

MasterPel 788 (Formerly known as Rheomac 788)

Water-proofing admixture

DESCRIPTION

MasterPel 788 is a ready-to-use liquid admixture for use in concrete designed to inhibit the passage of water. **MasterPel 788** is based on a highly concentrated, chloride-free integral water-proofing admixture. **MasterPel 788** has the property of reducing the amount of water required to produce a desired workability. In addition, it delays the setting time and assists optimum compaction to achieve denser less permeable concrete.

FEATURES/BENEFITS

MasterPel 788 provides the following benefits to fresh and hardened concrete.

- reduces unit water content
- increases workability and reduces segregation
- increases effectiveness of cement
- increases compressive strength
- increases density
- improves impermeability

PRINCIPLE

Concrete absorbs water when it is in contact with water. When water is pressed against concrete, it passes through the concrete resulting in water leakage. Concrete is usually mixed with more water than necessary for cement hydration to give easier placing properties to the concrete. As a result, after drying, concrete contains a large amount of continuous micro pores, paths from bleeding water, and voids beneath large aggregate which all serve to provide water passages through the concrete. These greatly affect water absorption and permeability of concrete.

Improved workability and reduction of water by use of **MasterPel 788** decreases segregation and bleeding, reduces micro pores, water passage and free water accumulation. As a result, water absorption and permeability are improved considerably.

Further, the absolute volume of cement usually becomes smaller after hydration, and a large number of micro pores are created. These also serve as water passages. Since **MasterPel 788** makes concrete dense enough, it greatly reduces the passage of water as time elapses. **MasterPel 788** ensures this at the most economic cement content.

PROPERTIES

Form	: Liquid
Colour	: Dark brown
Specific Gravity	: 1.16 - 1.20
pH	: 8.0 – 10.0

DOSAGE

Normally used at the rate of 200 - 500 ml per 100 kg of cementitious content for most concrete mixes using average concrete ingredients. Higher dosage rates may be required for bored piles and high ambient temperatures.

TEST DATA

	Plain Concrete	Concrete with MasterPel 788
Cement (Kg/m ³)	350	350
W/C	0.54	0.49
Admixture (ml)	-	1,225
A/C Ratio	5.5	5.5
Slump (mm)	50	50
Compressive Strength (%)	100	120
* Permeability Test Value (mm)	59	26
Diffusion Value (βl ² x 10 ⁻⁴ cm ² /sec)	46.6	13.9

* Tested by dia. 150 x height 150 mm cylinder cured for 14 days in the standard condition, thereafter dried at room temperature and 20 kg/cm² static pressure applied to the water in contact with one side of the test piece.

OTHER PRODUCTS FOR IMPROVING IMPERMEABILITY OF CONCRETE

- **MB-SF**
- **MasterRheobuild**
- **Masterkure**

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COMPATIBILITY

MasterPel 788 is compatible for use in concrete containing other Master Builders Solutions admixtures such as high range water reducers, accelerators, densifiers and shrinkage reducers.

When two or more admixtures are used, they must be added to the mix separately (through dispensers or by hand) and must not be mixed with each other prior to adding to the concrete mix.

PACKAGING

205 litre drum or bulk delivery.

PRECAUTIONS

Health: **MasterPel 788** does not contain any hazardous substances requiring labelling.

It is safe for use with standard precautions followed in the construction industry, such as use of hand gloves, safety goggles, etc.

For detailed Health, Safety and Environmental Recommendations, please consult and follow all instructions in the product Material Safety Data Sheet

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STATEMENT OF RESPONSIBILITY

The technical information and application advice given in this Master Builders Solutions publication is based on the present state of our best scientific and practical knowledge. As the information herein is of a general nature, no assumption can be made as to a product's suitability for a particular use or application and no warranty as to its accuracy, reliability or completeness either expressed or implied is given other than those required by commonwealth or State legislation. The owner, his representative or the contractor is responsible for checking the suitability of products for their intended use.

NOTE

Field service where provided, does not constitute supervisory responsibility. Suggestions made by Master Builders Solutions either verbally or in writing may be followed, modified or rejected by the owner, engineer or contractor since they, and not Master Builders Solutions are responsible for carrying out procedures appropriate to a specific application.

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