

MasterRheobuild 554

High range water-reducing admixture for concrete
EN - 934 - 2 : T 3.1/3.2

DESCRIPTION

MasterRheobuild 554 is a naphthalene sulphonate based high range water reducing/ superplasticizer admixture that improves the early and final strengths of concrete by giving Rheoplastic property.

- Low permeability
- High durability
- Reduced shrinkage and creep
- Highly reliable in-place structural integrity

THE CHEMISTRY

Admixtures generally go into reaction only with the binder. When the admixture is added to the concrete, it is absorbed by the particles of the binder. The particles of the binder push each other by electrostatic force. Thus, the desired workability is obtained by less amount of water. Proportional with the decrease of mixture's water amount, mechanic strength increases.

APPLICATION PROCEDURE

MasterRheobuild 554 is introduced into the mixer together with water. The plasticising effect or water reduction is higher if the admixture is added to the damp concrete after 80% of the water has been added. The addition of MasterRheobuild 554 to dry aggregate or cement is not recommended, as it lowers the plasticising effect or water reduction.

FIELDS OF APPLICATION

Recommended for use in:

- Concrete where high plasticity, normal-setting characteristics and accelerated strengths are desired
- Prestressed, precast and ready-mixed concrete applications
- Civil and mining applications

DOSAGE

MasterRheobuild 554 is suggested to be used as 1.0-1.5 kg for 100 kg binder (cement-microsilica-fly ash). The dosage to be used must be determined beforehand by laboratory experiments according to concrete class and properties. Master Builders Solutions Yapı Kimyasalları Sanayi ve Ticaret Ltd.Şti Technical Service Department must be consulted for detailed information.

FEATURES and BENEFITS

- Less dependence on consolidation energy
- Job time and cost reduced through higher productivity rates and/or reduced labor
- Early strength allows for accelerated construction methods, resulting in completion dates ahead of schedule
- Engineering specification changes can allow for greater limits on the free-fall of concrete, lift heights, concrete temperatures and potential economic mixture adjustments.

COMPATIBILITY

MasterRheobuild 554 can be used with all types of **EN 197 Cements**. For use with other special cements, contact with Master Builders Solutions Yapı Kimyasalları Sanayi ve Ticaret Ltd.Şti Technical Services Department.

MasterRheobuild 554 should not be pre-mixed with other admixtures. If other admixtures are to be used in concrete containing MasterRheobuild 554 they must be dispensed separately.

Plastic State:

- Controlled set times
- Cohesive and non-segregating
- Minimal bleed water

MasterRheobuild 554 is compatible and recommended for use with:

- MasterX-Seed - Crystal Speed Hardening Concept for accelerated early strengths
- MasterMatrix to modify the viscosity of SCC.
- MasterFinish, demoulding agents for easy formwork removal and improved finish.
- MasterKure, curing compounds for highly efficient water retention and friendly use.

Hardened State:

- Higher earlier strengths than can be achieved with conventional high-range
- water reducers
- Increased ultimate compressive strength
- Higher modulus of elasticity
- Improved bond strength to steel

MasterRheobuild 554 is **not compatible** with all admixtures of MasterGlenium series. When such complimentary admixtures are required it is important that laboratory trials are performed, prior to any

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supply, to determine the respective dosages of any complimentary admixture, and the suitability, in the fresh and hardened state, of the resultant concrete. In these circumstances we recommend that you consult Master Builders Solutions Yapı Kimyasalları Sanayi ve Ticaret Ltd.Şti Technical Services Department for further advice.

PACKAGING

1200 kg tank
Bulk

Product Data	
Structure of the Material	Naphtalene Sulphonate Based
Appearance	Dark Brown
Specific gravity @ 20°C	1.178 - 1.238 kg/l
pH-value	5-7
Alkali content (%)	≤ 10.00 (by mass)
Chloride content (%)	≤ 0.10 (by mass)
Corrosion behavior	Contains only components according to BS EN 934-1:2008, Annex A.1
Dangerous substances	Comply with annex AZ.
Logistics	
Shelf life	12 months if stored according to manufacturer's instructions in unopened container.
Storage conditions	Store in original sealed containers and at temperatures between 5°C and 30°C. 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.
Handling and transportation	Refer to MasterRheobuild 554 Safety Data Sheet.
Disposal	Refer to MasterRheobuild 554 Safety Data Sheet.

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HEALTH AND SAFETY

*For full information on Health and Safety matters regarding this product the relevant Health and Safety Data Sheet should be consulted.

The following general comments apply to all products.

As with all chemical products, care should be taken during use and storage to avoid contact with eyes, mouth, skin and foodstuffs, (which may also be tainted with vapor until the product is fully cured and dried). Treat splashes to eyes and skin immediately. If accidentally ingested, seek medical attention. Keep away from children and animals. Reseal containers after use.

SPILLAGE

Chemical products can cause damage; clean spillage immediately.

DISCLAIMER

"Master Builders Solutions Yapı Kimyasalları Sanayi ve Ticaret Ltd.Şti " (the Company) endeavors to ensure that advice and information given in Product Data Sheets, Method Statements and Material Safety Data Sheets (all known as Product Literature) is accurate and correct. However, the Company has no control over the selection of its products for particular applications. It is important that any prospective customer, user or specifier, satisfies him/her-self that the product is suitable for the specific application. In this process, due regard should be taken of the nature and composition of the background/base and the ambient conditions both at the time of laying/applying/installing the material and when the completed work is to be brought into use. Accordingly, no liability will be accepted by the Company for the selection, by others, of a product, which is inappropriate to a particular application. Products are sold subject to the Company's standard conditions of sale and all customers, users and specifiers, should ensure that they examine the Company's latest product literature.

CONTACT INFORMATION

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