

# ADDITIONAL INFORMATION

## Classification of building products according to standards

### CLASSIFICATION OF ADHESIVES ACC. TO THE STANDARD PN-EN 12004:2017-03

According to the standard adhesive mortars are divided into:

- C** cement-based adhesives
- D** dispersive adhesives
- R** reactive resin-based adhesives

Adhesive type depends on the type of binder and the method of bonding. Cement-based adhesives (C) use cement as binder and bond by hydration. Dispersive adhesives (D) use organic resins as binder and bond by drying. Reactive resin-based adhesives (R), on the other hand, are two-component adhesives and bond as a result of a chemical reaction between the components of the adhesive mortar.

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

- 1** Standard setting adhesive  
bonding after 28 days  $\geq 0.5 \text{ N / mm}^2$
- 2** Adhesives of improved parameters;  
bonding after 28 days  $\geq 1.0 \text{ N / mm}^2$
- F** Rapid set adhesives;  
bonding after 6 hours  $\geq 0.5 \text{ N / mm}^2$
- T** Adhesives of reduced slip;  
slip not exceeding 0.5 mm
- E** Adhesives of extended open time;  
bonding after 28 days  $> 0.5 \text{ N / mm}^2$ ,
- S1** Deformable adhesives
- S2** Highly deformable adhesives

Deformability of an adhesive is a feature which determines the ability of transfer of shear tensions at joints between adhesive and substrate. Such tensions can occur, for example, between adhesive and elastic substrate, which is the case when fixing ceramic tiles on OSB boards or on substrates which change 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 or S2 symbol.

### Example of adhesive labelling - ATLAS PLUS EXPRESS - (C2 FTE S1)

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

### CLASSIFICATION OF GROUTS ACC. TO PN-EN 13888: 2010

Grouts are divided into three types:

- CG1** cement grout of standard setting
- CG 2** WA cement grout of enhanced parameters, reduced water absorption and improved resistance to abrasion
- RG** grout based on reactive resins

Example of grout labelling -

### ATLAS TIGHT GROUT - (CG2 WA)

- CG 2** cement grout of enhanced parameters
- W** of reduced water absorption
- A** of improved resistance to abrasion

### CLASSIFICATION OF INTERIOR SCREEDS ACC. TO PN-EN 13813:2003

Interior screeds are divided according to the type of binder used in their production:

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

Each of the screeds listed above can be characterized by the following properties:

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

Example of screed labelling -

**ATLAS POSTAR 40 (CT-C30-F6-A22)**

**CT** a cement screed

**C30** of compressive strength  $\geq 30 \text{ N/mm}^2$

**F6** of flexural strength  $\geq 6 \text{ N/mm}^2$

**A22** of resistance to abrasion  $\leq 22 \text{ cm}^3 / 50 \text{ cm}^2$

Resistance to abrasion of ATLAS products is listed in accordance to the Böhm's method. It consists in determination of volume of material abraded from the screed surface of 50 cm<sup>2</sup>. Thus, the higher level of A index, the lower resistance to abrasion of a screed is. Therefore, a screed labelled with A22 class has lower resistance to abrasion than the one labelled with A15 class.

**CLASSIFICATION OF MASONRY MORTARS ACC. TO PN-EN 998-2: 2012**

Masonry mortars are divided according to their use:

- G** – general use
- T** – for tight joints
- L** – lightweight

Mortar classes:

CLASS	M1	M2,5	M5	M10	M15	M20	MD
Compressive strength (N/mm <sup>2</sup> )	1	2.5	5	10	15	20	D*

\* D – IS THE COMPRESSIVE STRENGTH OF OVER 25 N/MM2, DECLARED BY THE MANUFACTURER AS A MULTIPLE OF 5.

**CLASSIFICATION OF PLASTERING MORTARS ACC. TO PN-EN 998-1: 2016-12**

Plastering mortars are divided according to their use:

- GP** – general purpose
- LW** – lightweight
- OC** – one-coat for external applications
- CR** – coloured
- R** – renovation
- T** – thermal insulation

Categories of plastering mortars:

PROPERTIES	CATEGORIES	VALUES
Range of compressive strength after 28 days of setting (curing) [N/mm <sup>2</sup> ]	CS I	0.4 - 2.5
	CS II	1.5 - 5.0
	CS III	3.5 - 7.5
	CS IV	$\geq 6$
Water absorption due to capillary rising [kg/m <sup>2</sup> •min <sup>0.5</sup> ]	W 0	not determined
	W 1	C $\leq 0.40$
	W 2	cC $\leq 0.20$
Thermal conductivity coefficient [W/m•K]	T1	$\leq 0.1$
	T2	$\leq 0.2$

**TYPES OF WATERPROOFING**

**Light waterproofing** – protects from water flowing freely from the sealed surface. Light waterproofing is applied, for example, in bathrooms. The water freely runs down the walls without forming pools.

**Medium waterproofing** – protects from water accumulating at the surface in form of pools (puddles). A good example are balcony and terrace floors, where, despite a gradient, water stays for a longer time in form of puddles, for example as a result of melting snow. Waterproofing of this type should be applied also inside buildings, e.g. on bathroom floors with linear water drains.

**Strong waterproofing** – protects against pressure-generating water. This means that water permanently acts on the sealed surface. The best examples here are swimming pools and water tanks.