BASF
The Chemical Company

MasterSeal 588

Formerly: Thoroseal FX100

Elastomeric waterproof coating for concrete and masonry in water retaining structures subject to movement

Approved under regulation 31 of the Water Supply (Water Quality) regulations 2000

DESCRIPTION

MasterSeal 588 powder and liquid when mixed forms a brushable waterproof slurry, which cures to a flexible elastomeric membrane. It is applied to a minimum 2 mm thickness in two coats by stiff brush, broom or spray.

FIELD OF APPLICATION

- Water retaining structures which may be subject to movement.
- As part of the basement waterproofing system, in areas sensitive to movement, vibration and settlement
- To protect concrete from water of low pH or soft quality, carbonation and de-icing salts
- Suitable for internal and external use, against positive and negative water pressure
- As a resilient coating to protect concrete on bridge parapets, columns, piers, on land and in marine environments
- Waterproofing of new structures where movement is expected from drying shrinkage
- Once cured, a 2mm thick MasterSeal 588 membrane will accommodate up to 0.5mm, or 1.5mm of movement when reinforced with FX Mesh.

Note: MasterSeal 588 is not suitable for prolonged contact with hydrocarbons such as petrol, fuel oil, etc.

FEATURES AND BENEFITS

- Reg 31 approved for use with potable water
- Retains flexibility when submerged
- Good chemical resistance against soft water, domestic and sewage waste water and other liquids moderately aggressive to mineral substrates
- Resistant to occasional foot traffic
- 2mm of cured coating equivalent to 500mm of concrete cover
- Freeze/thaw resistant
- Water vapour permeable*
- Solvent free – safe to handle and use, environmentally friendly

*Contact BASF Plc, Construction Chemicals for specific advice

TESTS AND APPROVALS

Approved by the Secretary of State for the Environment under Regulation 31 of the Water Supply (Water Quality) Regulations 2000. Specific instructions for use are available upon request.

APPLICATION METHOD

For tanking applications refer to the Basement Waterproofing Guide.

Substrate quality

Substrates to be treated must be completely clean, structurally sound and mechanically keyed. All surface coatings, defective renders, foreign matter, formwork treatments and other contaminants that may affect the bond adversely should be removed.

(a) Surface Preparation

Substrates should be prepared by abrasive blasting or high-pressure water treatment. Do not use scabbling or any other aggressive method.

All mortar joints to be flush-pointed.

Repair with MasterSeal 590 and/or MasterEmaco S 420 or MasterEmaco mortars as required.

All wall/floor intersections to be prepared by cutting a 20mm by 20mm chase along the junctions and filling with MasterSeal 590, finishing in an angle fillet to “round out” the junction.

Water infiltration through the substrate to be treated should be either diverted by drainage or concentrated at weepholes, which will be plugged with MasterSeal 590 after the application of the final coat of MasterSeal 588.

Basements in areas containing high levels of soil or ground water sulphates may require a pre-treatment render. Consult BASF Plc, Construction Chemicals for details.

(b) Mixing

Liquid content

10 litres of MasterSeal 588 liquid per 25 kg bag of MasterSeal 588 powder.

Mechanical Mixing

Provide adequate ventilation when mixing and applying MasterSeal 588 powder and liquid.

Blend the powder into the mixing liquid. Use a suitable mixing paddle in a slow speed drill (400 - 600rpm). Mix until a lump-free, slightly viscous slurry is obtained. This should be achieved within 2 minutes. Do not over mix.

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Allow the mixed material to stand for 10 minutes for full saturation to take place. If applying by spray add 0.4litre of MasterSeal 588 liquid. Re-mix for 10 - 20 seconds before use.

Mixed material must be used within 60 minutes from the start of mixing, or less under hot weather conditions.

Do not re-temper the mix.

(c) Application

Note: Do not apply to frozen substrates or if the ambient temperature exceeds 30°C or is below 5°C or expected to fall below 5°C within 24 hours.

Always apply the mix to a pre-dampened substrate. High-suction substrates require more dampening than dense substrates. Ensure there is no free standing water on the substrate prior to application. The nominal thickness per coat must be between 1.0 and 1.5mm.

Application Methods

MasterSeal 588 can be applied by *brush, broom or spray. MasterSeal 588 must not be applied by trowel.

* A suitable brush will be 6" (150mm) in width and have a short pile comprising stiff nylon bristles of 3" (80mm) in length.

The first coat MUST be worked into the substrate with a stiff brush, while still wet, to ensure an intimate bond to the substrate, even when applied by spray.

FINISHING AND CLEANING

Tools, equipment and spillages should be cleaned immediately with clean water.

CURING

Damp cure for 24 hours after which time the MasterSeal 588 must be allowed to air dry.
In cold, humid or unventilated areas it may be necessary to leave the application for a longer curing period or to introduce forced air movement.
NEVER use dehumidifiers during curing periods.

WORKING TIME

45 minutes in 20 ºC ambient and substrate temperature.

PACKAGING

MasterSeal 588 powder is available in 25kg bags.

MasterSeal 588 liquid is supplied in 10ltr plastic containers.

COVERAGE

Approximately 21m² per pack at 1mm thickness in one coat.

Apply 2 coats.

Coverage is influenced by the roughness of the substrate. On rough substrates the quantities required will increase significantly.

STORAGE

MasterSeal 588 should be stored under cover, clear of the ground and stacked not more than 6 bags high. Protect the materials from all sources of moisture and frost.

SHELF LIFE

Rotate stock in order not to exceed the shelf life of 12 months.

WATCH POINTS

- If MasterSeal 588 is used to waterproof fish tanks, it should be washed down after curing is complete with salt water and rinsed with clean water. Repeat the rinsing until the required pH conditions are obtained. Failure to do this and to monitor the pH of the water until stable can lead to the death of fish.

HANDLING AND TRANSPORT

Usual preventive measures for the handling of chemical products should be observed when using this product, for example do not eat, smoke or drink while working and wash hands when taking a break or when the job is completed.
Specific safety information referring the handling and transport of this product can be found in the Material Safety Data Sheet. For full information on Health and Safety matters regarding this product the relevant Health and Safety Data Sheet should be consulted.

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Disposal of product and its container should be carried out according to the local legislation in force. Responsibility for this lies with the final owner of the product.

CONTACT DETAILS

BASF plc,
Construction Chemicals,
19 Broad Ground Road
Lakeside
Redditch
Worcestershire
B98 9LJ
Tel: +44 (0) 1527 512255
Fax +44 (0) 1527 503576
www.master-builders-solutions.basf.co.uk

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Product Data			
Property	**Standard**	**Unit**	**Data**
Density of mixed material	EN 1015-6	kg/m^3	approx. 1680
Maximum particle size	-	mm	0.6
Mixing time	-	minutes	Approx. 2
Standing time	-	minutes	10 maxium
Workability time	-	minutes	Within 60 (+20ºC)
Total applcation thickness	-	mm	2
Application temperature (substrate and material)	-	ºC	from +5 to +30
Water vapour permeability	-	µ	985
Resistance to chloride ion penetration	-	%	0.001
Tensile strength 28 days	-	MPa	0.64
Adhesive strength 28 days	-	Mpa	1.00
Freeze/thaw resistance	ISO/DIS 4846.2	-	No scaling after 50 cycles
Water absorption	Astm 642	%	1.5
Positive side waterproofing	-	bar	1.5
Negative side waterproofing	-	bar	1.0
Static crack bridging:	EN 1062-7	mm	0.5 Reinforced with mesh 1.5
CO_2 permeability	-	µ	100,000
Equivalent concrete cover to 2mm of coating	-	mm	500 (P35 grade concrete)

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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 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.

Solvent Based Products
Use in well ventilated areas; avoid inhaling. Suitable respiratory equipment may be needed, eg when spraying. Can cause skin, eye irritation. Wear protective eye shields and gloves during use. Do not smoke or allow sparks or naked lights when stored or in use.

Resin Products
Can cause irritation, dermatitis or allergic reaction. Use protective equipment particularly for skin and eyes. Use only in well ventilated areas.

Spillage
Chemical products can cause damage; clean spillage immediately.

DISCLAIMER
"BASF plc, Construction Chemicals" (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 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.