is especially helpful in extreme conditions where conventional concrete or placing techniques would result in a high percentage of material loss due to washout.

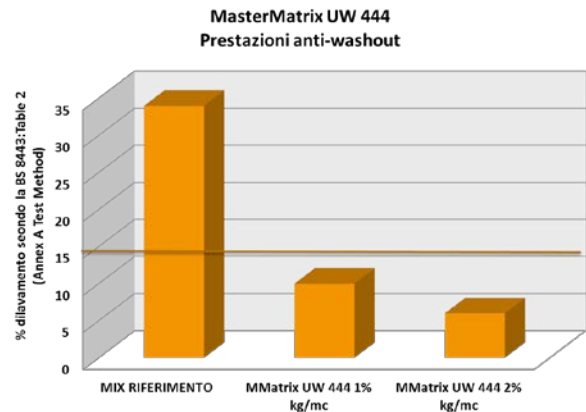
BENEFITS

MasterMatrix UW 444 admixture produces a concrete mixture highly resistant to washout, while maintaining workability, pumpability, and placeability. The following special qualities are also provided:

- Minimal to no effect on water demand.
- Reduces or eliminates concrete bleeding.
- Slump characteristics equal to untreated concrete.
- Virtually eliminates segregation even with highly fluid, high water-cementitious ratio mixes.
- Reduces/eliminates costly methods of de-watering.
- Thixotropic action provides stiffening after concrete is placed.
- Minimises environmental impact of cement washout in water.
- Minimal to no effect on set time.

TYPICAL RESULTS: WASHOUT RESISTANCE

Washout as determined by Annex A of BS 8443:2005 "Determination of Washout", reports the performance of MasterMatrix UW 444 admixture treated concrete compared to untreated concrete. This requires that an anti-washout admixture must result in a washout value of less than 15% when compared to the EN 480 control mix.



Anti Wash Out Performance

SLUMP RETENTION

Results from slump loss studies taken over a 60 minute period indicate MasterMatrix UW 444 admixture does not adversely affect concrete slump retention.

SET TIME

MasterMatrix UW 444 admixture has little to no effect on concrete set time.

AIR CONTENT

A slightly higher dosage of air entraining admixture may be required to achieve the desired air content when using MasterMatrix UW 444 admixture.

COMPRESSIVE STRENGTH

MasterMatrix UW 444 admixture has an effect on compressive strength. It is strongly recommended that trial mixes be carried out to establish the correct performance.

APPLICATION

MasterMatrix UW 444 should be used in conjunction with a high range water reducing admixture from the BASF MasterGlenium SKY range.

This combination will produce a high performance, high strength, low water-cementitious ratio concrete that exhibits its superior resistance to washout of cement and fines.

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Technical Information	
Form	Powder, beige
Uncompacted Bulk Density (kg/l at 20°C)	0,770

DASAGE RATE

For most concrete mixtures MasterMatrix UW 444 admixture is recommended for use at a dosage range of:

By Mass - 1.5 to 3.0 kg per cubic metre of concrete, typically 2.0 kg will give less than 15% washout at a cement content of 450 kg/m³ and a w/c ratio of less than 0.45.

Due to variations in job conditions, applications and concrete materials, dosage rates outside the recommended range may be required.

PACKAGING AND STORAGE

MasterMatrix UW 444 is available in 15 kg paper sacks.

MasterMatrix UW 444 should be stored in a dry non-humid environment. Store under cover, out of direct sunlight and protect from extremes of temperature. Failure to comply with the recommended storage conditions may result in premature deterioration of the product or packaging.

For specific storage advice, consult BASF Construction Chemicals Technical Services Department.

If stored in unopened bags, according to manufacturer's instructions, the shelf life is 18 months.

From 16/12/1992 BASF Construction Chemicals Italia Spa operates under the Quality System in compliance with European Standard UNI-EN ISO 9001. The environmental management system of BASF Construction Chemicals Italia Spa is certified accordingly to UNI EN ISO 14001 and the System of Safety Management is certified accordingly to OHSAS 18001. Environment sustainability: Partner Green Building Council since 2009.

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For further information, please consult your local BASF Construction Chemicals Italia Spa representative.

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Supersedes all prior issues on this product.

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