

MasterMatrix[®] UW 404

Anti - washout admixture

DESCRIPTION

MasterMatrix UW 404 anti-washout admixture is a ready to use, liquid admixture specially developed for concrete placed underwater. Concrete treated with MasterMatrix UW 404 exhibits superior resistance to washout of cement and fines.

ADVANTAGES

MasterMatrix UW 404 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 concrete bleeding.
- Slump characteristics equal to untreated concrete.
- Virtually eliminates segregation, even with highly fluid, high water-cementitious ratio mixes.
- Thixotropic action provides stiffening after concrete is placed.
- Minimises environmental impact of cement washout in water.
- Minimal to no effect on set time.
- Reduced pumping pressures.

PRIMARY USES

MasterMatrix UW 404 is recommended for use in all types of concrete pumped or tremied underwater, where thixotropic properties are desired. MasterMatrix UW 404 is especially helpful in extreme conditions where conventional concrete or placing techniques would result in a high percentage of material loss due to washout.

MasterMatrix UW 404 is particularly useful in mortar and grouting applications where mixes are typically more fluid and have a higher potential for washout.

PACKAGING

MasterMatrix UW 404 is supplied in 210 litre drums.

SET TIME

MasterMatrix UW 404 has little to no effect on concrete setting time.

AIR CONTENT

A slightly higher dosage of air entraining admixture may be required to achieve the desired air content when using MasterMatrix UW 404.

COMPRESSION STRENGTH

MasterMatrix UW 404 has marginal effect on compressive strength. It should be noted that most underwater concrete mixes proportioned in accordance with ACI 304R have greater compressive strengths than specified. If additional strength is required with the use of MasterMatrix UW 404, a lower water/cement ratio may be necessary.

RECOMMENDATIONS

For underwater concrete placements, ACI 304R, Chapter 8, "Concrete Placed Underwater" recommends certain basic mixture proportions such as:

Total cementitious materials:	356kg/m ³ or more
Pozzolans:	15%

Fine aggregate content:	45-55% by volume of total aggregate
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Air content:	up to 5%
Slump:	150 to 230mm

MasterMatrix UW 404 should be used with a water reducing admixture from the MasterPozzolith or MasterGlenium product ranges. Due to incompatibility MasterMatrix UW 404 should not be used in conjunction with MasterRheobuild admixtures with the exception of MasterRheobuild 2000M. For achieving high slump concrete MasterMatrix UW 404 should ideally be used in conjunction with a MasterGlenium admixture.

If other Master Builders Solutions admixtures are to be used with MasterMatrix UW 404, please contact your representative as some admixtures are not compatible.

MasterMatrix® UW 404

DOSAGE

MasterMatrix UW 404 is recommended for use at a dosage range 0.8-1.6 litre/100kg of cementitious material for most concrete mixes using average concrete ingredients. Because of variations in job conditions, applications and concrete materials, dosage rates outside the recommended range may be required.

MasterMatrix UW 404 should be added at the batch plant after all other concrete ingredients have been mixed and discharged into the mixer. It is also possible to add MasterMatrix UW 404 at the job site provided adequate mixing is accomplished.

TEMPERATURE PRECAUTION

Material must be stored at temperatures above 7°C to avoid dispensing difficulties due to thickening. Do not allow material to freeze. MasterMatrix UW 404 admixture cannot be reconstituted after thawing.

STORAGE

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 Master Builders Solutions Construction Chemicals Egypt's Technical Services Department.

SAFETY PRECAUTIONS

MasterMatrix UW 404 is not a fire or health hazard. For further information, refer to material safety data sheet.

NOTE

Field service, where provided, does not constitute Supervisory responsibility. For additional information contact your local Master Builders Solutions representative.

Master Builders Solutions reserves the right to have the true cause of any difficulty determined by accepted test methods.

QUALITY AND CARE

All products manufactured by Master Builders Solutions Egypt, or imported from Master Builders Solutions affiliate companies world-wide, are manufactured to procedures certified to conform to the quality, environment, health & safety management systems described in the ISO 9001:2015, ISO 14001:2015 & OHSAS 18001:2007 standards.

* Properties listed are based on laboratory controlled tests.

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