THERMAL INSULATION PLASTER SYSTEM **CLIMATE SYSTEM®**

- ✓ **Ecological**
- ✓ **Thermal insulation**
- ✓ **Sound insulation**
- ✓ **Up to 1500 colours**
- ✓ **Hydrophobic**
- ✓ **Frost resistant**
- ✓ **Incombustible**
- ✓ **Vapor permeable**
- ✓ **Does not require reinforcement**

Technical Specification

Application Area: Climate System® is a lightweight plastering system based on mineral binders (cement, lime), lightweight mineral fillers, polymer modifiers, and nanotechnology. It is used for dehumidification and insulation of building structures. Suitable for insulating façades, interiors, attics, balconies, and basements. It is durable, hard, non-flammable, and after application to the structure, it acts comprehensively by dehumidifying, insulating, and reflecting thermal radiation.

Description

Plastering System - Climate System® consists of a thermal insulating plaster applied directly to the structure, equipped with a system penetration, thermal insulating render, and a thermoreflexive diffusion-open coating with an endothermic effect.

Application

Application is performed using common plastering procedures, resulting in a completely consistent, solid, smooth layer. Climate System®, which is typically composed of a thermal insulating core plaster, thermal insulating render, and thermoreflexive coating, can be applied both externally and internally. In order for it to function as a dehumidification system, it must be applied to a diffusion-open substrate. The application of the system is carried out according to project documentation and relevant calculations to achieve maximum effect. It is necessary to follow the technical instructions for processing individual components.

Substrate

Climate System® can be applied to all stable, clean substrates, free of erosion and greasiness. For maintaining parameters, a diffusion-open substrate is required.

Table: Examples of the use of Climate System® on different types of structures. (The given values are indicative)

Structure type	Brick	Sand brick	Panel	Liapor KSL 365	Ytong YQ500 P2-300
	45cm	44 cm	25 cm	36,5 cm	37,5 cm
Thermal resistance R	2,07	8,9	3,69	7,51	8,44
Heat transfer coefficient U	0,48	0,11	0,27	0,13	0,12

Declared values of technical parameters of components Climate System®

TECHNICAL SPECIFICATIONS	DECLARED VALUE
Climate System® Core Parameters:	
Bulk density of plaster in dry state kg/m³	360 ±10
Capillary absorption	0.01 ± 0.5 kg/(m²•min^0.5)
Water vapor diffusion coefficient ***μ***	6.5 ±1.5
Thermal conductivity coefficient **λ**	T1 0.07 W/(m•K)
Fire reaction	A1
Resistance	Frost-resistant
Water quantity per 1 kg of dry mix	5.3 – 5.8 l/bag 10 kg
Minimum temperature	5°C – for 24 hours
Maximum temperature in shade	30°C – for 24 hours
Climate System® Render Parameters:	
Bulk density of plaster in dry state kg/m³	750 ±20
Capillary absorption	0.01 ± 0.5 kg/(m²•min^0.5)
Water vapor diffusion coefficient ***μ***	9.8 ±1.5
Thermal conductivity coefficient **λ**	T1 0.12 W/(m•K)
Fire reaction	A1
Resistance	Frost-resistant
Water quantity per 1 kg of dry mix	6.24 – 6.96 l/bag 12 kg
Minimum temperature	5°C – for 24 hours
Maximum temperature in shade	30°C – for 24 hours
Climate System® Coating Parameters:	
Resistance to wet abrasion DIN EN 13 300	class 2
Density DIN 53217-2	1060 kg/m³
Diffusion resistance S_d dry area DIN 52615	1.3 m
Diffusion resistance S_d humid area DIN 52615	0.7 m
Solar radiation reflectance DIN 67507	86-92%
Fire class	Class I
Volatile Organic Compounds (V.O.C.)	39.5 g/l
Min. dry film thickness	250 μm
Thinning - maximum volume ratio of water, if necessary	max up to 5%
Drying time - the coating can be further processed after	12 hours
Minimum temperature required for texture formation	5°C – for 24 hours
Maximum temperature in shade	28°C – for 24 hours
Colour shades	approximately 1,500 colour tones