

MasterCast 777

High range water reducing admixture specially designed for use in Manufactured Concrete Products

Material Description

MasterCast 777 is an innovative multi-purpose plasticizer based on a carefully selected blend of polymers, specially developed for use in concrete blocks or in other dry-mix applications.

MasterCast 777 is a key component to our FIT 4 VALUE concept.

FIT 4 VALUE considers the four elements essential for MCP Manufactures:

- FIT for Economics
- FIT for Performance
- FIT for Aesthetics
- FIT for Durability

Here, FIT means meeting every requirement for economics, performance, aesthetics and durability.

Areas of Application

MasterCast 777 is suitable for Manufacturing Concrete Products, especially:

- Concrete Block Manufacture
- Dry-mix applications

Characteristics and Benefits

MasterCast 777 offers the following benefits for the MCP industry to:

- Improving cohesion which allows the use of a wider range of aggregates without loss of quality.
- Lubricating the concrete mix to improve compaction.
- Giving greater cement savings (10-15%) whilst maintaining required compressive strength.
- Improving the finished appearance of the product even with poor shaped aggregates.
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- Preventing premature drying of the concrete blocks in warm or windy conditions.

Application procedure

MasterCast 777 primarily has a threefold action:

- It disperses the cement particles within the mix and thus improves the cement hydration.
- It increases the mobility of the cement paste and thus improves compaction. This also means that segregation and bleeding are controlled thus giving increased strength in the hardened state.
- It increases early strength development thus allowing for earlier lifting of blocks hence reducing labour costs and improving plant efficiency.

Dosage

The normally recommended dosage rate of MasterCast 777 is approximately 0.4% by weight of cement (bind-er) content.

The dosage rates given above are for typical usages, they are not meant as absolute limits, as other dosages may be utilised in special cases according to specific job conditions. If required consult our Technical Services Department for advice. Trial mixes should be carried out to ensure optimum dosage and effect.

Mixing

MasterCast 777 is supplied ready for use. The admixture should be added to the concrete mix at the same time as the water. MasterCast 777 should never be added directly to the cement. MasterCast 777 should not be used in conjunction with other admixtures without prior consultation with our Technical Department.

MasterCast 777 can be used with all types of EN 197 Cements. For use with other special cements, contact our Technical Services Department.

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MasterCast 777 should not be pre-mixed with other admixtures. If other admixtures are to be used in concrete containing MasterCast 777 400 they must be dispensed separately. If any complimentary admixtures are required it is important that trials are performed, prior to any 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 our Technical Services Department for further advice.

Effects of Overdosing

Overdosing using MasterCast 777 can cause the following effects:

- Considerable increases in workability.
- Increased air entrainment.
- Retardation of initial and final set.

If over-dosing does occur please consult our Technical Department for recommendations.

Packaging

MasterCast 777 is supplied in 1000-litre IBC's and 15-litre containers.

Contact Details

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Product Data	
Appearance	Dark Brown Liquid
Specific gravity @ 20°C	1.18 ± 0.02 g/cm ³
pH-value:	5.0 ± 1
Chloride content (%)	≤ 0.10 by mass
Alkali content (%):	≤ 4.00 by mass
Sulphate (SO ₃ %)	0.07
Compressive strength – 28 day	≥ 75% of Reference mix
Air content in fresh concrete	≥ 2.5% by volume of Reference mix & total air content between 4% & 6%
Air void characteristics in hardened concrete	Spacing factor in test mix ≤ 0.200 mm
Chloride content	Max 0.1% by mass
Alkali content	Max 2.0% by mass
Corrosion behaviour	Contains only components according to BS EN 934-1:2008, Annex A. I

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Dangerous substances	No Performance Determined
Durability	No Performance Determined
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 MasterCast 777 Safety Data Sheet
Disposal:	Refer to MasterCast 777 Safety Data Sheet

Disclaimer

MasterCast 777, Master Builders Solutions UK Ltd, Version 6

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 vapour 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 UK Ltd" (the Company) endeavours 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

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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.