



CONTRACTOR'S HANDBOOK



PRODUCTS RANGE OF USE AND TECHNICAL DATA
DRAWINGS OF SIGNIFICANT CONSTRUCTION DETAILS
STANDARD LABELLING AND IMPORTANT DEFINITIONS

Edition 2017

FOREWORD

With a great pleasure we give you the second edition of ATLAS "Contractor's Handbook". We have gathered here comprehensive up-to-date information on ATLAS and AVAL brand offer, including new products introduced recently. We believe that it will meet your expectations and significantly help in proper selection of our products.

Similarly to the first edition, in our brochure we have tried to gather all the information about the products, their technical data and range of use clearly shown in form of 18 tables divided into seven product categories. There are 3D drawings, adjoined to the most of them, which illustrate the most relevant solutions with the use of products from the particular category.

In case of adhesives, grouts and waterproof products we show the areas which cause the major problems during tiling. We have included details that are significant during finishing works in the "wet rooms" and two layouts of terrace layers over the heated rooms. In the screeds and floors section we present four floor layouts in two variants of heating. In the insulation section we raise the issues that are queried the most often and those occurring during any external thermal insulation works.

Information and issues that are given in the "Contractor's Handbook" can also be found in Technical Data Sheets and on our web site (www.atlas.com.pl/en). We hope that information and the way of its presentation in this handbook will be helpful in everyday work. The handbook will be widely available for contractors: distributed among the participants of trainings conducted by our Sales and Technical Advisors and ATLAS Trainers as well as by ATLAS wholesale partners.

Michał Goślawski

Foreign Sales Director – Atlas Group Coordinator (West)

Information presented in the manual are based on knowledge available in January 2017.



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ATLAS PLUS is a flexible adhesive most popular for professionals. It is confirmed by millions of square meters of tiles laid on different substrates with the use of this adhesive. It is appreciated because of high bonding strength, flexibility as well as of firmness and reliability.

It meets the highest Polish and European standards.

Highly flexible adhesives ATLAS PLUS and ATLAS PLUS WHITE has S1 class of deformability that means resistance to deformation up to 5 mm. It allows to apply the adhesives on difficult substrates such as plasterboards, OSB, wooden ceilings. It ensures firm and lasting cladding in bathrooms, kitchens, on terraces, balconies, façades and even in home swimming-pools.

ATLAS PLUS – FIRM, RELIABLE, FLEXIBLE!



When the
substrate
works like
this page ...



DEFORMABLE ADHESIVE

TABLE 1.1

											
	ATLAS ATUT	ATLAS ELASTIFIED ADHESIVE/ AVAL KM 11 Plus	ATLAS MIG 2	ATLAS STANDARD WHITE	ATLAS ELASTYK/ AVAL KM 16	ATLAS GEOFLEX	ATLAS PLUS/ AVAL KM 17	ATLAS PLUS WHITE/ AVAL KM 15	ATLAS PLUS EXPRESS	ATLAS PLUS MEGA	ATLAS PLUS MEGA WHITE
PRODUCT	Adhesive for indoor and outdoor use	General purpose adhesive	Fast setting adhesive	White adhesive	Flexible adhesive	Flexible adhesive	Deformable S1 adhesive	Deformable S1 white adhesive	Deformable S1 fast setting adhesive	Deformable S1 adhesive for large size floor tiles	White, deformable S1 adhesive for large size floor tiles
Reference document	PN-EN 12004+A1:2012										
Adhesive type and class	C1T	C1TE	C1FTE	C1T	C2TE	C2TE	C2TES1	C2TES1	C2FTE1	C2ES1	C2ES1
TECHNICAL DATA											
Mixing ratio water/dry mix [l/kg]	0.21-0.24	0.21-0.24	approx. 0.22	0.26-0.28	0.25-0.27	0.26-0.33	0.31-0.33	0.26-0.28	0.21-0.23	0.21-0.24	0.21-0.24
Min/max adhesive thickness (mm)	2-10	2-10	2-5	2-10	2-10	2-15	2-10	2-10	2-5	4-20	4-20
Temperature of application [°C]	5-25	5-25	5-25	5-25	5-25	5-35	5-25	5-25	5-25	5-25	5-25
Maturing time [min]	5	5	5	5	5	5	5	5	5	5	5
Pot life [h]	4	4	1	3	4	4	5	4	1	4	4
Open time [min]	20	30	30	20	30	30	30	30	30	30	30
Adjustability time [min]	10	10	10	10	10	20	10	10	10	10	10
Floor access [h]	after ca. 24	after ca. 24	after ca. 4	after ca. 24	after ca. 24	after ca. 12	after ca. 24	after ca. 24	after ca. 4	after ca. 24	after ca. 24
Grouting [h]	after ca. 24	after ca. 24	after ca. 4	after ca. 24	after ca. 24	after ca. 12	after ca. 24	after ca. 24	after ca. 4	after ca. 24	after ca. 24
Full load	after ca. 3 days	after ca. 3 days	after ca. 3 days	after ca. 3 days	after ca. 3 days	after ca. 3 days	after ca. 3 days	after ca. 3 days	after ca. 3 days	after ca. 3 days	after ca. 3 days
TYPE OF SUBSTRATE											
Cement or gypsum plasters or screeds	✓	✓	✓	✓	✓	✓	✓	✓	✓	only on screeds	only on screeds
Damp proofing course					✓	✓	✓	✓	✓	✓	✓
OSB, chip boards, plywood (require priming)						✓	✓	✓	✓	✓	✓
Plasterboards, cement-fibre boards					✓	✓	✓	✓	✓		
Terrazzo primed with Cerplast/Aval KT 16						✓	✓	✓	✓	✓	✓
Old tiles primed with Cerplast/Aval KT 16						✓	✓	✓	✓	✓	✓
TYPE OF TILES TO BE FIXED											
Glazing tiles/ terracotta	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Gres-porcelain	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Clinker		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Mosaic		✓	✓	✓	✓		✓	✓	✓		
Absorbable stone tiles, polished gres				✓	✓**	✓	✓**	✓	✓**	✓**	✓
SPECIAL USAGE CONDITIONS											
Floor heating					✓	✓	✓	✓	✓	✓	✓
Terraces/balconies					✓*	✓*	✓	✓	✓	✓	✓
Bath- and shower-tub casing					✓	✓	✓	✓	✓		
Fireplace casing							✓	✓	✓		
Swimming pools basins							✓	✓	✓	✓	✓

* S1 adhesive is recommended for terraces

** if in doubt conduct an application test

PRODUCT					
	ATLAS ARTIS GROUT	ATLAS DECORATIVE GROUT	ATLAS GROUT/ AVAL EXTRA GROUT	ATLAS WIDE GROUT	ATLAS EPOXY GROUT
	Fine aggregate grout	Decorative grout with glitter effect	Fine aggregate cement grout	Coarse aggregate cement grout	Two-component grout

Reference document:

PN-EN 13888:2010

Grout class

CG2 WA

CG2 WA

CG2 WA

CG2 WA

RG

TECHNICAL DATA

Mixing ratio water/dry mix [l/kg]	0.21-0.22	0.22-0.24	0.28-0.29	approx. 0.25	n/a
Min/max joint thickness [mm]	1-25	1-15	1-7	4-16	1-10
Temperature during application [°C]	5-35	5-35	5-25	5-25	10-25
Pot life [min]	40	120	120	120	45
Initial cleaning [min]	30	30	10	10	5
Final cleaning [min]	180	180	30	20	20
Foot traffic [h]	3	24	24	24	24
Full load [days]	1	1	1	1	7
Full chemical resistance [days]	-	-	-	-	7
Improved colour durability	✓	✓	✓		✓
Pearl Effect	✓	✓	✓		
Myco Protect	✓	✓	✓	✓	✓
Bio Barrier	✓		✓		
Colours	40	5	44	7	12

PRODUCT



SILICONE ATLAS ARTIS



SILICONE ATLAS SILTON S







SILICONE AVAL EXTRA

Reference document

 PN-EN 15651-1:2013
 PN-EN 15651-2:2013
 PN-EN 15651-3:2013

Hardening system	acetate	acetate	acetate
Substrate and ambient temperature during work [°C]	5-40	5-40	5-40
Temperature resistance after hardening [°C]	from -50 to +180	from -50 to +180	from -50 to +180
Max. joint depth [mm]	14	14	14
Joint width [mm]	4-25	4-25	4-25
Pot life [min]	15	15	15
Foot traffic [h]	3	3	3
Full load [h]	24	24	24
Improved colour durability	✓		
Myco Protect	✓	✓	✓
Colours	38 + transparent	38 + transparent	38 + transparent

TABLE 1.3

PRODUCT				
	ATLAS WODER DUO	ATLAS WODER E/ AVAL KL 51	ATLAS WODER W	ATLAS WODER S
	Two-component waterproofing	Watertight flexible foil	Flexible, one-component damp proofing	Watertight cement mortar
Reference document	PN-EN 14891:2012 CM P	AT-15-5032/2013	AT-15-7990/2014	AT-15-5031/2013
TECHNICAL DATA				
Min/max coat thickness [mm]	1-3	1-5	1-5	1-3
Open time [min]	30	30	30	30
Pot life [min]	60	whole shelf life period	whole shelf life period	120
Application of the second coat after [h]	3	3	3	5
Top coat application [h]	12	24	24	24
Resistance to pressurized water [head of water in m]	50	not resistant	not resistant	50
Loading with pressurized water [days]	7	not resistant	not resistant	7
Cracks bridging up to [mm]	≥0.75	-	-	-
Vapour permeability resistance coefficient μ	500	1000	600	500
APPLICATION				
Indoors	✓	✓	✓	✓
Outdoors	✓	✓		✓
USAGE CONDITIONS				
Foundations, cellar walls	✓			✓
Floor/wall heating	✓	✓	✓	✓
Water reservoirs, pools	✓			✓
Terraces, balconies	✓	✓ *		✓
TYPE OF SUBSTRATE				
Cement and concrete screeds, cement-lime renders, concrete, cellular concrete, silicates	✓	✓	✓	✓
Anhydrite screeds, gypsum plasters		✓	✓	
Plasterboards, OSB boards	✓	✓	✓	
Galvanized metal sheets	✓	✓		
INSULATION TYPE				
Light	✓	✓	✓	✓
Medium	✓	✓		✓
Heavy	✓			✓

* ATLAS WODER DUO is recommended for terraces

PRODUCT				
	ATLAS UNI-GRUNT/ AVAL KT 17	ATLAS UNI-GRUNT PLUS/ AVAL KN 97	ATLAS OPTIGRUNT	ATLAS GRUNTO-PLAST
	Fast drying priming emulsion	Deep-penetrating priming emulsion	General-use priming emulsion	Adhesion layer for difficult substrates
Reference document	Primers and impregnators are not classified as construction materials, they are not covered by standards and therefore require no technical approvals.			
TECHNICAL DATA				
Density [g/cm³]	1.0	1.0	1.0	1.5
Way of application	roller/brush	roller/brush	roller/brush	roller/brush
Substrate temperature and temperature during work [°C]	5-25	5-25	5-25	5-30
Consumption [kg/m²]	0.05-0.20	0.05-0.20	0.05-0.20	0.3
Further works since priming [h]	2	4	2	24
SAMPLE SUBSTRATES				
Bricks, ceramic hollow blocks, cellular concrete, silicates	✓		✓	
Cement, cement-lime and gypsum plasters, plasterboards	✓		✓	
Old cement screeds	✓	✓		
Anhydrite screeds	✓	✓		
Concrete screeds	✓			✓
Formwork concrete				✓
OSB boards				✓
Terrazzo				✓
Old ceramic tiles				✓

1.1 DETERMINING THE WET ZONES IN A BATHROOM



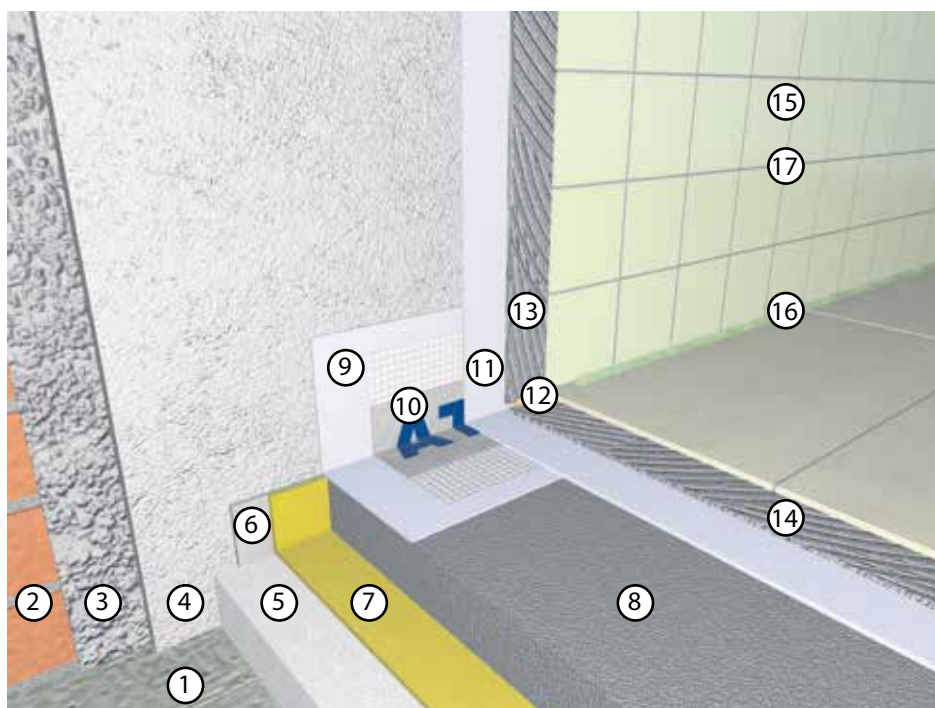
A - wet zone

B - damp zone

Note:

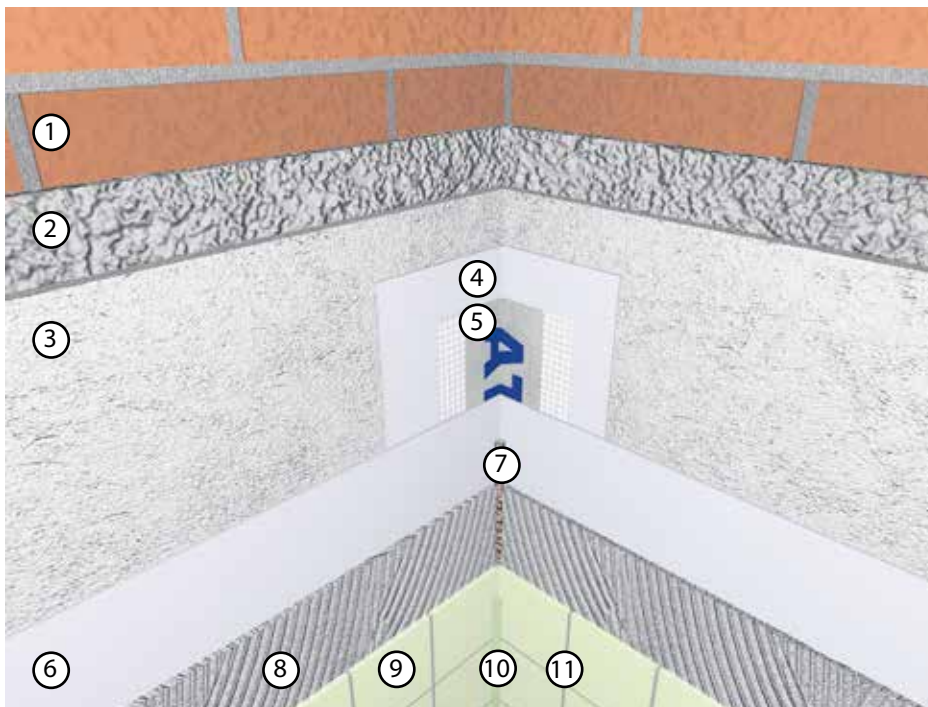
In small bathrooms, for example in multifamily buildings, it is recommended to treat the entire bathroom as a wet zone.

1.2 SEALING THE JOINT BETWEEN WALL AND FLOOR IN A BATHROOM



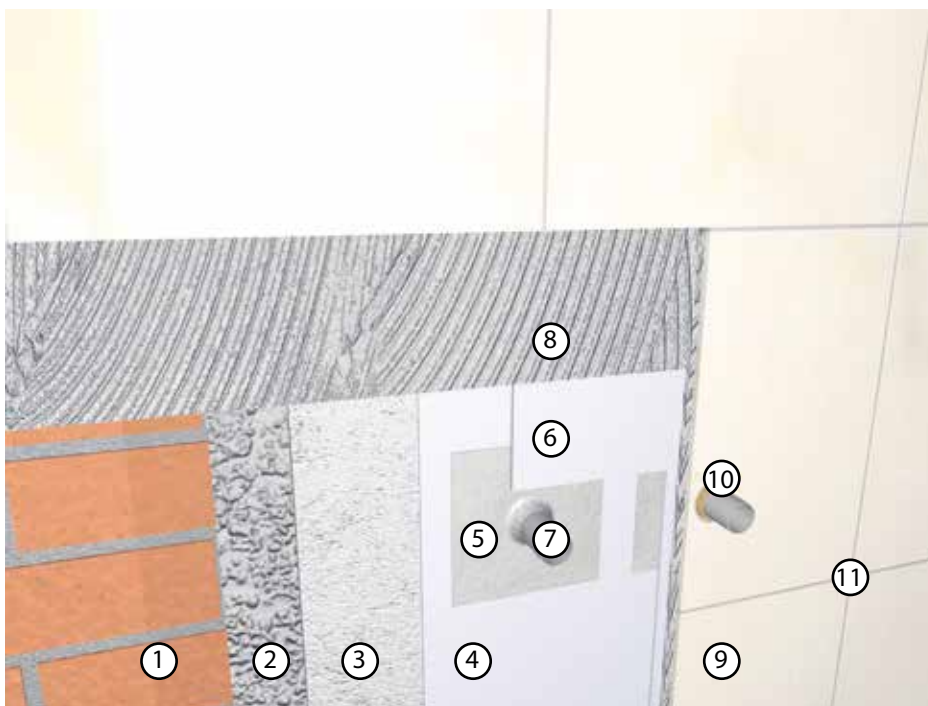
1. Concrete ceiling
2. Wall
3. ATLAS CEMENT BASE COAT
4. ATLAS PLASTERING MIX
5. ACOUSTIC/THERMAL insulation
6. FLOOR EXPANSION JOINT PROFILE
7. PE foil
8. ATLAS POSTAR 20 or ATLAS POSTAR 80 cement screed
9. ATLAS WODER E/AVAL KL 51 or ATLAS WODER W damp – proofing under tiles
10. ATLAS SEALING TAPE/ AVAL KL 152
11. ATLAS WODER E/AVAL KL 51 or ATLAS WODER W damp – proofing under tiles
12. ATLAS BACKER ROD
13. ATLAS PLUS/AVAL KM 17 adhesive
14. ATLAS PLUS MEGA adhesive
15. Ceramic, gres tiles
16. ATLAS ARTIS SILICONE
17. ATLAS ARTIS GROUT 1-25 mm

1.3 SEALING THE INNER CORNER IN A BATHROOM



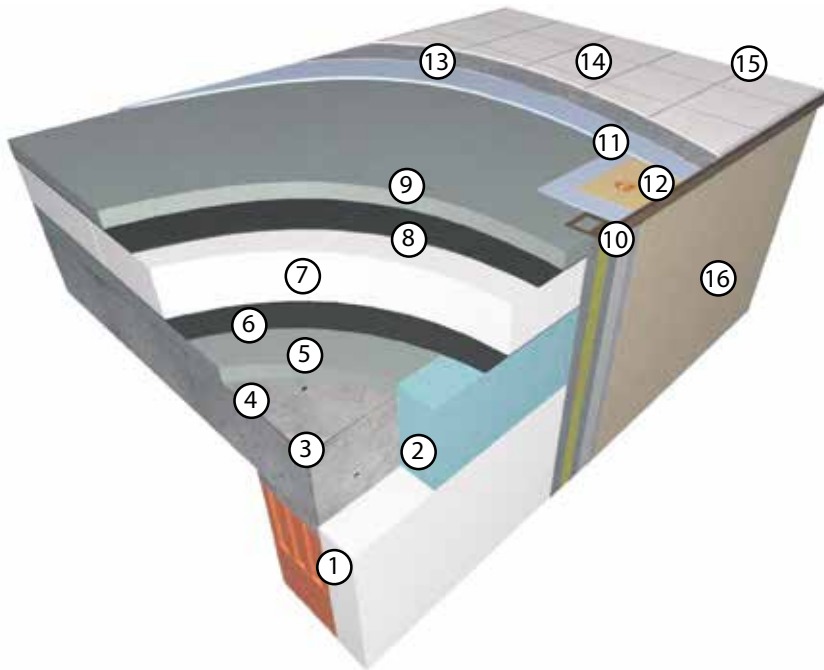
1. Wall
2. ATLAS CEMENT BASE COAT
3. ATLAS PLASTERING MIX
4. ATLAS WODER E/AVAL KL 51 or ATLAS WODER W damp – proofing under tiles
5. ATLAS SEALING TAPE/AVAL KL 152
6. ATLAS WODER E/AVAL KL 51 or ATLAS WODER W damp – proofing under tiles
7. ATLAS BACKER ROD
8. ATLAS PLUS/AVAL KM 17 adhesive
9. Ceramic, gres tiles
10. ATLAS ARTIS SILICONE
11. ATLAS ARTIS GROUT 1-25 mm

1.4 SEALING THE WATERPIPE IN A WALL IN A BATHROOM



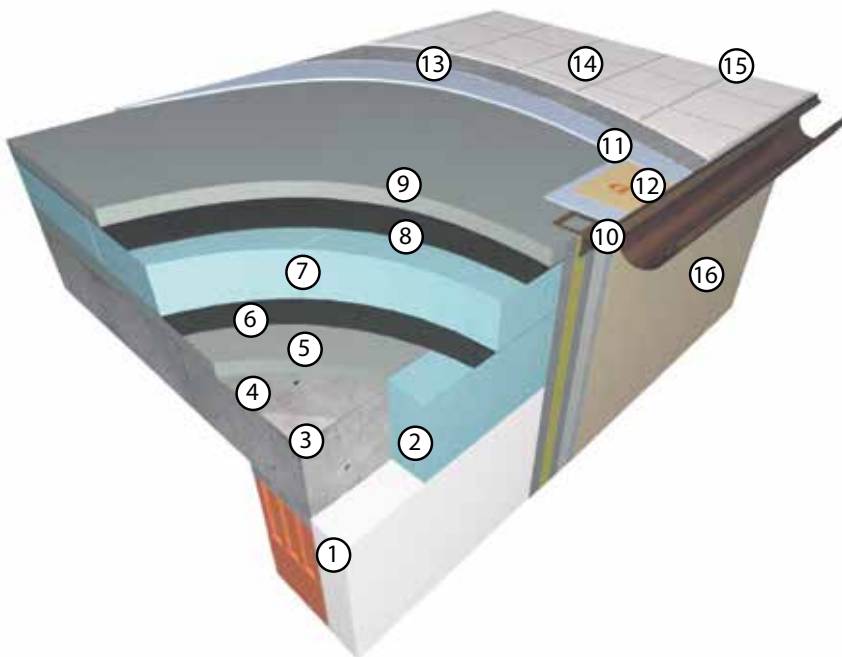
1. Wall
2. ATLAS CEMENT BASE COAT
3. ATLAS PLASTERING MIX
4. ATLAS WODER E/AVAL KL 51 or ATLAS WODER W damp – proofing under tiles
5. ATLAS SEALING TAPE/ AVAL KL 152
6. ATLAS WODER E/AVAL KL 51 or ATLAS WODER W damp – proofing under tiles
7. Waterpipe
8. ATLAS PLUS/AVAL KM 17 adhesive
9. Ceramic, gres tiles
10. ATLAS ARTIS SILICONE
11. ATLAS ARTIS GROUT 1-25 mm

1.5 LAYERS OF TERRACE ABOVE THE HEATED ROOM WITH THE EPS THERMAL INSULATION



1. EPS 70 boards
2. EPS 200 boards
3. Concrete floor
4. Contact layer: water + ATLAS ELASTIC EMULSION + ATLAS POSTAR 20 or ATLAS POSTAR 80
5. ATLAS POSTAR 20 or ATLAS POSTAR 80 cement screed
6. Vapour barrier: ATLAS GENERAL-PURPOSE BITUMINOUS COMPOUND + ATLAS SMB self-adhesive bituminous membrane
7. Thermal insulation: min. EPS 200 boards
8. Waterproofing, e.g. 2 x heat-welded membrane
9. ATLAS POSTAR 20 or ATLAS POSTAR 80 cement screed
10. ATLAS 100 eaves profile
11. ATLAS WODER DUO under-tile damp-proofing
12. ATLAS HYDROBAND 3G sealing tape
13. ATLAS PLUS MEGA adhesive
14. Ceramic, gres tiles
15. ATLAS ARTIS GROUT 1-25 mm
16. Base coat layer and thin-coat render layer of ATLAS INSULATION SYSTEM

1.6 LAYERS OF TERRACE ABOVE THE HEATED ROOM WITH THE XPS THERMAL INSULATION



1. EPS 70 boards
2. XPS boards
3. Concrete floor
4. Contact layer: water + ATLAS ELASTIC EMULSION + ATLAS POSTAR 20 or ATLAS POSTAR 80
5. ATLAS POSTAR 20 or ATLAS POSTAR 80 cement screed
6. Vapour barrier: ATLAS GENERAL-PURPOSE BITUMINOUS COMPOUND + ATLAS SMB self-adhesive bituminous membrane
7. Thermal insulation: XPS boards
8. Protecting layer: PE foil
9. ATLAS POSTAR 20 or ATLAS POSTAR 80 cement screed
10. ATLAS 150 eaves profile
11. ATLAS WODER DUO under-tile damp-proofing
12. ATLAS HYDROBAND 3G sealing tape
13. ATLAS PLUS MEGA adhesive
14. Ceramic, gres tiles
15. ATLAS ARTIS GROUT 1-25 mm
16. Base coat layer and thin-coat render layer of ATLAS INSULATION SYSTEM








PRODUCT							
	ATLAS SAM 55	ATLAS SAM 100/ AVAL KN 10	ATLAS SAM 150	ATLAS SAM 200	ATLAS SWS/ ATLAS SAM 500	ATLAS SMS 15	ATLAS SMS 30
	Fast setting, self-leveling compound	Fast setting, self-leveling screed	Fast setting, self-leveling screed	Self-leveling screed	Fast setting, self-leveling screed	Fast setting, self-leveling compound	Fast setting, self-leveling screed
Reference document	PN-EN 13813:2003						
Classification	CA-C30-F5	CA-C35-F6	CA-C20-F5	CA-C16-F5	CA-C20-F4	CT-C25-F7	CT-C30-F7
TECHNICAL DATA							
Self-spreading	✓	✓	✓	✓	✓	✓	✓
Layer thickness [mm]	1-10	5-30	15-60	25-60	20-60	1-15	3-30
Mixing ratio water/dry mix [l/ 25 kg]	5.0-6.25	5.0-5.5	4.0 - 4.75	4.25-4.75	5.00-5.25	5.0-5.25	5.00-5.50
Consumption for 1 cm thickness [kg/m ²]	18	20	20	20	18	16.6	16.5
Compressive strength [N/mm ²]	≥30	≥35	≥20	≥16	≥20	≥25	≥30
Flexural strength [N/mm ²]	≥5	≥6	≥5	≥5	≥4	≥7	≥7
Abrasion resistance acc. to Bohm method							
Linear contraction [%]	< 0.03	< 0.03	< 0.03	< 0.03	< 0.05	<0.06	< 0.06
Foot traffic [h]	6	6	6	48	6	4	4
Tiles fixing [days]	3	14-21	21-28	21-28	21-28	1	1
Parquet fixing [days]		21-28				7	7
Installation of panels or carpet flooring [days]	7-10	21-28	21-28	21-28	21-28	7	7
Start of heating (in screeds with heating) [days]			28	28	7		
Manual application	✓	✓	✓	✓	✓	✓	✓
Machine application (mixing-and-pumping units)	✓	✓	✓	✓	✓	✓	✓
SCREED TYPE							
Bonded	✓	✓	✓	✓	✓	✓	✓
On separation layer			✓	✓	✓		
Floating			✓	✓	✓		
With heating system			✓	✓	✓		
USE IN FLOOR STRUCTURE							
Smoothing layer	✓	✓				✓	✓
PLACE OF APPLICATION							
Indoors - dry	✓	✓	✓	✓	✓	✓	✓
Indoors - wet						✓	✓

TABLE 2.1.2

PRODUCT					
	ATLAS POSTAR 10	ATLAS POSTAR 20	ATLAS POSTAR 40	ATLAS POSTAR 80	ATLAS POSTAR 100
	Traditional cement floor	Fast drying cement screed	Cement floor	Fast-setting cement floor	Self-spreading cement floor
Reference document	PN-EN 13813:2003				
	AT-15-9621/2016	AT-15-8432/2010 + Annex 1	AT-15-6972/2012	AT-15-8462/2010 + Annex 1	AT-15-6971/2012
Classification	CT-C25-F5-A15	CT-C20-F4	CT-C30-F6-A22	CT-C40-F7-A12	CT-C50-F7-A15
TECHNICAL DATA					
Self-spreading					✓
Thickness [mm]	10-100	10-80	10-80	10-80	10-80
Mixing ratio water/dry mix [l/ 25 kg]	2.25-3.00	2.75	2.00-3.75	2.00	3.25-3.75
Consumption for 1 cm thickness [kg/m ²]	20	20	20	20	20
Compressive strength [N/mm ²]	≥25	≥20	≥30	≥40	≥50
Flexural strength [N/mm ²]	≥5	≥4	≥6	≥7	≥7
Böhme abrasion resistance - class	A15		A22	A12	A15
Linear contraction [%]	<0.06	<0.06	<0.08	<0.06	<0.06
Floor access/ foot traffic [h]	24	24	24	3	24
Fixing the tiles [days]	14	1	21-28	1	21-28
Parquet installation [days]	21-28		21-28	7	21
Installation of panels or carpets [days]	21-28	14	21-28	7	21-28
Application of epoxy coat [days]	21-28		21-28	7	21-28
Start of heating (for screeds with heating) [days]	7	7	7	7	7
Manual application	✓	✓	✓	✓	✓
Machine application					✓
SCREED TYPE					
Bonded	✓	✓	✓	✓	✓
On separation layer	✓	✓	✓	✓	✓
Floating	✓	✓	✓	✓	✓
With heating system	✓	✓	✓	✓	✓
USE IN FLOOR STRUCTURE					
Top floor	✓		✓	✓	✓
PLACE OF APPLICATION					
Indoors - dry	✓	✓	✓	✓	✓
Indoors - wet	✓	✓	✓	✓	✓
Outdoors	✓	✓	✓	✓	✓




PRODUCT					
	ATLAS ZW 50	ATLAS ZW 330 *	ATLAS MONTER T-5	ATLAS MONTER T-15	ATLAS TEN -10
	General-use leveling mortar	Fast-setting leveling mortar	Fast-setting assembly mortar	Fast-setting assembly mortar	Fast-setting cement mortar
Reference document		PN-EN 998-1:2012 PN-EN 13813:2003			PN-EN-13813:2003
		AT-15-9437/2015	AT-15-8722/2011	AT-15-4332/2011 + Annex 1	AT-15-4411/2011 + Annex 1
TECHNICAL DATA					
Mixing ratio water/dry mix [l/kg]	0.14-0.17	0.17-0.22	ca. 0.25	0.12-0.13	0.12-0.15
Pot life [min]	120	120	5	15	40
Open time [min]	20	20	5	15	40
Min/max. thickness [mm]	3/50	3/30**	1/25***	20/50	5/30
Bonding [N/mm ²]	≥ 0.3	≥ 0.6	≥ 2.0	≥ 1.2	≥ 0.5
Compressive strength [N/mm ²]	25.0	≥ 20.0	after 6h > 10.0 after 24h > 25.0 after 28 days > 60	after 24h > 25.0 after 28 days > 60	40.0
Flexural strength [N/mm ²]	5.0	≥ 4.0	after 6h > 2.0 after 24h > 4.0 after 28 days > 9.0	after 24h > 3.5 after 28 days > 9.0	7.0
Tile fixing/further works [h]	12 (thick. 5 mm)	5 (thick. 5 mm)	6	6	24
Floor access/use [h]	12	8	0.5	0.5	3
PLACE OF APPLICATION					
Walls outdoors and indoors	✓	✓	✓		✓
Floors outdoors and indoors	✓	✓	✓	✓	✓
TYPE OF APPLICATION					
Repairs of small local surfaces	✓	✓	✓	✓	✓
Repairs of large floor surfaces	✓	✓			✓
Elements assembling			✓	✓	
TYPE OF SURFACE DAMAGE TO BE REPAIRED					
Cracking	✓	✓	✓	✓	✓
Deeper cavities		✓	✓	✓	✓

* Product can be used to execute screeds

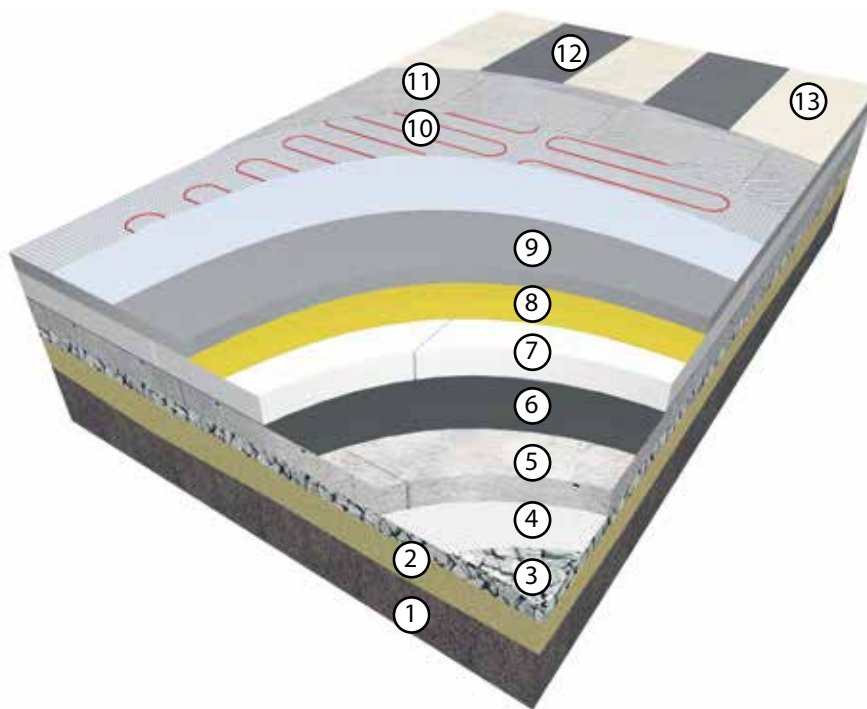
** In order to obtain thicker layer from 31 to 60 mm, add quartz sand (grain size up to 2 mm) in weight ratio 1:4 (sand : dry mix)

*** In case of thickness above 25 mm, mix MONTER T-5 with quartz sand in 1:1 ratio

TABLE 2.3

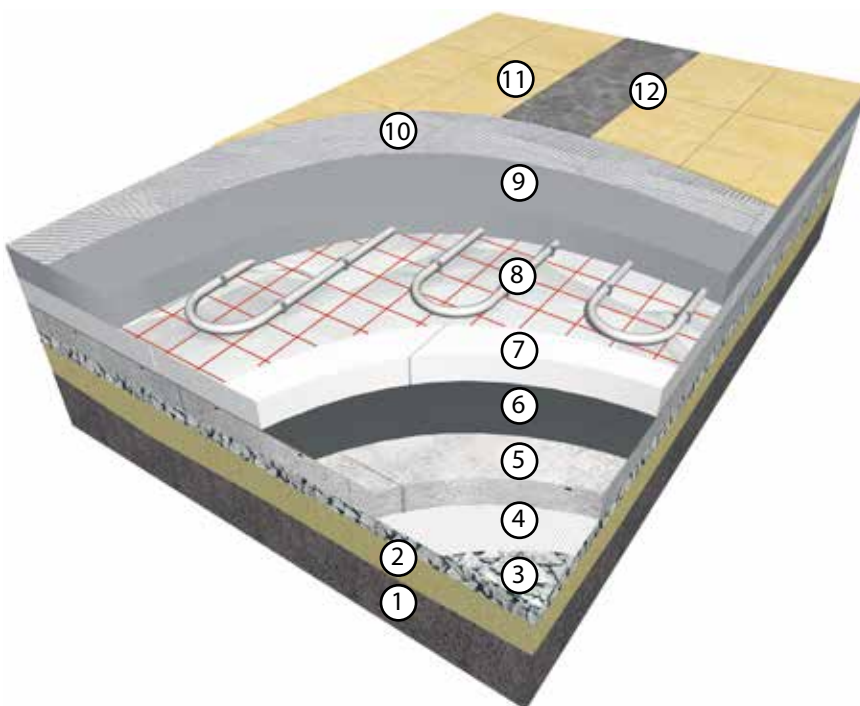
PRODUCT			
	ATLAS ADHER	ATLAS FILER	ATLAS ENDER
Reference document	PN-EN 1504-3:2006		
Function of system element	Contact coat	Repair layer	Finish coat
TECHNICAL DATA			
Mixing ratio water/dry mix [l/ 25 kg]	8.0-8.75	2.5-3.25	4.0-4.5
Layer thickness [mm]	1,0	10-50	3-10
Pot life [min]	120	60	60
Open time [min]	15	10	15
Temperature of mortar preparation and application [°C]	5-25	5-25	5-25
Time period after execution of the previous stage of work		Immediately after application of ATLAS ADHER contact coat	After 24 hours since application of ATLAS FILER leveling layer
Bonding to concrete [MPa]	≥ 0,8	≥ 0,8	≥ 0,8
Compressive strength	R1 class	R2 class	R2 class
Floor access/use [h]		24	24
Load [days]		14	14
Examples of use	Ceilings, ferroconcrete posts, construction slabs of terraces and balconies, retaining walls, ferroconcrete beams, ferroconcrete slabs and platforms of flight of stairs		

2.1 FLOOR ON GROUND IN A "WET ROOM" WITH ELECTRIC HEATING



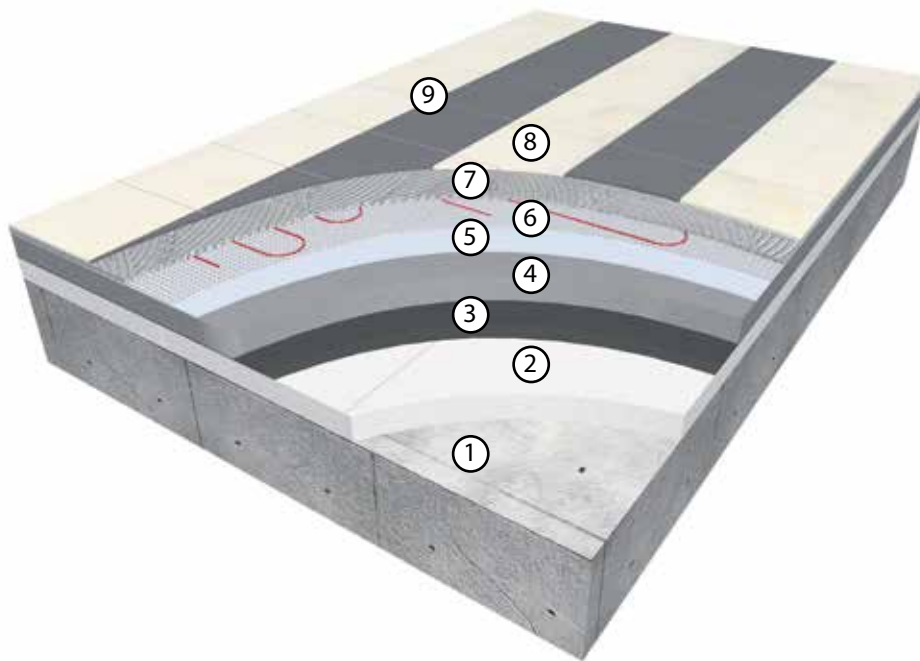
1. Subsoil
2. Leveling subcrust of sand
3. Filtration layer of gravel
4. Geotextile or dimpled membrane
5. Concrete or ferroconcrete slab
6. IZOHAN IZOBUD WL primer (diluted with water in 1:1 ratio)
+ IZOHAN IZOBUD WM damp - proofing
7. Thermal or acoustic insulation
8. PE foil
9. ATLAS POSTAR 20 or ATLAS POSTAR 80 screed
10. Heating mat embedded in an adhesive
11. ATLAS PLUS MEGA adhesive
12. Ceramic or gres tiles
13. ATLAS ARTIS GROUT

2.2 FLOOR ON GROUND IN A "DRY ROOM" WITH HEATING IN A SCREED



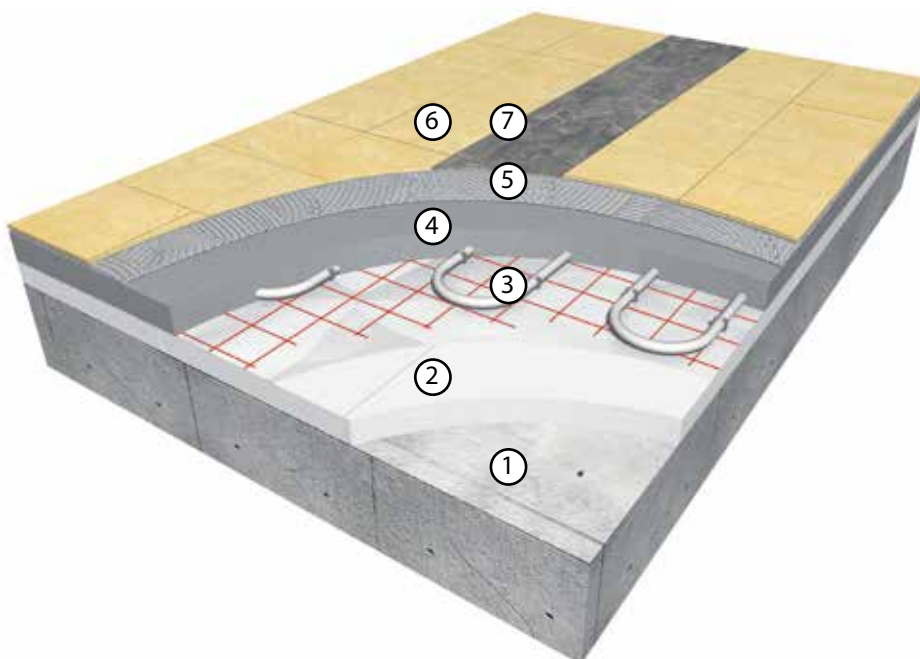
1. Subsoil
2. Leveling subcrust of sand
3. Filtration layer of gravel
4. Geotextile or dimpled membrane
5. Concrete or ferroconcrete slab
6. IZOHAN IZOBUD WL primer (diluted with water in 1:1 ratio)
+ IZOHAN IZOBUD WM damp - proofing
7. Thermal or acoustic insulation
8. Heating system embedded in rough floor executed on foil
9. ATLAS SWS or ATLAS SAM 200 screed
10. ATLAS PLUS MEGA adhesive
11. Ceramic or gres tiles
12. ATLAS ARTIS GROUT

2.3 FLOOR ON A CEILING SLAB IN A “WET ROOM” WITH ELECTRIC HEATING



1. Concrete ceiling
2. Thermal insulation
3. PE foil
4. ATLAS POSTAR 20 or ATLAS POSTAR 80 screed
5. ATLAS WODER DUO under- tile damp - proofing
6. Heating mat embedded in an adhesive
7. ATLAS PLUS MEGA adhesive
8. Stoneware, large size floor tiles
9. ATLAS ARTIS GROUT

2.4 FLOOR ON A CEILING SLAB IN A “DRY ROOM” WITH HEATING IN A SCREED

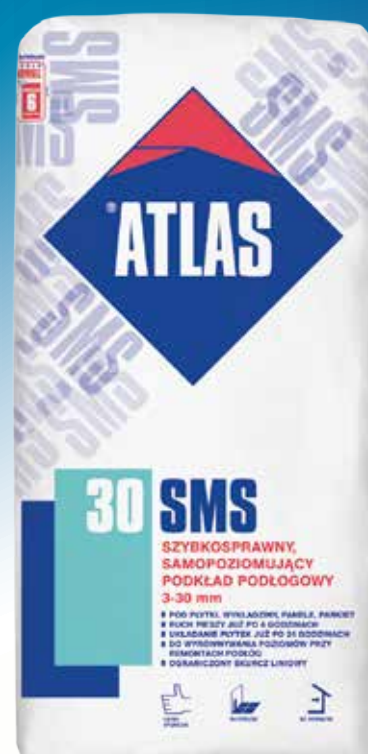


1. Concrete ceiling
2. Thermal/acoustic insulation
3. Heating system embedded in rough floor executed on foil
4. ATLAS SAM 500 or ATLAS SAM 200 screed
5. ATLAS PLUS MEGA adhesive
6. Stoneware, large size floor tiles
7. ATLAS ARTIS GROUT

FAST-SETTING SELF-LEVELING



FOOT TRAFFIC
JUST AFTER 4H



UNDER TILES, CARPETS AND PARQUET



www.atlas.com.pl/en


TABLE 3.1

PRODUCT					
	ATLAS MASONRY MORTAR	MASONRY MORTAR ATLAS M10	ATLAS KB-15	ATLAS MASONRY MORTAR FOR CLINKER	ATLAS SILMUR
	Traditional masonry mortar	Traditional masonry mortar	Masonry mortar for cellular concrete	Masonry mortar with trass	Masonry mortars for silicate elements
Reference document	PN-EN 998-2:2012				
TECHNICAL DATA					
Mortar type*	G	G	T	G	T
Mixing ratio water/dry mix	3-3.5	3-3.5	5.25-6.0	bricklaying: 3.25-3.75 grouting: 2.5	5.0-6.0
Joint width [mm]	6-40	6-40	2-10	6-40	2-10
Compressive strength [N/mm²]	≥ 5.0	≥ 10.0	≥ 5.0	≥ 5.0	from ≥ 5 up to ≥ 15
Pot life [h]	4	4	4	3	4
Colour	grey	grey	grey	grey, dark grey, dark brown, beige, graphite, brick red, anthracite - black	grey or white
Mortar preparation and application temperature [°C]	5-30	5-30	5-30	5-30	5-30 0-30**
TYPE OF MASONRY ELEMENTS					
Ceramic	✓	✓			
Clinker				✓	
Lime-sand	✓	✓			✓
Concrete	✓	✓			
Cellular concrete	✓	✓	✓		✓ ***
USE					
Thick joint bricklaying	✓	✓		✓	
Thin joint bricklaying			✓		✓
Grouting				✓	

* G – general use, T – for thin joints

** applies to M15 mortars

*** does not apply to M15 mortars

PRODUCT					
	ATLAS PLASTERING MIX	ATLAS CEMENT BASE COAT	ATLAS LIGHT MACHINE-APPLIED PLASTER	ATLAS REKORD	ATLAS REKORD GREY
	Traditional cement plaster, category III	Base coat for 2- and 3-coat plasterwork	Cement-lime plaster, category III	White cement top finish	Grey cement top finish
Reference document	PN-EN 998-1:2012				
Mortar type*	GP	GP	LW	OC	OC
TECHNICAL DATA					
Mixing ratio water/dry mix	3.25-4.0 l/25 kg	6.5 l/30 kg	6.0-7.8 l/30 kg	7.0-8.0 l/25 kg	7.0-8.0 l/25 kg
Coat thickness [mm]	6-30	4	5-30	1-10	1-10
Pot life [h]	4	2	2	2	2
Consumption [kg/m ²]	20 / 10 mm thickness	8 / 4 mm thickness	14 / 10 mm thickness	15 / 10 mm thickness	15/10 mm thickness
Mortar function	plaster	base coat	plaster	top finish	top finish
Colour	grey	grey	grey	white	grey
FORM OF APPLICATION					
Manual	✓	✓		✓	✓
Machine	✓ **	✓	✓		
PLACE OF USE					
Indoors	✓	✓	✓	✓	✓
Outdoors	✓	✓		✓	✓
SUBSTRATE TYPE					
Ceramic	✓	✓	✓		
Cellular concrete	✓	✓	✓	✓	✓
Silicate	✓	✓	✓	✓	✓
Concrete	✓	✓	✓	✓	✓

* plastering mixes are classified according to PN-EN 998-1:2012 standard

The most important division according to the standard is the classification based on properties and form of application. Therefore we can list the following plastering mixes:

GP – general purpose

LW – light

OC – single coat for indoor use

** machine applied plastering mix is custom made, and the bags are labeled with the letter M

TABLE 4.1





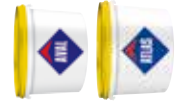
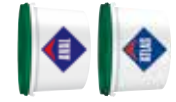



NAME	ATLAS/ AVAL	ATLAS ETICS	ATLAS XPS	ATLAS RENOTER	ATLAS CERAMIK	ATLAS ROKER/ AVAL ROKER	ATLAS ROKER G		
							TYPE I	TYPE II	TYPE III
Reference document	ETA-06/0081 ETA-06/0187	AT-15-9090/2014	ETA-07/0316	AT-15-8477/2010	AT-15-8592/2011	ETA-06/0173 ETA-06/0281	AT-15-7314/2011		
INSULATION LAYER									
EPS	✓	✓		✓	✓				
XPS			✓		✓				
Mineral wool						✓	✓	✓	
Lamella mineral wool						✓	✓	✓	
Beveled lamella mineral wool									✓
(●) MORTAR FOR INSUALTION FIXING (●●) MORTAR FOR INSULATION FIXING AND BASE COAT EXECUTION									
STOPTER K-10	●	●	●						
STOPTER K-20/ AVAL KT 85	●●	●●	●●	●●	●●				
STOPTER K-50		●●				●●			
HOTER S/ AVAL KT 53	●	●	●						
HOTER U/ AVAL KT 55	●●	●●	●●	●●	●●				
ROKER W-10						●			●
ROKER W-20/ AVAL KT 190						●●	●●	●●	●
BASE COAT – MESH									
Single	✓	✓	✓	✓		✓	✓	✓	
Double	✓ *				✓				
Without mesh									✓
FINISHING COAT – THIN-COAT RENDER, FAÇADE PAINT, CERAMIC TILE									
Mineral render	✓	✓	✓	✓		✓		✓	✓
Acrylic render	✓	✓	✓	✓					
Silicate render	✓	✓	✓	✓		✓		✓	
Silicone render	✓	✓	✓	✓		✓		✓	
Acrylic-silicone render		✓							
Silicone-silicate render		✓				✓			
Façade paint							✓		
Ceramic tiles					✓				
LIMITATION OF USE DUE TO BUILDING HEIGHT									
Height up to:	Check local regulations					No limits	Not applicable		
Use	Insulation of all types of buildings	Insulation of all types of buildings	All types of buildings and places vulnerable to mechanical damage	Renovation of existing insulations	Façades of particular utility requirements	Buildings of special fire and acoustic requirements	Underground garages, passages under buildings		

* Possible if required by local regulations, e.g. in order to reach higher resistance to impact category.

PRODUCT	      						
	ATLAS STOPTER K-50	ATLAS STOPTER K-20/ AVAL KT 85	ATLAS STOPTER K-10	ATLAS HOTER U/ AVAL KT 55	ATLAS HOTER S/ AVAL KT 53	ATLAS ROKER W-20/ AVAL KT 190	ATLAS ROKER W-10
Reference document	AT-15-8512/2010	AT-15-3092/2013	AT-15-1857/2013	AT-15-6347/2014 AT-15-9090/2014	AT-15-6348/2014	AT-15-2927/2014	AT-15-7314/2011
TECHNICAL DATA							
Mixing ratio water/dry mix [l/kg]	5.0-5.5	5.0-5.5	5.0-5.5	5.0-5.5	5.0-5.5	5.0-6.25	5.5-6.25
Pot life [h]	4	4	3	4	3	2	4
Open time [min]	25	25	25	25	25	30	25
Bonding to polystyrene* [MPa]	≥ 0.1	≥ 0.08	≥ 0.08	≥ 0.08	≥ 0.08		
Bonding to mineral wool* [MPa]	≥ 0.08					≥ 0.08	≥ 0.08
Bonding to concrete* [MPa]	≥ 0.25	≥ 0.25	≥ 0.25	≥ 0.25	≥ 0.25	≥ 0.25	≥ 0.3
Consumption [kg/m ²] – boarding	polystyrene	4.0-5.0	4.0-5.0	4.0-5.0	4.0-5.0	4.5-5.5	4.5-5.5
	mineral wool	4.5-5.5					
Consumption [kg/m ²] – base coat	polystyrene	3.0-3.5	3.0-3.5	3.0-3.5		5.5-6.5	
	mineral wool	5.5-6.5					
Temperature of application [°C]	5-30	0-25	5-30	5-25	5-30	5-25	5-25
Colour of base coat	white	grey	grey	grey white	grey	grey	grey
ADHESIVE USE IN THE INSULATION SYSTEM							
Boarding	✓	✓	✓	✓	✓	✓	✓
Boarding and base coat	✓	✓		✓		✓	
TYPE OF INSULATION							
EPS	✓	✓	✓	✓	✓		
XPS		✓	✓	✓	✓		
Mineral wool	✓					✓	✓

* in air-dry state




TABLE 4.3

PRODUCT									
	ATLAS CEMIT SN-MAL	ATLAS CEMIT ND	ATLAS CEMIT WN	ATLAS CEMIT PS	ATLAS/AVAL ACRYLIC RENDER	ATLAS/AVAL ACRYLIC-SILICONE RENDER	ATLAS/AVAL SILICONE RENDER	ATLAS SILICONE-SILICATE RENDER	ATLAS DEKO M AVAL KT 77
Reference document	PN-EN 998-1:2012				PN-EN 15824:2010				
Render type	Mineral dry mixtures				Dispersion ready-to-use mix				
Binder	Cement				Styrene-acrylic resin	Styrene-acrylic and silicone resin	Styrene-acrylic and silicone resin	Styrene-acrylic resin, potassium silicate	Acrylic resin
Priming mass	Cerplast/ AVAL KT 16				Cerplast/ AVAL KT 16	Cerplast/ AVAL KT 16	Silikon ANX/ AVAL KT 76	Silikon ANX/ AVAL KT 76	Cerplast/ AVAL KT 16
Texture	spotted/rustic	spotted	wood-like	sandstone	spotted	spotted	spotted	spotted	mosaic
Colours	1 (white)	1 (white)	10***	1 (sandy)	400	400	400	400	60 – ready-to-use 84 – TM1 20 – TM3
Max aggregate grain size [mm]	1.5/spotted 2.0/spotted/rustic 3.0/spotted/rustic	2.0	1.0	1.0	1.5/N-15 2.0/N-20	1.5	1.5/N-15 2.0/N-20	1.5/N-15 2.0/N-20	1.0-2.0 - ready-to-use 0.2-08 – TM1
Consumption [kg/m ²]	2.5 for 1.5 mm 3.0 for 2.0 mm 4.0 for 3.0 mm	2.8	2.5-3.0	2.0-2.5	2.5 for 1.5 mm 3.0 for 2.0 mm	2.5	2.5 for 1.5 mm 3.2 for 2.0 mm	2.5 for 1.5 mm 3.0 for 2.0 mm	3.0-5.5* - ready-to-use and TM3 1.5-2.5* – TM1
Mixing ratio [l/25kg]	5.75-6.50/spotted 5.0-6.0/rustic	6.25	5.25-6.00	5.0-5.5	-	-	-	-	-
Pot life	1.5	1.5	1.0	1.5	-	-	-	-	-
USE									
Manual	✓	✓	✓	✓	✓	✓	✓	✓	✓
Machine	✓**	✓**		✓	✓**	✓**	✓**	✓**	

* The actual consumption can be established on basis of sample application upon particular substrate.

** Mineral renders CEMIT SN 1.5 mm and 2.0 mm, dispersion renders 1.5 mm thick can be applied with machines only. The machine-applied render forms texture differing from the one formed manually.

*** After coating with ATLAS BEICA impregnator.

PRODUCT			
	ATLAS SALTA E	ATLAS SALTA S	ATLAS SALTA/ AVAL KT 46
Reference document	Paints are covered with technical approvals for the thermal insulation systems		
Type of paint	Acrylic	Silicate	Silicone modified
Number of colours	400	352	400
TECHNICAL DATA			
Primer	Not required	ARKOL SX	Not required
Density [kg/dm³]	1.5	1.5	1.4
Temperature during application and substrate temperature [°C]	5-30	5-25	5-30
Drying time [h]	2-4	2-6	2-6
Next coat application after [h]	6	6	6
Application on fresh mineral render after min. [days]	28	2	5
Coverage from 1 litre (single application) [m²] *	4-8	3.5-5	4-8
SUBSTRATE TYPE			
Mineral substrates: concrete, traditional plasters	✓	✓	✓
Thin-coat mineral renders	✓	✓	✓
Thin-coat acrylic render	✓		✓
Thin-coat acrylic-silicone render	✓		✓
Thin-coat silicone render			✓
Thin-coat silicone-silicate render			✓
Thin-coat silicate render		✓	✓
FINISHING COAT FOR THERMAL INSULATION			
Insulation system with EPS/XPS	✓	✓	✓
Insulation system with mineral wool		✓	✓




* Actual coverage depends on the substrate absorptiveness and the texture of painted surface. We recommend establishing the exact consumption on a test basis.

TABLE 4.5

PRODUCT		
	ATLAS CERPLAST/ AVAL KT 16*	ATLAS SILKON ANX/ AVAL KT 76
Reference document	Primers are covered with technical approvals for the thermal insulation systems	
TYPE OF RENDER		
Mineral	✓	
Acrylic	✓	
Mosaic (e.g. DEKO M/ KT 77)	✓	
Silicone		✓
Acrylic-silicone	✓	
Silicone-silicate		✓
TECHNICAL DATA		
Density [g/cm³]	1.5	1.5
Application of render after [h]	4-6	4-6
Temperature during application and substrate temperature [°C]	5-30	5-30
Consumption [kg/m²]	0.3	0.3

Note:

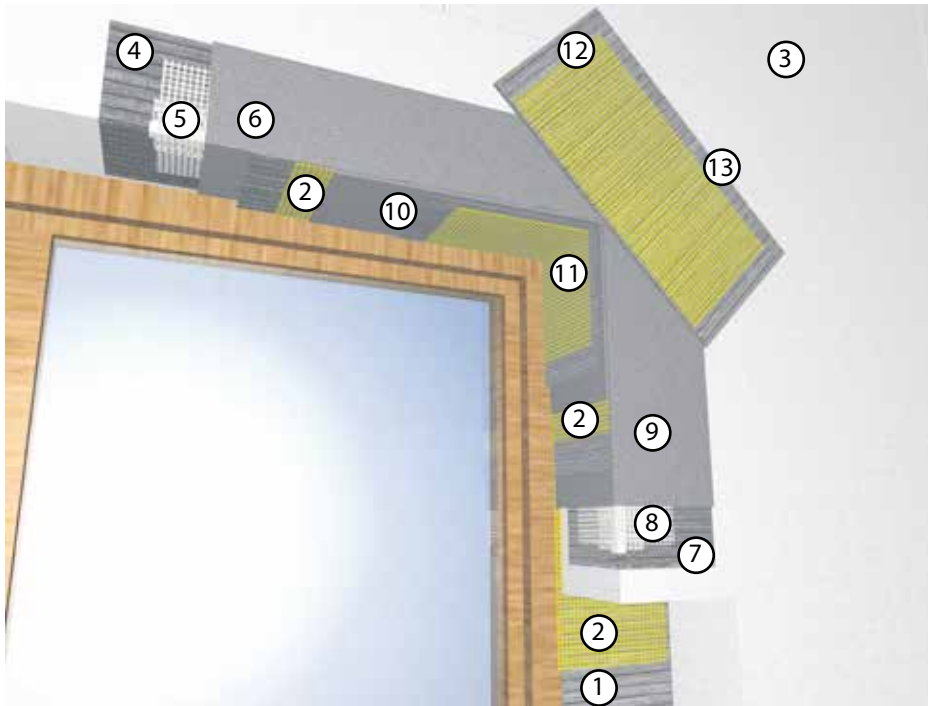
* Product can be applied as contact coat on difficult substrates e.g. OSB boards, old terrazzo.

PRODUCT			
	ATLAS UNI-GRUNT/ AVAL KT 17	ATLAS ARKOL SX	ATLAS ARKOL NX
Reference document	Primers are covered with technical approvals for the thermal insulation systems		
TYPE OF FAÇADE PAINT			
Acrylic	✓		
Silicate		✓	
Silicone			✓
TECHNICAL DATA			
Density [g/cm³]	1.0	1.0	1.0
Drying time [min]	30	30	30
Temperature of application [°C]	5-25	5-30	5-30
Painting after [h]	2	4	4
Consumption [kg/m²]	0.05-0.2	0.2	0.05-0.2

Note:

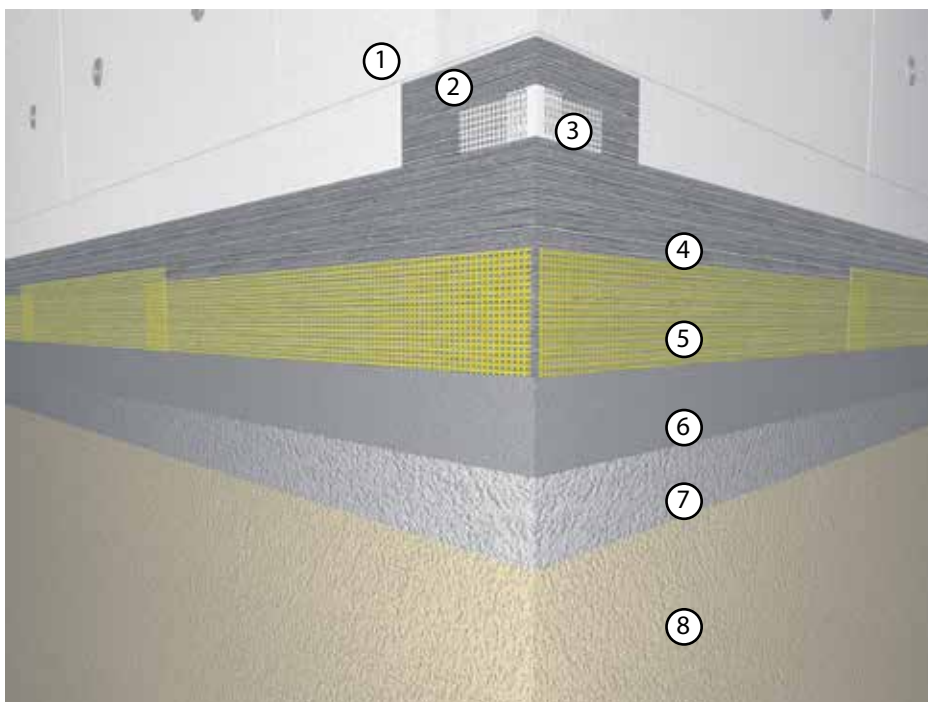
Primers beneath paints are used when unification of substrate absorptiveness is required.

4.1 REINFORCING MESH LAYOUT AT THE REVEAL



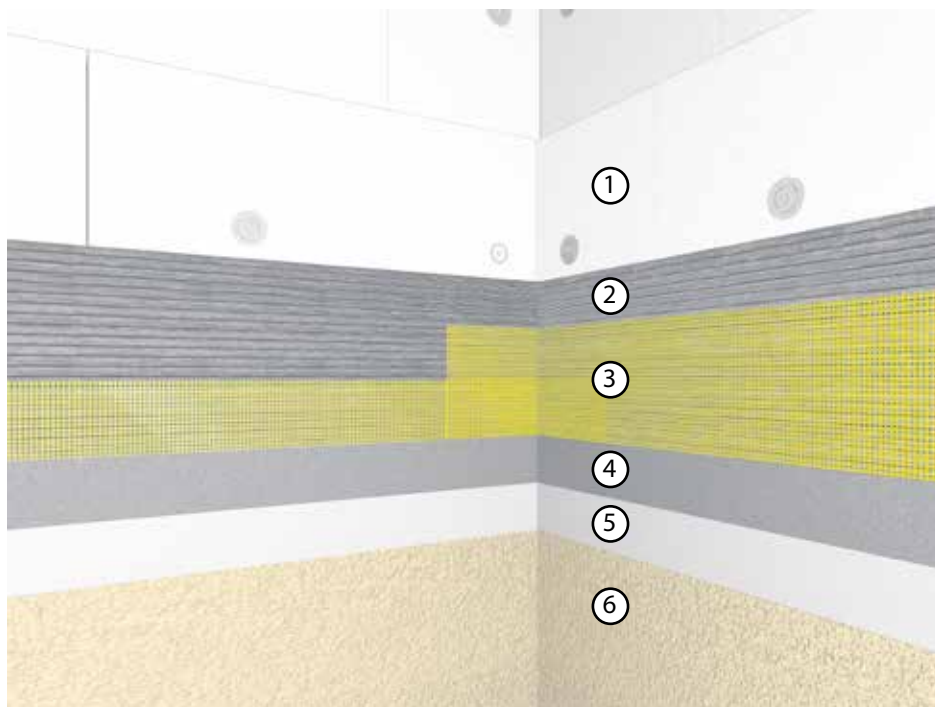
1. Fixing the mesh:
ATLAS HOTER U/ AVAL KT 55 or ATLAS STOPTER K-20/ AVAL KT 85 adhesive
2. REINFORCING MESH – fixed to the wall and folded on thermal insulation (execution without the window profile)
3. Thermal insulation
4. Fixing the drip bead:
ATLAS HOTER U/ AVAL KT 55 or ATLAS STOPTER K-20/ AVAL KT 85 adhesive
5. DRIP BEAD
6. Fixing the drip bead:
ATLAS HOTER U/ AVAL KT 55 or ATLAS STOPTER K-20/ AVAL KT 85 – after smoothing
7. Fixing the corner bead:
ATLAS HOTER U/ AVAL KT 55 or ATLAS STOPTER K-20/ AVAL KT 85 adhesive
8. CORNER BEAD
9. Fixing the corner bead:
ATLAS HOTER U/ AVAL KT 55 or ATLAS STOPTER K-20/ AVAL KT 85 – after smoothing
10. Fixing the mesh for reveals reinforcement:
ATLAS HOTER U/ AVAL KT 55 or ATLAS STOPTER K-20/ AVAL KT 85 adhesive
11. REINFORCING MESH – reinforcement of reveals
12. Fixing the mesh for diagonal reinforcement:
ATLAS HOTER U/ AVAL KT 55 or ATLAS STOPTER K-20/ AVAL KT 85 adhesive
13. REINFORCING MESH – diagonal reinforcement

4.2 REINFORCING MESH LAYOUT AT THE OUTER CORNER



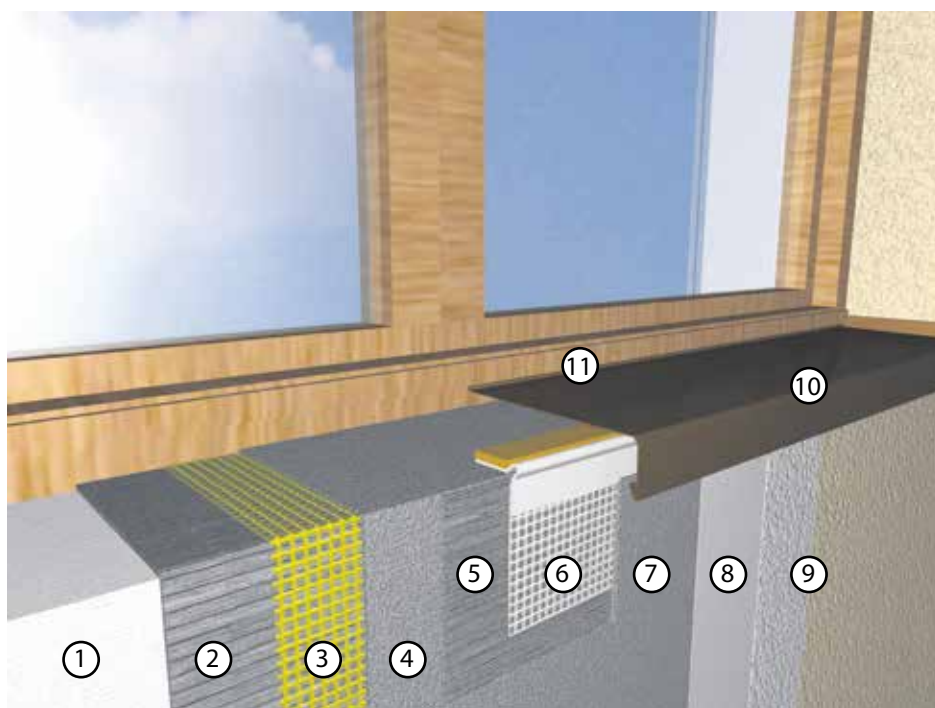
1. Thermal insulation
2. Fixing the corner bead
3. CORNER BEAD
4. Embedding the reinforcing mesh:
ATLAS HOTER U/ AVAL KT 55 or ATLAS STOPTER K-20/ AVAL KT 85 adhesive
5. REINFORCING MESH
6. Embedding the reinforcing mesh:
ATLAS HOTER U/ AVAL KT 55 or ATLAS STOPTER K-20/ AVAL KT 85 adhesive – after smoothing
7. ATLAS CERPLAST/ AVAL KT 16 or ATLAS SILKON ANX/ AVAL KT 76 priming mass beneath the render
8. ATLAS/AVAL RENDERING COAT

4.3 REINFORCING MESH LAYOUT AT THE INNER CORNER



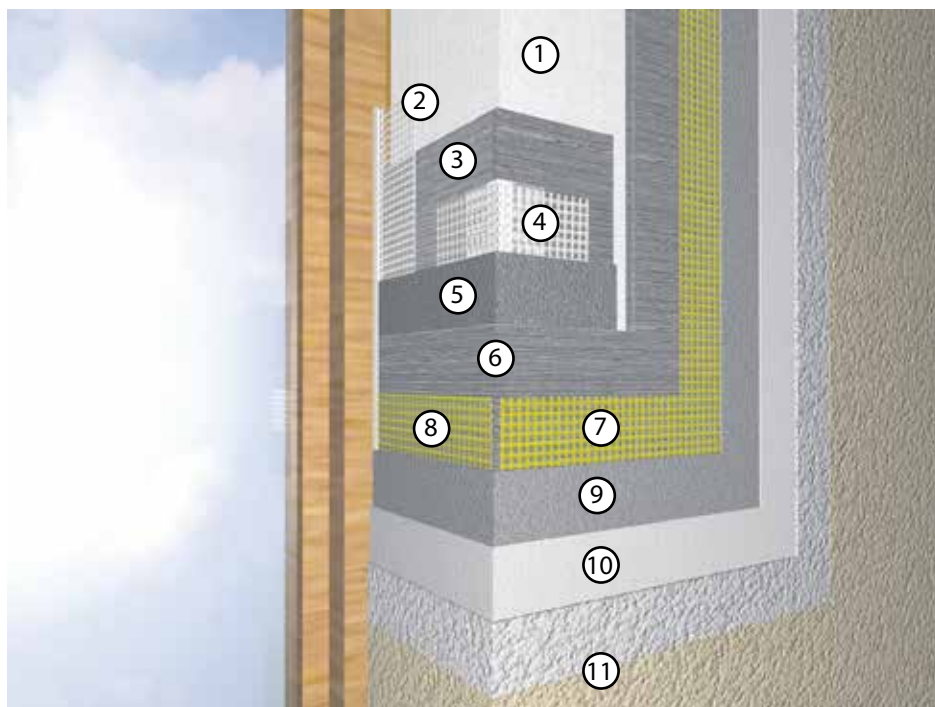
1. Thermal insulation
2. Embedding the reinforcing mesh:
ATLAS HOTER U/ AVAL KT 55 or ATLAS STOPTER
K-20/ AVAL KT 85 adhesive
3. REINFORCING MESH
4. Embedding the reinforcing mesh:
ATLAS HOTER U/ AVAL KT 55 or ATLAS STOPTER
K-20/ AVAL KT 85 adhesive – after smoothing
5. ATLAS CERPLAST/ AVAL KT 16 or ATLAS SILKON
ANX/ AVAL KT 76 priming mass beneath the
render
6. ATLAS/AVAL RENDERING COAT

4.4 INSULATION OF THE WINDOW SILL WITH THE FACING WINDOW



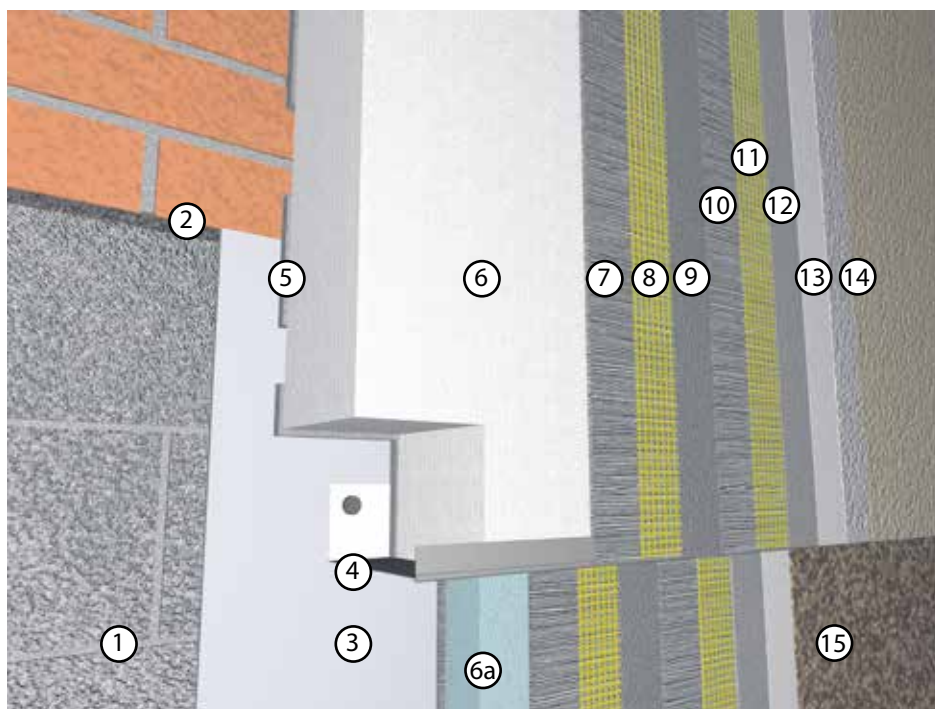
1. Thermal insulation
2. Embedding the reinforcing mesh:
ATLAS HOTER U/ AVAL KT 55 or ATLAS STOPTER
K-20/ AVAL KT 85 adhesive
3. REINFORCING MESH
4. Embedding the reinforcing mesh:
ATLAS HOTER U/ AVAL KT 55 or ATLAS STOPTER
K-20/ AVAL KT 85 adhesive – after smoothing
5. Fixing the window sill profile:
ATLAS HOTER U/ AVAL KT 55 or ATLAS STOPTER
K-20/ AVAL KT 85 adhesive
6. WINDOW SILL PROFILE
7. Fixing the window sill profile:
ATLAS HOTER U/ AVAL KT 55 or ATLAS STOPTER
K-20/ AVAL KT 85 adhesive – after smoothing
8. ATLAS CERPLAST/ AVAL KT 16 or ATLAS SILKON
ANX/ AVAL KT 76 priming mass beneath the
render
9. ATLAS/AVAL RENDERING COAT
10. Window sill
11. Silicone ATLAS ARTIS

4.5 INSULATION OF THE REVEAL WITH THE FACING WINDOW







1. Thermal insulation
2. WINDOW PROFILE
3. Fixing the window profile and the corner bead:
ATLAS HOTER U/ AVAL KT 55 or ATLAS STOPTER
K-20/ AVAL KT 85 adhesive
4. CORNER BEAD
5. Fixing the window profile and corner bead:
ATLAS HOTER U/ AVAL KT 55 or ATLAS STOPTER
K-20/ AVAL KT 85 adhesive – after smoothing
6. Embedding the reinforcing mesh:
ATLAS HOTER U/ AVAL KT 55 or ATLAS STOPTER
K-20/ AVAL KT 85 adhesive
7. REINFORCING MESH
8. REINFORCING MESH – reinforcing the reveals
9. Embedding the reinforcing mesh:
ATLAS HOTER U/ AVAL KT 55 or ATLAS STOPTER
K-20/ AVAL KT 85 – after smoothing
10. ATLAS CERPLAST/ AVAL KT 16 or ATLAS SILKON
ANX/ AVAL KT 76 priming mass beneath the
render
11. ATLAS/AVAL RENDERING COAT

4.6 INSULATION OF THE PLINTH OF WALL OF EVEN FAÇADE



1. Foundation: concrete blocks
2. Wall
3. damp - proofing: ATLAS WODER DUO
4. Base track
5. Boarding thermal insulation to the wall:
ATLAS HOTER U/ AVAL KT 55 or ATLAS STOPTER
K-20/ AVAL KT 85 adhesive
6. Thermal insulation
- 6a. Thermal insulation of high density EPS or XPS
boards
7. Embedding the reinforcing mesh:
ATLAS HOTER U/ AVAL KT 55 or ATLAS STOPTER
K-20/ AVAL KT 85 adhesive
8. REINFORCING MESH – reinforcing the plinth area
9. Embedding the reinforcing mesh:
ATLAS HOTER U/ AVAL KT 55 or ATLAS STOPTER
K-20/ AVAL KT 85 adhesive – after smoothing
10. Embedding the reinforcing mesh:
ATLAS HOTER U/ AVAL KT 55 or ATLAS STOPTER
K-20/ AVAL KT 85 adhesive
11. REINFORCING MESH
12. Embedding the reinforcing mesh:
ATLAS HOTER U/ AVAL KT 55 or ATLAS STOPTER
K-20/ AVAL KT 85 adhesive – after smoothing
13. ATLAS CERPLAST/ AVAL KT 16 or ATLAS SILKON
ANX/ AVAL KT 76 priming mass beneath the
render
14. ATLAS/AVAL RENDERING COAT
15. ATLAS DEKO M/ AVAL KT 77 mosaic render







PRODUCT				
	ATLAS proFarba	ATLAS optiFarba*	ATLAS ecoFarba	ATLAS BASE COAT PAINT
Reference document	Paints are not classified as construction products, thus they are not covered with standards and there is no need to issue technical approvals for them			
Type of paint	LATEX	LATEX	ACRYLIC	ACRYLIC
TECHNICAL DATA				
Densyte [g/cm ³]	1.45	1.45	1.45	1.45
Viscosity [cP]	13,000-16,000	6,000-9,000	6,000-9,000	6,000-9,000
Content of volatile organic compounds (VOC) [g/l]	29.9	1.1	29.9	29.9
Scrub resistance according to PN EN 13 300:2002	Class 2	Class 3	Class 4	not applicable
Water vapour permeability, S _d	< 0.3 m	< 0.3 m	< 0.3 m	-
Thixotropy	yes	no	no	no
Coat appearance	white matt	white matt	white matt	white matt
Hygienic certificate	✓	✓	✓	✓
PAINTING TOOLS				
Roller	✓	✓	✓	✓
Brush	✓	✓	✓	✓
Spray	✓	✓	✓	✓
USE				
Investment painting: offices, staircases, utility rooms, etc.	• •	• • •	• • •	• • •
Painting public access buildings: schools, kindergartens, nursing homes, agencies, theatres, sport halls, traffic routes, etc.	• • •	• • •	•	• • •
Painting health service facilities: medical centres, hospitals, surgeries, treatment and emergency rooms	• • •			•
Dry compartments: rooms, antechambers	• • •	• • •	• • •	• • •
Wet compartments: bathrooms, kitchens	• • •	• •	•	

* Recommendation of the Polish Allergy Society

** - (for humidity 55% and temperature 23°C +/- 2°C)

•	permissible
• • •	recommended
• • • •	particularly recommended

TABLE 6.1

PRODUCT							
	GIPSAR UNI	PLUS GIPSAR	ATLAS GIPS OPTIMUS	ATLAS GIPS RAPID	ATLAS GIPS SOLARIS	ATLAS GIPS BONDER	ATLAS GIPS STONER
	White gypsum finishing coat	Gypsum top finish	Cement top finish	Ready-to-use polymer finishing coat	Hand-applied gypsum plaster	Gypsum adhesive	Jointing compound for filling joints without tapes
Reference document	PN-EN 13279-1:2009		PN-EN 998-1:2012	PN-EN 15824:2010	PN-EN 13279-1:2009	PN-EN 14496:2007	PN-EN 13963:2008
TECHNICAL DATA							
Binder	gypsum and polymer	gypsum and polymer	white cement	resin	gypsum	gypsum	gypsum
Mixing ratio water/dry mix [l/kg]	0.39-0.40	0.35-0.45	0.28-0.32	ready-to-use mass	approx. 0.60	approx. 0.50	approx. 0.50
Pot life [min]	90	60	120	whole shelf life	30	45	60
Bonding [N/mm²]	≥ 0.5	≥ 0.5	≥ 0.5	≥ 0.3	≥ 0.1	≥ 0.06	≥ 0.25
Max. single coat thickness wall/ceiling [mm]	2/2	3/3	5/5	3/3	30/15	20/-	15/15
APPLICATION							
Manual	✓	✓	✓	✓	✓	✓	✓
Machine		✓		✓			
USE							
Finishing coats	✓	✓	✓	✓			
Rooms with constant high humidity			✓				
Plasters indoors					✓		
Plasterboards fixing						✓	
Plasterboards jointing							✓
Small gypsum elements fixing						✓	✓
Installation of wiring elements					✓	✓	
Manual grinding	✓	✓	✓	✓			
Machine grinding		✓	✓	✓			



Additive

to renders and paints enabling
to apply from already 0°C

**WINTER
INSULATION
SYSTEM
ATLAS
STOPTER**

www.atlas.com.pl/en



ATLAS ESKIMO outstanding features:



- ◆ enables proceeding insulation works in lower temperature (from already 0°C) and with higher air humidity
- ◆ accelerates setting and drying of all ATLAS/AVAL dispersion renders and paints
- ◆ resistance to precipitation is achieved already after 6 hours from render applying



Up to five European Technical Assessment
for ATLAS insulation systems



TABLE 7.1

Product		
	ATLAS SILSTOP	ATLAS DELFIN
TYPE OF IMPREGNATED SURFACE		
Absorptive ceramic tiles	•	✓
Absorptive stone	✓	✓
Grouts	•	✓
Construction ceramics	✓	•
Cellular concrete	✓	
Silicate elements	✓	
Mineral and acrylic renders	✓	

✓ particularly recommended
• can be used

Product			
	ATLAS SZOP	ATLAS SZOP 2000	ATLAS MYKOS
TYPE OF CLEANED DIRT			
Cement	✓		
Lime	✓		
Gypsum	✓		
Mineral deposits from water	✓		
Rust	✓		
Acrylic priming emulsions		✓	
Dispersion renders and paints		✓	
Acrylic impregnants		✓	
Algae			✓
Fungi			✓
TYPE OF CLEANED SURFACE			
Glazed tiles and terracotta	✓	✓	
Clinker and gres-porcelain	✓	✓	
Stone	✓	✓	
Plastic	✓	✓	
Glass		✓	
Chrome plated	✓		
Steel	✓	✓	
Mineral renders		✓	✓
Concrete elements		✓	✓
Grouts		✓	✓

✓ particularly recommended
• can be used

Introduction of construction products for trade within the European Union is regulated by the **Regulation (EU) No 305/2011 of the European Parliament and of the Council of 9 March 2011** (so-called CPR). According to this Act, supported by the local regulations of each EU – member state, the packaging of a construction product may be labelled with CE or B symbol (in special cases both characters can occur simultaneously on the packaging of a particular product). The application of CE mark on a construction product was based until 30 June 2013 on the Declaration of Conformity issued by a manufacturer (if the product in question had harmonized technical specification). Since 1 July 2013 the Declaration of Conformity has been replaced by the Declaration of Performance. The B – symbol labelling of the packaging of a construction product is based on the Domestic Declaration of Conformity issued by a manufacturer. In any case, this Declaration constitutes the manufacturer's guarantee that the concerned product has the properties stated in the Declaration and, in particular, that it has technical and performance characteristics specified in the appropriate product technical specification issued by the manufacturer. That technical specification for CE marking may be the Polish Standard with the status of a harmonized European Norm (PN-EN) or the European Technical Approval (in accordance with CPR the new name is the European Assessment Document). In case of B marking, the Polish Standard (which does not have a harmonized status) or the Technical Approval may be the technical specification. The CE or B symbol, if there is no technical impediment, should be applied on the packaging of a product.

There are products used in construction works, which according to the act mentioned above are not classified as construction products. This applies to, e.g.: paints, primers and impregnants. There are no appropriate technical specifications for them, hence the manufacturers of these products do not issue the Declarations of Conformity and have no basis for labelling them with CE or B symbols.

8.1 Standard Symbols Used in Classification of Adhesives According to PN-EN 12004+A1:2012

According to the standard above adhesives are divided into:

- C** cement adhesives
- D** dispersion adhesives
- R** adhesives based on reactive resins

Adhesive type depends on the type of binder and the binding mode. Adhesives based on cement (C), in which Portland cement is the binder, bind thanks to hydration of cement. Dispersion adhesives (D), in which the role of binder is fulfilled by the organic resins, bind by drying. Adhesives based on reactive resins (R) are two-component, therefore they bind by chemical reaction between the components of the adhesive.

Each of three types of adhesives can exist in different classes. Standard lists the following classes of adhesives:

- 1** standard setting adhesives; adhesion after 28 days $\geq 0.5 \text{ N} / \text{mm}^2$
- 2** adhesives of improved parameters; adhesion after 28 days $\geq 1.0 \text{ N} / \text{mm}^2$
- F** fast setting adhesives; adhesion after 6 hours $\geq 0.5 \text{ N} / \text{mm}^2$
- T** adhesives with reduced slip; slip not exceeding 0.5 mm
- E** adhesives with extended open time; adhesion after 28 days $> 0.5 \text{ N} / \text{mm}^2$, despite the fact the time between the application of the adhesive and placing a tile is not longer than 30 minutes
- S1** deformable adhesives
- S2** highly deformable adhesives

Deformability of an adhesive is a feature which determines the ability to transfer shear tensions at the joints between the adhesive and the substrate. Such tensions may occur, for example, between adhesive and elastic substrate, that is the case when fixing ceramic tiles on the OSB boards or on substrates which change the temperature due to external factors (e.g. terraces, balconies or floors with heating systems). In these cases one should apply deformable adhesives marked with S1 symbol.

Example of adhesive labelling - ATLAS PLUS EXPRESS - (C2 FTE S1)**ATLAS PLUS EXPRESS ADHESIVE is:**

- C2** a cement based adhesive of improved parameters, adhesion $> 1.0 \text{ N/mm}^2$
- F** fast setting
- T** with reduced slip
- E** with extended open time
- S1** deformable

8.2 Standard Symbols Used in Classification of Grouts According to PN-EN 13888:2010**Grouts are divided into three types:**

- CG1** cement grout of standard bonding strength
- CG2 WA** cement grout of enhanced parameters, reduced water absorption and increased resistance to abrasion
- RG** grout based on reactive resins

Example of grout labelling - ATLAS ARTIS GROUT - (CG2 WA)**ATLAS ARTIS GROUT is:**

- CG2** a cement grout of enhanced parameters
- W** with reduced water absorption
- A** with increased resistance to abrasion

8.3 Standard Symbols Used in Classification of Rough Floors According to PN-EN 13813:2003**According to the standard above rough floors are divided according to the type of binder used for manufacturing:**

- CT** cement - based rough floors
- CA** anhydrite (calcium sulfate) - based rough floors
- MA** magnesium rough floors
- AS** asphalt rough floors
- SR** rough floors made of synthetic resins

Each of the rough floors listed above may be characterized by:

- C** compressive strength $[\text{N/mm}^2]$
- F** flexural strength $[\text{N/mm}^2]$
- A** abrasion resistance $[\text{cm}^3/50 \text{ cm}^2]$

Example of rough floor labelling - ATLAS POSTAR 40 (CT-C30-F6-A22)**ATLAS POSTAR 40 rough floor is:**

- CT** a cement rough floor
- C30** of compressive strength $\geq 30 \text{ N/mm}^2$
- F6** of flexural strength $\geq 6 \text{ N/mm}^2$
- A22** of abrasion resistance $\leq 22 \text{ cm}^3/50 \text{ cm}^2$

Abrasion resistance for ATLAS products is given according to the Böhm's method. It consists of determining the volume of material scratched from the rough floor surface of 50 cm^2 . Thus – the higher number of **A** index indicates the lower resistance to abrasion of the rough floor. This means that the rough floor labelled with **A22** has lower resistance to abrasion than the **A15** labelled one.

9.1 Water Absorbability

Water absorbability of a material depends on the size and the structure of pores. In construction, one usually uses the weight water absorbability. It determines the amount of water that the material can absorb and retain. In practice, it equals the maximum moisture content in the material. The weight water absorbability is indicated by the ratio of water mass absorbed by the material to the mass of material in a dry state, determined in percents. Thus, absorbability of 15% means that the material in wet state is 15% heavier than when it is dry.

9.2 Abrasion

Abrasion in construction is determined by the loss of mass, volume, thickness or height under the influence of abrasive factor. Abrasion is an important parameter for materials used for execution of rough floors and floors. The most common method used by manufacturers of construction materials to determine the abrasion is the Böhm's method. This method is also used by ATLAS. In case of floors one determines the volume loss measured in cm³ per 50 cm² of the material surface. In case of rough floors abrasion is described with letter "A" with a numerical index.

Note! When determining abrasion, higher numerical index "A" indicates lower abrasion resistance of the material.

9.3 Thermal Conductivity Coefficient "λ"

Thermal conductivity coefficient λ stands for the amount of heat transmitted through the material. It is determined by the amount of heat transmitted through 1 m² of material of 1 m thickness at temperature difference of 1K. Low value of λ coefficient characterises materials which conduct heat poorly, so they are good insulators. Below there is a comparison of coefficients for selected materials

"λ" coefficients for selected building materials

Material	Thermal conductivity coefficient λ [W/mK]
Concrete of stone aggregate	1.00
Wall of ceramic brick	0.77
Wall of ceramic hollow blocks jointed with cement-lime mortar	0.33
Pine wood across the fibres	0.16
EPS	0.031-0.045
Mineral wool	0.031-0.045

Data given in the table is defined for the materials in a medium wet state.

9.4 Heat Resistance "R"

Heat resistance R (m² x K/W) depends on the thickness of the material layer and the value of λ coefficient and it is represented by the following formula:

$$R = \frac{d}{\lambda}$$

Below there is a comparison of layers of selected materials, for which heat resistance is of the same value:

$$R = 0,25 \text{ (m}^2\text{K/W)}$$

Thickness of selected materials of the same heat resistance

Material	Layer thickness [cm] at R=0.25 [m ² K/W] heat resistance
EPS	1.0
Pine wood across the fibres	4.0
Wall of ceramic hollow blocks	8.0
Wall of ceramic brick	19.3
Concrete of stone aggregate	25.0

9.5 Thermal Transmittance Coefficient "U"

Thermal transmittance of the building partition is defined by the "U" [W/m²K] coefficient. It determines the amount of heat transmitted through 1m² of partition. "U" coefficient is a reciprocal of thermal resistance "R". Therefore it is described by the formula:

$$U = \frac{1}{R}$$

Low value of "U" coefficient represents small amount of heat penetrating the building partition, e.g. an external wall of a building. Thus, the lower the "U" coefficient is, the better thermal insulation of the partition one obtains. Since thermal insulation of walls is crucial for energy savings, it is not surprising that the value of "U" coefficient, or rather its limit is defined in the Regulation of the Minister of Transport, Construction and Maritime Economy on technical specifications that need to be met by buildings and their location. Currently, the limiting value of "U" coefficient in Poland is lower than **0.25 [W/m²K]**. For other states one should follow local requirements.

The table below shows the minimum thickness of EPS layer resulting in "U" value lower than **0.25 [W/m²K]**.

Thickness of EPS layer combined with other materials resulting in "U" value lower than 0.25 [W/m²K]

Construction material of the wall	Material thickness [cm]	Minimum thickness of EPS with $\lambda=0.035$ [W/mK] resulting in "U" value for whole partition lower than 0.25 [W/m ² K]
Concrete of stone aggregate	16	16
Wall of ceramic bricks	38	12
Wall of ceramic hollow blocks	29	11

9.6 Relative Diffusion Resistance Coefficient "μ"

The relative diffusion resistance coefficient is comparative in nature. The comparison is made between the diffusion resistance of any construction material and air diffusion resistance. It is assumed that the value of diffusion resistance of the air layer of a thickness of 1m is 1. Owing to this, any construction material has a diffusion resistance higher than 1 – the diffusion resistance of air. If "μ" coefficient for selected material is 67, it means that the material is 67 times more resistant to gas (e.g. water vapour) than water. Below there is a table of "μ" values for selected construction materials.

Relative diffusion resistance coefficient "μ" for selected materials

Material	Coefficient μ
Air	1.0
Mineral wool	1.3
Gypsum	10
Brick	10
Silicate brick	20
Cellular concrete (density 800kg/m ³)	10
EPS	60
Wood-based boards - plywood	150

10. Units in Construction

Currently functioning system of measurement is SI - International System of Units approved in 1960 by the General Conference on Weights and Measures. SI units are divided into basic and derived. The table below presents the basic SI units and selected derived units used in technology, and especially in construction.

Basic units and selected derived SI units

Basic units		
Base quantity	Name	Symbol
Length	metre	m
Mass	kilogram	kg
Time	second	s
Temperature	Kelvin	K
Derived units		
Base quantity	Name	Symbol
Force	Newton	N
Pressure	Pascal	Pa

Despite the official system of measurement there still exists a generic system which mostly describes the pressures. Unit of pressure here is a kilogram per area unit expressed in square cm or square meters. Below there are conversions from SI units to generic system.

Conversions of stress units:

Assumptions:

$$10 \text{ N} \approx 1 \text{ kG}$$

$$1 \text{ MPa} = 1 \text{ N/mm}^2$$

$$1 \text{ MPa} \approx 10 \text{ kG/cm}^2$$

Example: Compressive strength of ATLAS POSTAR 40 rough floor is:

$$30 \text{ N/mm}^2 = 30 \text{ MPa} \approx 300 \text{ kG/cm}^2$$

Conversions of pressure units:

Assumptions:

$$1 \text{ MPa} = 100\,000 \text{ mm head of water} = 100 \text{ m head of water}$$

Example: Pressurized water resistance for ATLAS WODER DUO is:

$$0.5 \text{ MPa} = 50 \text{ m head of water}$$

MAKE IT BONE DRY

ATLAS WODER DUO

Two-component waterproof insulation

flexible*with reinforcing polymer microfibers*forms coat resistant to negative pressure of water*ideal under tiles on balconies and terraces

ATLAS WODER E

Liquid foil for jointless waterproofing

one-component*easy to use*enables to obtain continuous and flexible waterproof insulation*protects against moisture: bathrooms, kitchens, balconies, terraces





EXTERNAL WALL INSULATION SYSTEM



with polysteryne (EPS):

ETA-06/0081

ETA-06/0187



with mineral wool

ETA-06/0173

ETA-06/0281



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