

RHEOMAC[®] UW404

Anti – Washout Admixture

Description

RHEOMAC UW404 anti – washout admixture is a ready to use, liquid admixture specially developed for concrete placed underwater. Concrete treated with RHEOMAC UW404 exhibits superior resistance to washout of cement and fines.

Uses

RHEOMAC UW404 is recommended for use in all types of concrete pumped or tremmied underwater, where thixotropic properties are desired. RHEOMAC UW404 is especially helpful in extreme conditions where conventional concrete or placing techniques would result in high percentage of material loss due to washout.

RHEOMAC UW404 is particularly useful in mortar and grouting applications where mixes are typically more fluid and have higher potential for washout.

Advantages

RHEOMAC UW404 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

Typical Properties

Aspect	: Brown liquid
Relative Density	: 1.05 ± 0.02 at 25°C
pH	: ≥ 6
Chloride ion content	: < 0.2%

Specification Clause:

The Anti-washout admixture shall be RHEOMAC UW404, a ready to use liquid formulation. The product shall have average relative density of 1.05 at 25°C.

Direction for use

RHEOMAC UW404 is a ready-to-use liquid which is dispensed into the concrete together with the mixing water. The addition of RHEOMAC UW404 to dry aggregate or cement is not recommended.

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%
Max. w : c ratio	: 0.45
Fine aggregate content	: 45 – 55% by volume of total aggregate
Air content	: up to 5%
Slump	: 150 to 230mm

RHEOMAC UW404 should be used with a water reducing admixture from the POZZOLITH or GLENIUM product ranges. Due to incompatibility RHEOMAC UW404 should not be used in conjunction with RHEOBUILD admixtures. For achieving high slump concrete RHEOMAC UW404 should ideally be used in conjunction with a GLENIUM admixture.

If other BASF admixtures are to be used with RHEOMAC UW404, please contact your BASF representative as some admixtures are not compatible.

Dosage

RHEOMAC UW404 is recommended for use at a dosage range 0.4 – 1.0 kg/100 kg of cementitious material for most concrete mixes using average concrete ingredients. Because of variations in concrete materials, job site conditions, and/or applications, dosages outside of the recommended range may be required. In such cases, contact your local BASF representative.

RHEOMAC UW404 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 RHEOMAC UW404 at the job site using smaller concrete mixers provided adequate mixing is accomplished.

For addition information on RHEOMAC UW404 admixture or on its use in developing concrete mixes with special performance characteristics, contact your local BASF representative.

In the event of over dosage, consult your local BASF representative immediately.

Slump retention:

Results from slump loss studies taken over a 60 minute period indicate RHEOMAC UW404 does not adversely affect concrete slump retention.

Set time:

RHEOMAC UW404 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 RHEOMAC UW404.

Compressive strength:

RHEOMAC UW404 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 RHEOMAC UW404, a lower water/cement ratio may be necessary.

Packaging

RHEOMAC UW404 is supplied in 20 kg pails and 210 Kg drums or in bulk on request.

Temperature Precaution

Material must be stored at temperatures above 7°C to avoid dispensing difficulties due to thickening. Do not allow material to freeze. RHEOMAC UW404 admixture cannot be reconstituted after thawing.

Storage and Shelf life

RHEOMAC UW404 must be stored where temperatures do not drop below +5°C. If product has frozen, thaw at +5°C or above and completely reconstitute using mild mechanical agitation. Do not use pressurized air for agitation. Store under cover, out of direct sunlight and protect from extremes of temperature.

Shelf life is 12 months when stored as above.

Failure to comply with the recommended storage conditions may result in premature deterioration of the product or packaging. For specific storage advice consult your local BASF representative.

Safety precautions

As with all chemical products, care should be taken during use and storage to avoid contact with eyes, mouth, skin and foodstuffs (which can also be tainted with vapour until product fully cured or dried). Treat splashes to eyes and skin immediately. If accidentally ingested, seek immediate medical attention. Keep away from children and animals. Reseal containers after use. Do not reuse containers for storage of consumable item. For further information refer to the material safety data sheet. MSDS available on demand or on BASF construction chemicals web site.

Note

All BASF Technical Data Sheets are updated on regular basis; it is the user's responsibility, to obtain the most recent issue. Field services where provided, does not constitute supervisory responsibility, for additional information contact your local BASF representative.

Disclaimer

Whilst any information contained herein is true, accurate and represents our best knowledge and experience, no warranty is given or implied with any recommendations made by us, our representatives or distributors, as the conditions of use and the competence of any labour involved in the application are beyond our control.

TDS Ref. no.: Rmcxxuw404/02/0111

BASF India Limited

Construction Chemicals Division

Plot No.37, Chandivali Farm Road, Chandivali, Andheri(East)

Mumbai – 400072 India

Tel: +91 22 28580200, Fax: +91 22 28478381

e-mail: basfcc@vsnl.net www.basf-cc.co.in

