

MasterSeal[®] M 860

2C-PU/PUA waterproofing membrane, highly elastic, for hand applications

DESCRIPTION

MasterSeal M 860 is a two-component, hand applied, self-levelling, elastomeric polyurethane-polyurea hybrid membrane

FIELDS OF APPLICATION

MasterSeal M 860 is used in a variety of concrete water-proofing applications including balconies, terraces, podium decks and car park decks. It's also used in roofing applications where there is no requirement for a fire retardant coating.

FEATURES AND BENEFITS

- monolithic – no laps, welds or seams
- fully bonded
- excellent mechanical properties
- excellent crack bridging capability
- resistant to puncture
- resistant to standing water
- thermoset – do not soften at high temperature
- remain elastic at low temperatures (Tg approx – 5 °C)
- can be re-coated after only a few hours

APPLICATION METHOD

(a) Surface Preparation

The preparation of the substrate and the use of the appropriate primer are of paramount importance. All surfaces to which **MasterSeal M 860** is applied should be sound, clean and dry and free from oil or grease, loose particles and any other substances which may impair adhesion. For substrate pre-treatment prior to the primer application see primer technical data sheet.

Concrete and cementitious screeds

Concrete and other cementitious substrates must have a minimum pull off strength of 1.5 N/mm². Any laitance present on the surface must be removed mechanically. Shot blasting or scabbling is the preferred method.

Release oil and other contaminants which may impair adhesion must be removed prior to application of the primer.

Asphalt)

The asphalt should be cleaned by high pressure water jetting. In mechanically stressed applications the load bearing capacity of the asphalt should be suitable for the intended use and should be shot blasted so that at least 60 % of the surface aggregate is exposed. Blisters should be warmed, re-dressed and a de-bond tape applied over.

Bitumen felts

Blisters should be opened, dried out and repaired. Major cracks should be repaired and taped with de-bond tape.

Warning: **MasterSeal M 860** will not bond to black APP modified bitumen felts nor is a suitable primer available.

Plywood

All joints should be flush and taped prior to the application of the primer. All fittings must be flush with or sunk lower than the surface.

Iron and steel

Iron and steel should be sand blasted to Sa 1/2 finish prior to application of the primer.

Primer

Use the following guide to select the appropriate primer:

Substrate	Primer
Bitumen felt	MasterSeal P 698
Concrete/cementitious screed	MasterSeal P 770 MasterTop P 2525 MasterSEal P 658
Asphalt screed (mind. AS-IR10)	MasterTop P 660 or MasterTop BC 375 N
Plywood (preliminary tests are recommended)	MasterSeal P 770 or MasterSeal P 691
GRP/GFK	MasterSeal P 691
Iron and steel	MasterSeal P 681
Non-ferrous metals (e.g. aluminium, zinc)	MasterSeal P 684
Aged MasterSeal membranes	MasterSeal P 691

In some circumstances, other primers may be more appropriate. For further details, please consult your local sales office.

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(b) Mixing

MasterSeal M 860 is supplied in working packs which are pre-packaged in the exact ratio. Before mixing, precondition both the A and B components to a temperature of approximately 15 to 25 °C.

Pour the entire contents of Part A into the container of Part B. **DO NOT MIX BY HAND.** Mix with a mechanical drill and paddle at a low speed (approx. 300 rpm) for at least 3 minutes. Scrape the sides and the bottom of the container several times to ensure complete mixing. Keep the mixer bladed fully submerged in the coating to avoid introducing air bubbles. **DO NOT WORK OUT OF THE ORIGINAL CONTAINER.** After proper mixing to a homogeneous consistency, pour the mixed Parts A and B into a clean container and mix for a further minute.

(c) Application

MasterSeal M 860 is poured onto the prepared substrate and spread with a notched trowel or spreader (rubber or steel). The curing time of the material is influenced by the ambient, material and substrate temperatures. At low temperatures, the chemical reactions are slowed down, this lengthens the pot-life, open time and curing times. High temperatures speed up the chemical reactions thus the time frames mentioned above are shortened accordingly. To fully cure, the material, substrate and application temperatures should not fall below the minimum recommended. The temperature of the substrate must be at least 3 K above the dew point both during and for at least 6 hours after application (at 15 °C).

COVERAGE

The consumption of **MasterSeal M 860** depends on the application. For a 1 mm thick film the following quantities are necessary:

MasterSeal M 860 1.24 kg/m²

TOPCOATS

MasterSeal M 860 does not have sufficient UV and weather resistance to be used in exposed applications without protection. A number of top coats are available including MasterSeal TC 259 for standard applications, and MasterSeal TC 258 or MasterSeal TC 268 which can be broadcast with dry silica sand to provide a hard wearing, slip resistant finish. Other top coats may be more suitable for specific applications, consult your local sales office for further details.

FINISHING AND CLEANING

Re-useable tools should be cleaned carefully with Cleaner 40 or e.g. solvent naphtha.

PACKAGING

MasterSeal M 860 is supplied in 12 kg and 30 kg working packs

COLOUR

MasterSeal M 860 is available in grey

STORAGE/ SHELF LIFE

Store in original containers under dry conditions at a temperature between 15° – 25° C. Do not expose to direct sunlight. For maximum shelf life under these conditions see "Best before." label.

WATCH POINTS

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 M 860** is < 500 g/l (for the ready to use product).

HANDLING/PRECAUTIONS

In its cured state, **MasterSeal M 860** is physiologically non-hazardous. The following protective measures should be taken when working with this material:

Wear safety gloves, goggles and protective clothing. Avoid contact with the skin and eyes. In case of eye contact, seek medical attention. Avoid inhalation of fumes. When working with the product, do not eat, smoke or work near a naked flame. For additional references to safety hazard warnings, regulations regarding transport and waste management, please refer to the relevant Material Safety Data Sheet. The regulations of the local trade association and/or other authorities regarding safety and hygiene of workers handling polyurethanes and isocyanates must be observed

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TECHNICAL DATA				
Properties		Standard	Data	Unit
Chemical base		-	PU/PUA hybrid	-
Mixing ratio		A: B	100: 180	-
Density		-	1.24	g/cm ³
Viscosity		-	5200	mPas
Working time (30 kg Unit)	at 10 °C	-	35	min
	at 20 °C	-	25	min
	at 30 °C	-	15	min
Re-coating interval	at 10 °C	-	min. 8 max. 2	h d
	at 20 °C	-	min. 5 max. 1	h d
Fully cured	at 10 °C	-	5	d
	at 20 °C	-	4	d
Substrate and ambient temperatures		-	min. 5 max. 30	°C °C
Permissible relative humidity		-	max. 80	%

Technical data after curing*

Properties		Standard	Data	Unit
Shore-A-hardness		after 28 days	75	-
Tensile strength		DIN 53504	15	N/mm ²
Elongation		DIN 53504	700	%
Tear strength		DIN 53515	21	N/mm ²

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

MasterSeal[®] M 860

CE-MARKING (EN 1504-2)		CE-MARKING (EN 13813)	
			
1119			
BASF Coatings GmbH Donnerschweer Str. 372, D-26123 Oldenburg		BASF Coatings GmbH Donnerschweer Str. 372, D-26123 Oldenburg	
10		14	
486001		486001	
EN 1504-2:2004		EN 13813:2002	
Surface protection product - coatings EN 1504-2: ZA.1d, ZA.1e, ZA.1f and ZA.		Synthetic resin screed for use internally in buildings EN 13813: SR-B1,5-AR1-IR4	
Abrasion resistance	≤ 3000 mg	Essential characteristics	Performance
Permeability to CO ₂	Sd > 50	Fire behavior	Efl
Permability to water vapour	Class II	Release of corrosive substances	SR
Capillary absorption and permeability after freeze-thaw cycling	< 0.1 kg/(m ² xh ^{0.5})	Water permeability	NPD
Thermal compatibility after freeze-thaw cycling	NPD	Wear resistance	< AR 1
Resistance to severe chemical attack	Reduction of hardness < 50 %	Bond strength	> B 1,5
Crack bridging ability	A 4. (-20° C)	Impact resistance	> IR 4
Impact resistance	NPD	Impact sound insulation	NPD
Adhesion strength by pull-off test	≥ 1.5 N/mm ²	Sound absorption	NPD
Reaction to fire	C _{fl-s1}	Heat insulation	NPD
Skid resistance	NPD	Chemical resistance	NPD
		Slip/Skid resistance	NPD
		Emissions behavior	NPD
NPD = No performance determined. Performance determined in system build up MasterSeal Balcony 1338 .		NPD = No performance determined. Performance determined in system build up MasterSeal Balcony 1338	

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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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