

MasterSeal M689

A highly elastic, non-solvented, ultra fast curing, spray applied polyurea coating for use in waterproofing applications

DESCRIPTION

MasterSeal M689 is a non-solvented, two component waterproofing membrane. It is highly reactive and can only be applied by special two component spray equipment.

FIELD OF APPLICATION

MasterSeal M689 is used in a variety of waterproofing applications where a degree of chemical resistance is required.

These include sewage effluent, and secondary containment bunds within the dirty water, chemical and petrochemical industries.

MasterSeal M689 can be applied to the majority of substrates irrespective of falls. Spray delivered and ultra fast cure enables easy application to form a monolithic waterproofing membrane on simple and complex surfaces. Refer to individual system data sheets.

FEATURES AND BENEFITS

- Application to vertical surfaces without runs
- Easy application to complicated details
- Fast installation
- Can be applied to a wide range of substrates with the appropriate primer
- Monolithic – no welds or seams
- No welding, no torches, no hot works
- High water vapour permeability – low risk of blistering
- Excellent mechanical properties
- Excellent chemical resistance
- Excellent crack bridging properties
- Resistant to standing water
- Thermoset – does not soften at high temperatures and remains elastic at low temperatures; Tg approx. – 45°C
- Non-solvented

SUBSTRATE PRETREATMENT

The primer, or base layer to which MasterSeal M689 is to be applied must be clean and dry and free from oil, grease and loose material and any other contamination which might impair adhesion.

Primer selection will depend on substrate type. Application should take place within the re-coat interval of the primer, or base layer, to which it is to be applied. Refer to product data sheet.

APPLICATION CONDITIONS

For best results substrate and air temperature should be in the range 5–35°C.

Spray machine equipment, e.g. Greco type, will precondition the membrane components to the correct temperature 70–80°C prior to application. However, in very cold conditions the use of barrel heaters may be required to ensure the optimal operation of barrel pumps.

The temperatures should not fall below the minimum stated until the material is fully cured. The temperature of the substrate must be at least 3°C above the dew point both during the application and for at least a further 2 hours (at 15°C).

APPLICATION

MasterSeal M689 can only be applied by means of a suitable two component spray machine. The choice of machine depends on the type and size of work and the ease of access. For advice, please contact Master Builders Solutions UK Ltd

Due to the fast reaction it is possible to rapidly build thickness from 1.5 to > 6mm.

Check mix ratios are correct at the start of spraying and regularly throughout the day.

Surrounding areas should be protected from overspray by masking off. Care should be taken to prevent spray mist being carried by wind by erecting suitable barriers.

COVERAGE

MasterSeal M689 is normally applied at 1.7–2.2kg/m²; this corresponds to a thickness of 1.5–2.0mm. Details require a higher coverage rate up to 4.0kg/m² or more.

FINISHING AND CLEANING

Tools may be cleaned immediately after use with soapy water, once curing has commenced use xylene or other suitable solvent.

CURING

Tools must be cleaned immediately after use with xylene or other suitable solvent.

WORKING TIME

3 hours in 23 °C ambient and substrate temperature.

PACKAGING

MasterSeal M689 is supplied in drums.

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Component A 200 kg
Component B 225 kg

STORAGE

Store in original containers under normal warehouse conditions: Off the ground, dry and at a temperature between 5–30°C. Do not expose to direct sunlight.

SHELF LIFE

For maximum shelf life under these conditions, see "Best before....." label.

EU Regulation 2004/42 (Decopaint Guideline)

This product conforms to the EU directive 2004/42/EG (Deco-Paint directive) and contains less than the maximum allowable VOC limit (Stage 2, 2010).

According to the EU directive 2004/42, the maximum allowable VOC content for the Product Category IIA / j is 500 g/l (Limit: Stage 2, 2010). The VOC content for MasterSeal M689 is < 500 g/l (for the ready to use product).

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.

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

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Product Data	
Mixing ratio	
By weight	100:112
By volume	100:100
Density g/cm ³ at 20°C	
Component A	1.00
Component B	1.11
Viscosity mPas at 20°C	
Component A	220
Component B	800
Processing Temperature °C	
Component A	70-80
Component B	70-80
Processing Pressure bar	
Component A	120-200
Component B	120-200
Gel time sprayed / sec	5
Re-coat intervals at 20°C	
minimum / hours	2
maximum / hours	6
Fully cured at 20°C / hours	2
Ambient and substrate temperature	
minimum / °C	5
maximum / °C	35
Relative humidity maximum / % RH	85
Physical properties after 28 days	
Shore A hardness	95
Shore D hardness	45
Tensile Strength / N/mm ² DIN53504	21
Elongation / % DIN53504	425
Tear strength / N/mm DIN53515	58
Water vapour permeability g/mm(m ²)(24 h) DIN 53122	16.5

The above figures are intended as a guide only and should not be used as a basis for specifications.

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Master Builders Solutions UK Ltd 19 Broad Ground Road Lakeside, Redditch Great Britain B98 8YP	
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4M68901	
EN 1504-2:2004	
Surface protection product - coatings	
Linear shrinkage	NPD
Compressive strength	NPD
Abrasion resistance	≤ 3000 mg
Permeability to CO ₂	Sd > 50
Permeability to water vapour	Class I
Capillary absorption and permeability to water	< 0.1 kg/(m ² xh ^{0.5})
Thermal compatibility after freeze-thaw cycling	≥ 1.5 N/mm ²
Resistance to severe chemical attack	Reduction of hardness < 50 %
Impact resistance	Class III
Adhesion strength by pull-off test	≥ 1.5 N/mm ²
Reaction to fire	C _s -s1
Skid resistance	NPD

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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

"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 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.