



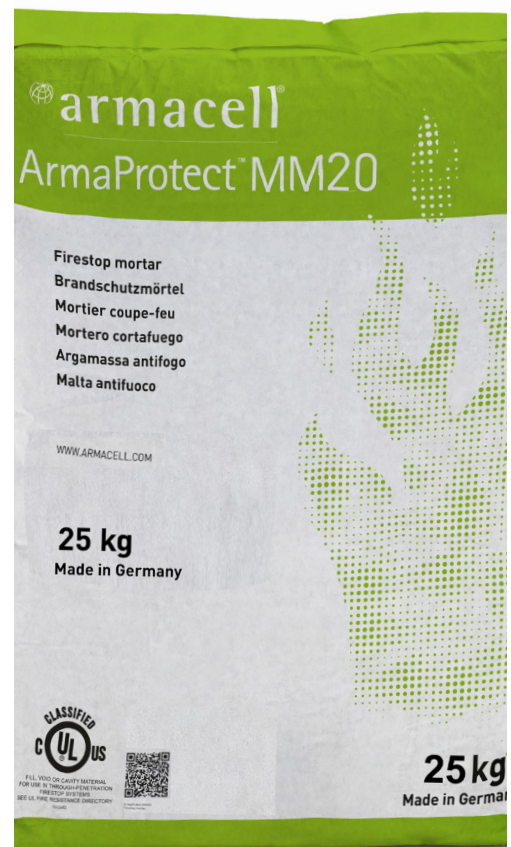
FOR MEDIUM-TO-LARGE  
FIRESTOP PENETRATIONS

# ArmaProtect MM20 Firestop mortar

Firestop mortar for mixed fire seals  
in walls and floors

- // Cables, cable bundles and cable trays
- // Combustible pipes
- // Busbars
- // Climasplit

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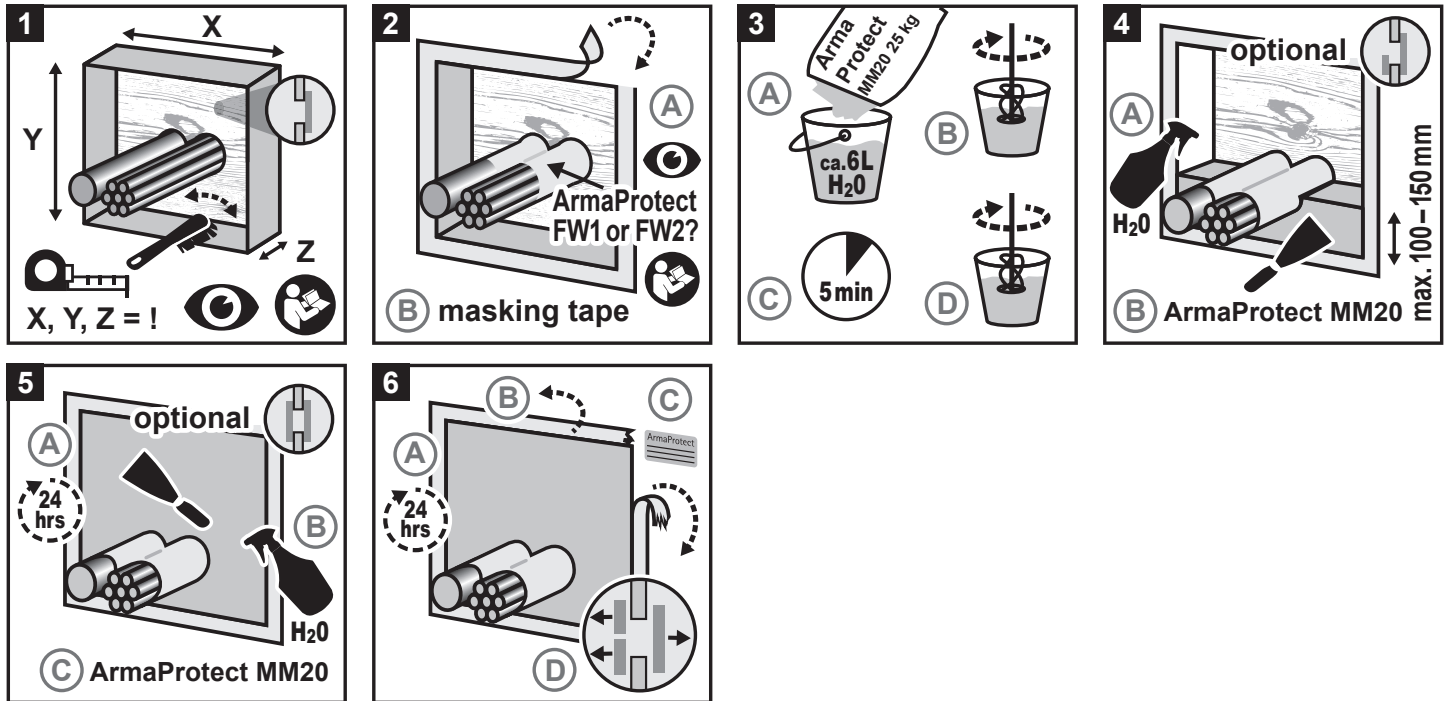


 **armacell**<sup>®</sup>  
ArmaProtect<sup>™</sup>

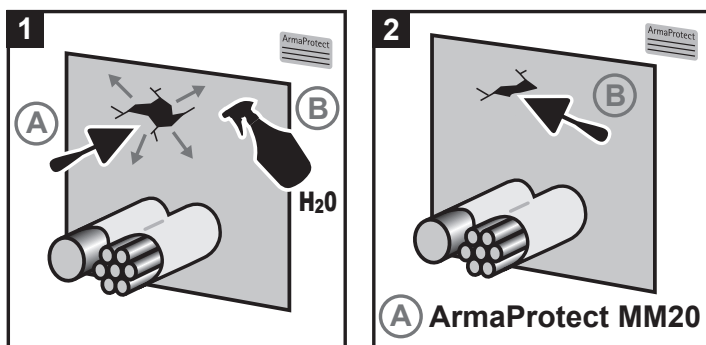
# INSTRUCTIONS FOR USE

Before you begin, ensure surfaces are solid and free of any adhesion-reducing substances such as dust. Absorbent surfaces should be pre-wet with water. The mortar consistency needs to be adapted so that all components are filled without cavities.

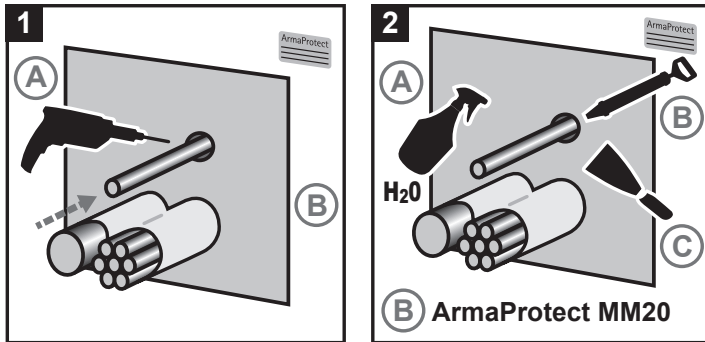
## // Wall installation



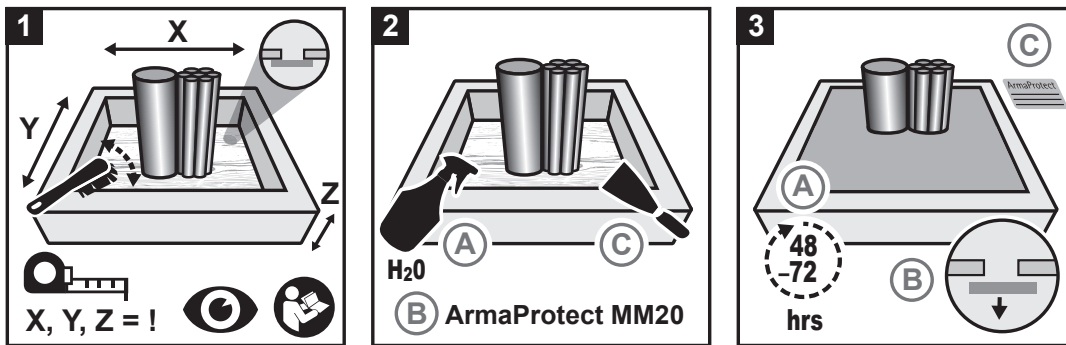
## // Repairing cracks



// Repenetration



// Floor installation



// Consumption guide

Approximate consumption [kg]

Maximum sealing size [m <sup>2</sup> ]	0% services	30% services	60% services
0.01	0.90	0.63	0.36
0.02	1.80	1.26	0.72
0.03	2.71	1.89	1.08
0.05	4.51	3.16	1.80
0.10	9.02	6.32	3.61
0.20	18.05	12.63	7.22
0.30	27.07	18.95	10.83
0.50	45.12	31.58	18.05
1.00	90.23	63.16	36.09

Take note of potential material loss during application at the job site.

# UL APPROVED SYSTEMS

## // Typical UL approved systems<sup>1</sup>

Penetrants

- |                   |                |
|-------------------|----------------|
| • Cables trays    | ≤ 500 mm width |
| • Busbars         | ≤ 300 mm width |
| • PVC or PE pipes | ≤ 110 mm dia   |
| • Climaspits      | ≤ 50 mm dia    |

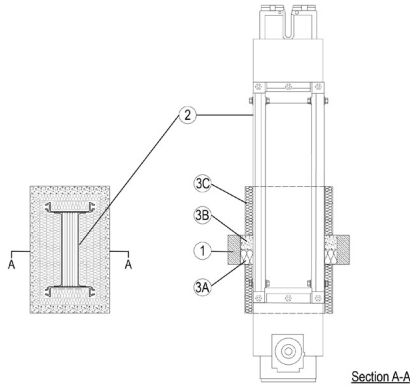
<sup>1</sup> See relevant UL system for further installation details.

## // Selected exemplary UL approved systems

### System No. C-AJ-6057 (busbar in wall and floor opening)

ANSI/UL 1479 (ASTM E814)

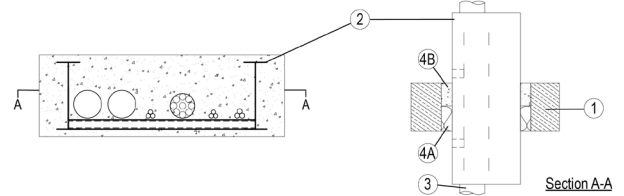
- F rating - 3 hours
- T rating - 1 hour



### System No. F-A-4028 (cable tray in floor opening)

ANSI/UL 1479 (ASTM E814)

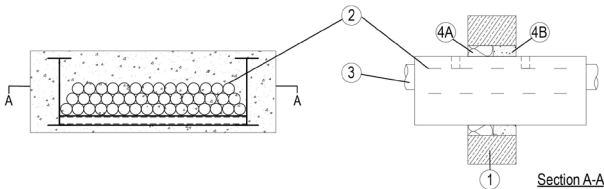
- F rating - 3 hours
- T rating - 1 hour



### System No. W-J-4112 (cable tray in wall opening)

ANSI/UL 1479 (ASTM E814)

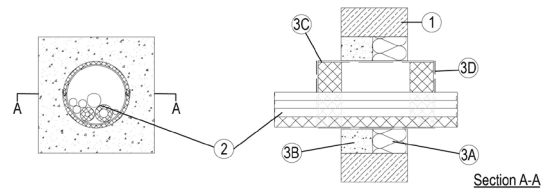
- F rating - 2 hours
- T rating - 1/2 hour



### System No. W-J-8099 (climasplit in wall opening)

ANSI/UL 1479 (ASTM E814)

- F rating - 3 hours
- T rating - 1 1/2 hours



## TECHNICAL DATA - ARMAPROTECT MM FIRESTOP MORTAR

Brief description	ArmaProtect MM20 is a fibre-free dry firestop mortar used to maintain the fire resistance performance of fire penetrations in wall and floors.
Material type	Fibre-free dry mortar.
Additional material information	4.0–5.0 l water + 25 kg dry mortar ≈ 15–18 l ready-to-use wet mortar ≈ 15–18 l volume after hardening.
Product colour range	Grey
Product range	Available as a 25 kg bag of mortar.
Applications	Firestop mortar for mixed fire seals in walls and floors, cables, cable bundles and cable trays and combustible pipes.
Installation	For professional use only. Refer to third party published listings, national approvals / assessments and Armacell's product literature for specific application details as well as before handling this product.
Declaration of Performance (DoP)	ArmaProtect MM20

### Approvals and compliance

Specification compliance	<ul style="list-style-type: none"> <li>UL acc. UL 1479 (ASTM E814)</li> </ul>
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Property	Value/Assessment	Standard/Test method
<b>Temperature range</b>		
Operating temperature	5 °C to 200 °C (41 °F to 392 °F)	
Application temperature	5 °C to 25 °C (41 °F to 77 °F)	
Storage and transportation temperature	5 °C to 25 °C (41 °F to 77 °F)	
<b>Mechanical properties</b>		
Dry bulk density	1.75 KG/DM3 ± 10 %	EN 998-2
Bulk density	2000 kg/m3 ± 10 %	EN 998-2
Pressure resistance	M 20	EN 998-2
<b>Fire performance</b>		
Reaction to fire	Class A1	EN 13501-1
Resistance to fire	See Annex	
<b>Health and environment</b>		
Emission of dangerous substances	No dangerous substances.	ETAG 026-02
<b>Other technical features</b>		
Cure time	Fully cured after approximately 28 days.	
Safety information	Please refer to the safety data sheet available on our website.	
Shelf life	Can be kept for at least 12 months unopened if stored properly.	
Storage	Store in a cool and dry place with an ambient temperature of 5 °C to 25 °C and protect from frost.	
Approved UL Systems	C-AJ-6057, F-A-2377, F-A-4028, F-A-4030, F-A-8066, W-J-2379, W-J-4110, W-J-4112, W-J-8099.	

**Firestop mortar**

<b>Item</b>	<b>Description</b>	<b>Content</b>
<b>PRO-MM-25kg</b>	ArmaProtect MM20 Firestop mortar	25 kg

**Firestop wrap**

<b>Item</b>	<b>Description</b>	<b>Content</b>
<b>PRO-FW1-10m</b>	ArmaProtect FW1 Firestop wrap	10 m
<b>PRO-FW2-10m</b>	ArmaProtect FW1 Firestop wrap	10 m

**Firestop identification plate.**

<b>Item</b>	<b>Description</b>	<b>Content</b>
<b>PRO-ID-SET</b>	ArmaProtect ID identification plate set	5 pieces



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## ABOUT ARMACELL

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As the inventors of flexible foam for equipment insulation and a leading provider of engineered foams, Armacell develops innovative and safe thermal, acoustic and mechanical solutions that create sustainable value for its customers. Armacell's products significantly contribute to global energy efficiency making a difference around the world every day. With more than 3,000 employees and 27 production plants in 19 countries, the company operates two main businesses, Advanced Insulation and Engineered Foams. Armacell focuses on insulation materials for technical equipment, high-performance foams for high-tech and lightweight applications and next generation aerogel blanket technology.



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