

# Watertite WA12

## Wet area composite waterproofing system

Designed for flexible surfaces in kitchens & bathrooms

### CHARACTERISTICS

- ▶ Excellent resistance to water and vapor.
- ▶ Anti-fungal/ Anti-bacterial
- ▶ Good adhesion to both, porous and non-porous surfaces
- ▶ Good mechanical properties
- ▶ For ceramic tiles (glazed & terracotta), vitrified tiles, porcelain tiles, mosaic tiles and natural stones like granite, sandstone
- ▶ Easy workability
- ▶ Crack resistance
- ▶ Smooth surface finish



### DESCRIPTION

Watertite WA 12 system is a composite waterproofing membrane and tile finish system which is designed for providing the moisture barrier system on flexible surfaces like gypsum/plasterboard walls.

### FIELDS OF APPLICATION

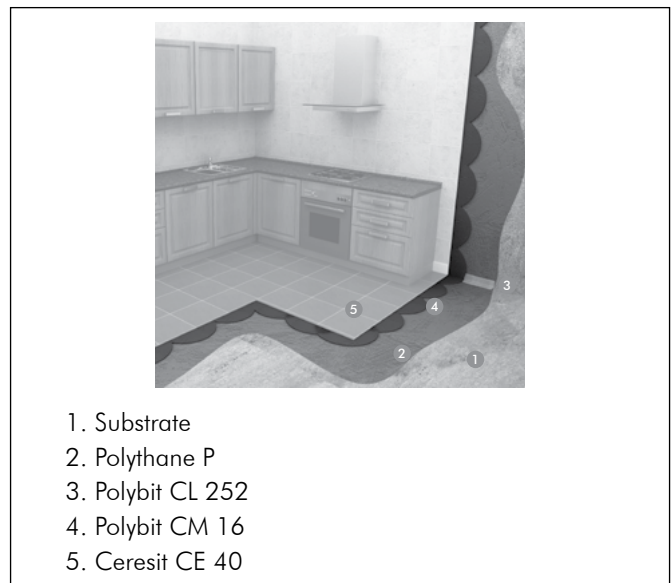
- Kitchen, Bathrooms and Showers

### WATERPROOFING SYSTEM

Showers, toilets and kitchens having walls made of plasterboards / gypsum requires high protection against moisture and water. The water exposure of such areas are categorized as moderate without hydrostatic pressure in indoor conditions. The different components of the composite waterproofing membrane with tile finish system are as follows: Polythane P is a liquid applied waterproofing and protective coating for concrete structures based on a hybrid polyurethane. the polyurethane is modified with specially selected polymers to form a tough, flexible and durable coating. it is completely free from coal tar and other hazardous ingredients. All corners, joints, edges, floor drains and other penetrations is sealed with Polybit CL252 non-woven sealing tape which is embedded onto the 1st coat of the waterproofing coating.

### TILING SYSTEM

Fixing of the ceramic covering is done with Polybit CM16 flexible tile adhesive using the thin bed fixing method. Filling of tile joints ranging from 1mm to 8mm widths is done with a specially formulated polymer modified cementitious flexible joint filling grout Ceresit CE40.



1. Substrate
2. Polythane P
3. Polybit CL 252
4. Polybit CM 16
5. Ceresit CE 40

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### APPLICATION INSTRUCTIONS OF WATERPROOFING SYSTEM

#### Surface preparation

All the surfaces must be cleaned and made free of dust, dirt, moss, oil, grease and other loose particles. This can be achieved by grit/sand/shot blasting. As a minimum, vigorous wire brushing should be employed. All pin holes and surface defects shall be repaired with a suitable Polycrete\* concrete repair mortar.

#### Priming

Polythane P does not require priming and can directly be applied onto the concrete surface. In case of highly porous surface, a priming coat is recommended to seal the pores and stabilize the surface. The primer coat can be produced on site by diluting Polythane P 1 to 1 with water. Apply the primer coat @ 5m<sup>2</sup>/L and allow to dry.

#### Mixing

Polythane P is a single component product but mix the contents of the pail thoroughly prior to application to remove any sediment. A slow speed drill and suitable paddle mixer shall be used to avoid the formation of air bubbles.

#### Application

The coating can be applied with a brush, roller or airless spray and shall be applied in a minimum of 2 coats. The 1st coat shall be allowed to dry completely before the 2nd coat is applied. The 2nd coat shall be applied cross wise to the first coat. The coating will achieve its full strength after a curing period of 7 days.

**Quality for Professionals**

## Corner detailing

It is recommended to reinforce all corners with Polybit CL 252 sealing strip. The sealing strip shall be embedded into the first coat whilst it is still wet and covered fully with the second coat.

## APPLICATION INSTRUCTIONS OF TILING SYSTEM

### Substrate preparation

Polybit CM 16 can be applied on even, load-bearing and compact substrates, free of any substances that reduce adherence (grease, bitumen, dust):

#### Indoors

- anhydrite substrates without floor heating (residual moisture below 0.5%) and gypsum (residual moisture below 1%) substrates – mechanically roughened, cleaned from dust and primed with CT 17
- aerated concrete (free from dust and primed with CT 17) Substrates must not be wet. Any existing dirt, loose layers and paint coating with low strength shall be mechanically removed. Absorbent substrates shall be primed with CT 17 and left to dry for at least 2 hours. Surface unevenness of up to 5 mm can be filled on the previous day using Polybit CM 16 mortar.

### Application of Polybit CM 16

Pour Polybit CM 16 into the precisely measured amount of clean water (7.5 – 8.5 L) and mix with a drill and mixer until a homogenous mass without lumps is reached. Leave for 2 min. and then mix again. Apply the mortar with a suitable notched trowel. For indoor use, the mortar coverage (wetting) on the tile backside must be at least 65%. The floating-buttering method shall be used for larger tiles and for outdoor applications (i.e. additionally a thin layer of the mortar should be spread on the tile's backside, wetting equal or more than 90%). Place the tiles only during the open time of the adhesive. Do not lay tiles butt jointed! Fresh excess mortar can be removed with water; hardened material can only be removed. Grouting on the wall can be done after 8 hours and after 24 hours in floor using Polybit grouts. Walkability is reached after 24 hours. Expansion joints, joints at the corners of walls and floor and around sanitary equipment shall be filled with silicone sealant.

### Application of Ceresit CE 40

Pour CE 40 to precisely measured amount of clean, cool water and stir until it forms a homogeneous mixture, free of lumps. Do not use rusty/dirty containers and tools. Wait 3 minutes and stir again. Observance of required maturity time is essential. Apply the mortar over the tiled surface using a rubber grout float or epoxy board. Make sure not to leave empty spaces between the tiles. When the grout becomes matt in the gap please make the finger test in order be sure that grout is ready for emulsifying, start cleaning and profiling process. The waiting time before washing ranges from 8 to 35 minutes, depending on the water absorption of tiles, width and depth of gaps and the ambient and substrate temperature. Remove the excess grout with a semi wet, frequently rinsed sponge. When cleaning do not use a dry cloth as this may cause a risk of discoloration by rubbing dried grout mortar into the damp grout. Ready for light foot traffic after 6 – 8 hours from application. Grout can be exposed to water for the first time after 24 h. During the first 5 days after application, use only clean water without any cleaning agents.

## STANDARDS

Tested according to EN 12004, ANSI A118.4, ANSI A118.6 and EN 13888

## STORAGE & SHELF LIFE

Store in a cool, dry place and keep away from all sources of heat and sunlight. The shelf life is up to 12 months when stored as per recommendations and in unopened conditions.

## HEALTH & SAFETY

As with all construction chemical products caution should always be exercised. Protective clothing such as gloves and goggles should be worn. Treat any splashes to the skin or eyes with fresh water immediately. Should any of the products be accidentally swallowed, do not induce vomiting, but call for medical assistance immediately.

## SUPPLY

Polythane P	20L Pail
Polybit CL 252	100mm x 50m
Polybit CM 16	25kg paper bag
Ceresit CE 40	5kg

## TECHNICAL SPECIFICATION - WATERPROOFING SYSTEM

PROPERTIES	VALUES	TEST STANDARDS
Color	Grey/white/black -	
Form	Viscous liquid	
Density, [g/cc]	1.25±0.0	ASTM D 1475
Solid content, [%]	63±3	ASTM D 1644
VOC, [g/l]	<20	ASTM D 3960 / D 2369
Tensile strength, [N/mm <sup>2</sup> ]	> 2	ASTM D 412
Elongation, [%]	> 500	ASTM D 412
Shore A hardness	50-60	ASTM D 2240
Hydrostatic pressure @5 bar, [50m] (part 8)	No leakage	BS EN 12390,
Crack bridging, mm	1.5	ASTM C 836
Low temperature flexibility, [°C]	-15	UEAtc / ASTM D 5147
Chemical resistance	chlorides, resistance sulphates, oil, bacteria and common fuels	ASTM D 543
Solar reflective index [SRI] [White]	>80	ASTM E 1980
Solar reflectance	>75	EN 410
Emissivity	<1	EN673
Re-coat interval, [hours]	6	
Full cure, [days]	7	
Application temperature, [°C]	-5 to 45	
Servicetemperature, [°C]	-10 to 70	

## TECHNICAL SPECIFICATION - TILING SYSYTEM - POLYBIT CM 16

PROPERTIES	VALUES
Base	mixture of cements with mineral fillers and modifier color: grey and white
Bulk density	approx. 1.5 + 0.05g/cc
Mixing proportion	approx. 7.5 – 8.5L of water for 25kg of powder
Initial maturing time	approx. 2min
Pot life	approx. 2hrs
Application temperature	from 5°C to 40°C
Walkability	after 24hrs @ 25°C
Temperature resistant	-30°C to 70°C
Tensile adhesion strength [ANSI 118.4]	Sec 5.3 >120 Psi [28days @ 20minutes] Sec 5.3 >100 Psi [28days @ 30minutes]
Sag on vertical surface [ANSI 118.4]	Sec 6.0 >120 Psi
Shear Strength of Glazed Wall Tile [ANSI 118.1]	Sec 7.1.2 >300 Psi [7days air curing] Sec 7.1.2 >200 Psi [7days water immersion]
Shear Strength of Porcelain Tile [ANSI 118.4]	Sec 7.2.2 >75 Psi [1days] Sec 7.2.3 >200 Psi [7days] Sec 7.2.4 >150 Psi [7days water immersion] Sec 7.2.5 >200 [28days]
Open time	approx. 20 minutes
Initial tensile adhesion	≥ 01.0 N/mm <sup>2</sup>
Tile size	notch depth CM 16 [kg/m <sup>2</sup> ]
up to 10cm	4mm 1.8
up to 15cm	6mm 2.3
up to 25cm	8mm 3.0
up to 30cm	10mm 3.8
above 30cm	12mm 4.6

## TECHNICAL SPECIFICATION - TILING SYSYTEM - CERESIT CE40

PROPERTIES	VALUES																					
Base	mixture of cements with mineral fillers and polymer modifiers																					
Bulk density	approx. 1.1 kg/dm <sup>3</sup>																					
Number of colours	40 (incl. 6 from Trend Collection) – 0.52 l of water per 2 kg (white) – 0.6 l of water per 2 kg (chilli, coal) – 0.56 l of water per 2 kg (other colours)																					
Mixing ratio	– 1.3 l of water per 5 kg (white) – 1.5 l of water per 5 kg (chilli, coal) – 1.4 l of water per 5 kg (other colours)																					
Temperature of application	from +5°C to +25°C																					
Initial maturing time	approx. 3 min																					
Pot life	up to 1,5 h																					
Ready for foot traffic	after 6 hours – after 30 min: ≤ 2 g																					
Water absorption	– after 240 min: ≤ 5 g acc. to EN 13888																					
Temperature resistance	from -30°C to +70°C																					
Resistance to high abrasion	≤ 1000 mm <sup>3</sup> acc. to EN 13888 – in dry conditions: ≥ 15 MPa – after cycles of freezing and thawing:																					
Compressive strength	≥ 15 MPa acc. to EN 13888 – in dry conditions: ≥ 2.5 MPa – after cycles of freezing and thawing:																					
Bending tensile strength	≥ 2.5 MPa acc. to EN 13888																					
Shrinkage	≤ 3 mm/m acc. to EN 13888																					
Indicative consumption for tiles with standard thickness:	<table><tr><th>Tile size (cm)</th><th>Joint width (mm)</th><th>Consumption on(kg/m<sup>2</sup>)</th></tr><tr><td>5x5</td><td>2</td><td>0.5</td></tr><tr><td>5x5</td><td>3</td><td>0.7</td></tr><tr><td>10 x 10</td><td>2</td><td>0.4</td></tr><tr><td>15x15</td><td>3</td><td>0.4</td></tr><tr><td>10x20</td><td>3</td><td>0.4</td></tr><tr><td>30x30</td><td>5</td><td>0.6</td></tr></table>	Tile size (cm)	Joint width (mm)	Consumption on(kg/m <sup>2</sup> )	5x5	2	0.5	5x5	3	0.7	10 x 10	2	0.4	15x15	3	0.4	10x20	3	0.4	30x30	5	0.6
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*This product is compatible with EN 13888:2010, it has obtained the hygienic approval No BK/W/0430/01/2018, valid until 26 April 2021, issued by the National Institute of Hygiene, and the permit of the Minister of Health No 4374/11 for biocide trading.*

Apart from the information given here it is also important to observe the relevant guidelines and regulations of various organisations and trade associations as well as the respective standards. The aforementioned characteristics are based on practical experience and applied testing. Warranted properties and possible uses which go beyond those warranted in this information sheet require our written confirmation. All data given was obtained at an ambient and material temperature of +23°C and 50 % relative air humidity at laboratory conditions unless specified otherwise. Please note that under other climatic conditions hardening can be accelerated or delayed.

The information contained herein, particularly recommendations for the handling and use of our products, is based on our professional experience. As materials and conditions may vary with each intended application, and thus are beyond our sphere of influence, we strongly recommend that in each case sufficient tests are conducted to check the suitability of our products for their intended use. Legal liability cannot be accepted on the basis of the contents of this data sheet or any verbal advice given, unless there is a case of wilful misconduct or gross negligence on our part. This technical data sheet supersedes all previous editions relevant to this product.

