

# MasterSeal® 7000 CR

**Waterproofing and protection system based on Xolutec™ technology two component membrane for wastewater facilities and harsh chemical environments**

## Product Specification and Method Statement:

Application of 1 coat with minimum total approximate thickness of 0,2 (or 0,3) mm of two-component, Xolutec based primer MasterSeal P 770, from Master Builders Solutions (or analogous) followed by application of a total approximate thickness of 0,8 mm of the two-component Xolutec based waterproofing membrane MasterSeal M 790 from Master Builders Solutions (or analogous).

The system comprises:

- Primer for damp substrates and resisting to rising moisture: **MasterSeal P 770**.
- Chemical resistant and crack bridging waterproofing membrane: **MasterSeal M 790**.

## System specification:

- Mechanically prepare the substrate using captive shot blasting, floor plane and/or diamond grinding as required to remove all contamination and provide a clean, sound substrate suitable to receive the product.
- Repairs to the substrate and other works must be completed using the appropriate Master Builders Solutions repair products in good time prior to the application. All surfaces to be coated must be sound, firmly fixed, clean, visible dry, smooth and free from voids or protrusions.
- Prepared substrate will be primed using MasterSeal P770 (see manufacturer datasheet).
- MasterSeal M 790 waterproofing membrane will be hand or spray applied using a brush, a roller or specific spraying equipment (see manufacturer datasheet).
- All materials are to be mixed and installed in accordance with the manufacturer's instructions and good site practice.

## Building Information Electronic Modelling (BIM) tools:

The manufacturer will deliver 3D electronic objects of the system (including adequate primers according the considered substrate) to be included in specific electronic building modelling tools.

## System specification:

Application	Test method	Request
Application temperature (substrate and material)	-	from +5 to +35°C
Maximum substrate moisture (during application)	-	not restricted, but surface must be visibly dry
Maximum relative humidity (during the application)	-	not restricted, but there should be no condensation on the surface

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Property	Test method	Request
Impermeability to water under pressure:	EN 12390-8	≥ 5 bar
Resistance to negative pressure	Based on UNI 8298	≥ 2,5 bar
Capillary water absorption:	EN 1062-3	< 0,1 kg/m <sup>2</sup> · h <sup>0.5</sup>
Permeability to water vapour:	EN ISO 7783-1 EN ISO 7783-2	Sd > 120 m
Permeability to carbon dioxide:	EN 1062-6	Sd > 200 m
Crack bridging:	EN 1062-7 (A) Static:	≥ A3 (+23°C), A3 (0°C)
		≥ A2 (-10°C)
	EN 1062 – 7 (B) Dynamic:	≥ B3.1 (+23°C)
		≥ B2 (-10°C)
Abrasion resistance:	EN ISO 5470-1 (Taber H22, 1000 g, 1000 c)	< 200 mg
Impact resistance:	EN ISO 6271-1	> 20 Nm
Adhesion:	EN 1542	> 2,9 N/mm <sup>2</sup>
Adhesion after thermal compatibility:	EN 13687-1 + EN 13687-2	> 2,7 N/mm <sup>2</sup>
Adhesion on wet concrete	EN 13578	> 2,2 N/mm <sup>2</sup>

Chemical Resistance	Test method	Request
Resistance to biogenic acid corrosion	Accelerated 6 month period equivalent to 48 to 60 month period in real sewer system	After accelerated test: <ul style="list-style-type: none"> <li>- No significant change in tensile strength and permeability.</li> <li>- Adhesion tests show cohesive failure on concrete substrate.</li> </ul>
Resistance to severe chemical attack	EN 13529 Reduction in hardness of less than 50%	Class III (28 days with pressure) No defects for Groups 1, 2, 3, 4, 5, 5a, 6, 7, 10, 11, 12, 14, 15a  Class II (28 days without pressure) No defects for Groups 1, 2, 3, 4, 5, 5a, 6, 7, 10, 11, 12, 14, 15a  With and without pressure 5 days No defects for Groups 4a, 6a, 9, 9a, 13 and 15

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These properties shall be documented by means of test reports after independent testing or supplier attestation after internal testing.

Chemical resistance will be documented after testing fully hardened product against required chemicals following EN 13529 procedure with a maximum reduction in hardness of 25% when measured according to Shore method EN ISO 868 24 h after the coating is removed from immersion in the test liquid.

## **Required approvals for the product:**

- Long term resistance against biogenic sulfuric acid corrosion.
- Compliance with EN 1504 part 2 according following principles:
  - Principle 1.2 Protection against ingress. Surface coating with crack bridging ability.
  - Principle 2.2 Moisture control. Surface coating.
  - Principle 5.1 Physical resistance. Coatings.
  - Principle 6.1 Resistance to chemicals. Overlays and coatings.
  - Principle 8.2 Increasing resistivity by limiting moisture content by surface treatments (coatings).

Delivery of CE marking documents (Declaration of Performance) is mandatory.

## **Required certifications for the supplying company:**

The product should be manufactured by a company certified to conform to the requirements of the quality, environmental and occupational health & safety standards ISO 9000 series and ISO 14001.

## **Required qualifications for the application company:**

- Company with minimum of 5 years' experience in application of specified products and systems on projects of similar size and scope. (Optionally: successful completion of a minimum of 5 projects of similar size and complexity to specified work.).
- Approval or certification (including specific training) by the product manufacturer of the material.

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