

MasterSeal[®] M 695

A highly elastic, ultra-fast curing, cold-spray applied, 100% polyurea waterproof and abrasion resistant, trafficable membrane

DESCRIPTION

MasterSeal M 695 is a specially formulated 100% pure, two-component, polyurea, spray applied membrane system. Especially designed for easy application by cold spray methods, in a wide range of climatic conditions it is not affected by high levels of moisture during the spraying or curing processes.

With a shore D hardness of approximately 40 making it is ideal for light commercial and industrial applications, where abrasion and impact are required.

It is a 100% solids product that contains no VOC's or solvents. Designed to be sprayed through proprietary low pressure spray machines (Please contact Master Builders Solutions Technical Department for further information).

MasterSeal M 695 is an economical lining for a wide variety of applications requiring long term protection against abrasion, impact, corrosion and containment.

TYPICAL APPLICATIONS

- Roof top waterproofing – green roofs. Wet area waterproofing, box gutters, podium decks, retaining walls
- Industrial floors, access ramps, service lift floors
- Water and waste water tank linings
- Secondary containment linings
- Infrastructure protection – pylons, power pole bases,
- Pile cap encapsulation as part of Master Builders Solutions integrated basement waterproofing solutions (see separate Method Statement and system specification for further information)
- Kitchens, toilets and shower areas in prisons, sport grounds, apartment complexes etc.
- Internal washable linings for food vans, ambulances, military vehicles
- Chutes, hoppers and storage bins – sand, gravel and grain

- Animal enclosures – zoos and parks

ADVANTAGES

- Low pressure cold-spray applied: an economical alternative to high pressure, hot spray systems 100% pure polyurea technology applied by low pressure cold spray application
- Applied using special low pressure proportioning, 110 / 240 volt, cold spray application equipment
- Spray applied – seamless
- Can build to any thickness in one application
- Fast reactivity and cure times even in less than ideal climatic conditions
- Fast return to service time, long life-cycle, maintenance free, significant savings
- Excellent abrasion resistance
- Excellent adhesion on concrete, steel, aluminium, wood, foam etc.
- Can be applied across multiple substrate types in one application
- Good resistance to most standard chemicals, cleaners, fuels and oils
- Excellent vibration and noise absorption capabilities
- High impact & abrasion resistance whilst still maintaining flexibility
- 100% solids, VOC-free, no solvents
- Water and weather-proof and saltwater resistant
- Excellent thermal stability -20°C to 130°C

PACKAGING

Part A: 20 litres and 200 litres
Part B: 20 litres and 200 litres

COLOURS

MasterSeal M 695 is available in Mid-Grey and Blue.

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APPLICATION GUIDELINES

SURFACE PREPARATION

The preparation of the substrate and the use of the appropriate primer are of paramount importance. All surfaces to which **MasterSeal M 695** is applied should be sound, clean and dry and free from oil or grease, loose particles and any other substances which may impair adhesion.

Concrete and cementitious screed

Concrete and other cementitious substrates must have a minimum pull off strength of 1.5N/mm². Any laitance present on the surface must be removed mechanically. Shot blasting is the preferred method. Release oil and other contaminants which may impair adhesion must be removed prior to the application of the primer.

Steel

Steel substrates be clean and completely oil and grease free. They should be mechanically grit blasted to Sa2 1/2 standard or St 3 standard when hand mechanical methods such as grinding are used.

APPLICATION NOTES

Material consumption [L/m ² /1mm]	Approx. 1 litre
Recommended thickness [mm]	Minimum: 2 Maximum: unlimited
Temperature range for application (ambient) [°C]	10°C to 40°C Optimal 15-30°C
Temperature range for application (substrate) [°C]	5°C to 40°C
Material temperature (Preconditioning) [°C]	25°C-35°C
Material temperature (Spraying) [°C]	15°C-35°C
Maximal relative air humidity for application [%]	98%
Gel time at 20°C [sec.]	Approx. 30 seconds (dependent on the temperature of the substrate)
Tack free-time at 20°C [sec.]	1-3 seconds (dependent on the ambient temperature)
Over coat cycle [h]	0-12 (without any pre-treatment)
Curing/loading after [h]	Walkable: 1 Mechanical: 4-8 Chemical: 12-24

The drying times depend on the climate and environmental influences, e.g. ambient temperature, substrate temperature, relative humidity and ventilation etc.

For best results ensure the chemical components are between 25-35°C whilst spraying. In cold climates pre-heating the chemical components is advised. Chemical components will increase in viscosity at colder temperatures and at temperatures below approximately 15°C the effectiveness of the component mixing can be reduced.

For additional information see detailed Method Statements.

STORAGE AND SHELF LIFE

Store in closed, original containers, under dry conditions in well ventilated place and at temperatures between 10-30°C. Beware of freezing.

Shelf life is approximately 12 months.

Failure to comply with the recommended storage conditions may result in premature deterioration of the product or packaging. For specific storage advice consult Master Builders Solutions Technical Services Department.

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TYPICAL TECHNICAL DATA

Material Properties	Result
Composition	Part A: MDI-Prepolymer Part B: Polyetheramine-Mixture
Colour	Straw colour un-pigmented
Solids content DIN EN 827 / ASTM D2697	100%
VOC-content DIN EN ISO 11890-1 / ASTM D1259	0%
Mixing ratio of Comp. A to Comp. B	1 : 1 by volume
Cured Membrane Properties	
Modulus [MPa] ISO 37-2005 / ASTM D638	100% Elongation: ≥8 300% Elongation: 11
Elongation at break [%] ISO 37-2005 / ASTM D638	300-350
Hardness [Shore D] ISO 868-2003 / ASTM D2240	40 ± 5
Rebound resilience [%] ISO 4662 / ASTM	≥25
Tear growth resistance[N/mm] ISO 34-1 method A	≥32
Taber Abrasion [mg] ASTM D4060	10 (Wheel CS17 / 1.000g / 1000 Cycles) 70 (Wheel H18 / 1.000g / 1000 Cycles)
Peel off strength [N/mm] ISO 813 / ASTM	Concrete: ≥ 4 Steel: ≥ 8
Pull off strength [N/mm ²] DIN EN ISO 4624 / ASTM D4541	Concrete: ≥ 1,5 Steel: ≥ 6
Max. Service temp. [°C] ISO 11346 / ASTM D2485	Wet: 40 Dry: 130 Peak temperature dry: 150
Water absorption [%] ASTM D570	≥1.4

QUALITY AND CARE

All products originating from Master Builders Solutions Dubai, UAE facility are manufactured under a management system independently certified to conform to the requirements of the quality, environmental and occupational health & safety standards ISO 9001 and ISO 14001.

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* Properties listed are based on laboratory controlled tests.

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STATEMENT OF RESPONSIBILITY

The technical information and application advice given in this Master Builders Solutions publication are 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 law. The user is responsible for checking the suitability of products for their intended use.

NOTE

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