ISONEM THERMAL PAINT

(Heat Insulation Paint)

Product Description

THERMAL PAINT is an elastomeric resin-based, contains special vacuum microspheres, have vapor-permeability, water-based, a low thermal conductivity, high sunlight absorbency, and high surface heat transmission value. Its activity is scientifically proved special insulating paint which provides the thermal and water insulation in the interior and exterior facades. It provides energy savings to buildings of up to 40% depending on the application layers number in heating and cooling energy costs. When the ISONEM THERMAL PAINT with special vacuum microspheres is used as interior wall paint, it reflects the radiant heat generated inside to the interior environment, and when it is used on the exterior, the incoming radiant heat is reflected back to the outside. When used on roofs, it reflects a minimum 80% of the sun's rays thanks to its ceramic-reinforced formula. While the water never passes from the film surface applied Isonem Thermal Paint, the moisture inside the building evaporates away from the structure.

- Radiant heat proof.
- Saves up to 40% energy.
- Applicable to internal and external surfaces.
- Labor costs are low and easy to apply.
- It prevents the formation of moisture and mold in the wall.
- It has water and sound insulation feature.
- It has late flammability and nonflammability.

Technical Specifications

Density (25°C, g/mL)	:	0,85 ± 0,10
pH (25°C)	:	7.0 – 9.0
Viscosity (25°C, mPa.s)	:	12500 - 15000
Solid content (% Weight)	:	53 ± 2
Water transmission rate (kg/ m^2. $h^{0,5}$)	:	< 0,1 CLASS W_3
Adhesion strength by pull-off test (N/mm^2)	:	Crack bridging flexible systems without trafficking ≥ 0.8,
Permeability to water vapour (m)	:	5 ≤ S_D ≤ 50 CLASS II
Certification	:	TSE K 127 THERMAL PAINTS
Class	:	COLD CLIMATE PAINT
Brightness	:	N/A (not applied)
Wet abrasion resistance (µm)	:	CLASS II
Covering power (m^2/L)	:	CLASS I
Dry film thickness	:	CLASS E_5
Grain size	:	CLASS S_2

Crack covering feature (µm)	:	not required, CLASS A_0
Carbon dioxide permeability (g/m².d)	:	not required, CLASS C_O
Surface heat transmission value (Ɛ)	:	min. 0.80
Sunlight absorbency value (α)	:	0.820, min. 0.80
Thermal paint surface resistance (RS)	:	0.0495 ± 1,5 %
Heat conductivity coefficient (W/mK)	:	0.023, λ<0.060
Impact resistance	:	no cracking & rupture
Touch-free Drying	:	1 hour
Through-dry time	:	72 hours
Pot life (23°C)	:	X
Solvent	:	Water
Class of fire reaction	:	B S1 d0
Color	:	All requested can be produced in colors

Application Procedure

Surface preparation: Surfaces to be applied should be free of dirt, oil, paste, grease, loose parts and other foreign materials. The appropriate primer selection for surface is made according to the following table. ISONEM UNIVERSAL PRIMER (1: 7 diluted with water - 1 part primer, 7 part water) insulation and paint primer should be applied one layer with 100 - 200 g/m² consumption. The primer is then allowed to dry for 4 hours.

Application method: ISONEM THERMAL PAINT must be mixed thoroughly before use. In exterior applications, 2 to 3 coats can be applied by roller or brush without diluting the product. It should be applied as 1 or 2 coats according to color and hiding power. It is recommended to apply 2 - 3 coats in roof applications. It is recommended that each coat be painted perpendicular to the previous coat. It can be applied by taking into consideration the drying processes. The second and third layer should be applied after the first layer has dried. Wait for 4 hours between two coats.

Application Conditions / Limitations

Application	:	Vertical /Horizontal
Surface humidity	:	Dry surface
Primer usage	:	**For concrete, raw wood, membrane, shingle etc. surfaces:** ISONEM UNIVERSAL PRIMER (diluted) **For metal/steel surface;** ISONEM ANTI RUST PRIMER (Consumption: 250 - 350 g/m²)
Primer consumption	:	100 - 200 g/m²
Product usage	:	1 - 2 layers (interior) 2 - 3 layers (exterior) 2 - 3 layers (roof)
Product consumption	:	max. 300 mL/m² (in interior applications) 1 L /m² (for 1 mm thickness) 2 L /m² (for 2 mm thickness)

Paintable (Coverage) Area	:	**5 L:** 3,5 - 5 m²/bucket **10 L:** 7 - 10 m²/bucket **18 L:** 12 - 18 m²/bucket
Between two coats	:	4 hours
Recommended application tools	:	Roller (synthetic epoxy), brush, spray
Application temperature (°C)	:	5 - 35 °C

Things to consider during and after the application: The application surface must be clean and free from all impurities like dirt, oil, and mud. The surface to be applied with Thermal Paint must be breathable, if it is to be applied to the painted surface, your existing paint must have this feature.

Other ISONEM products recommended: In primer application, ISONEM UNIVERSAL PRIMER or ISONEM ANTI RUST PRIMER should be used depending on the application surface.

IMPORTANT

The surface should be protected from rain, water, mechanical loads and impacts for 24 hours during and after the application. Consuming more or less can lead to inefficiency and side effects.

Packaging & Storage

Packaging	:	5 L, 10 L and 18 L PP bucket
Storage temperature (°C)	:	5 - 35 °C
Shelf life	:	24 months from date of production if stored in original, unopened, undamaged packages.
Storage condition	:	Store tightly closed in a dry and cool place.

Cleaning of Tools

Clean all tools and application equipment with clean water immediately after use.

Health and Safety Information

For information and advice on the safe handling, storage and disposal of chemical products, users shall refer to the most recent Safety Data Sheet containing physical, ecological, toxicological and other safety-related data.

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TS EN 1504-2: Surface protection systems for concrete - Coating (THERMAL PAINT)
DoP No: 37

	STANDARD VALUE	CONTROL VALUE
Permeability to water vapour	Class I S_D<5 m *(permeable to water vapour)* Class II 5 m≤S_D≤ 50 m Class III S_D>50 m *(not permeable to water*	Class II - 40 m
Capillary absorption and permeability to water	w < 0,1 kg/m^2.h^{0,5}	0,01 kg/m^2.h^{0,5}
Adhesion strength by pull-off test	Without trafficking ≥ 0,8 N/mm^2 With trafficking ≥ 1,5 N/mm^2	Crack bridging flexible systems without trafficking 0,8 N/mm²
Dangerous substances comply with 5.4		
Class of fire reaction: B S1 d0		