ISONEM ANTI RADIATION PAINT

(Electromagnetic Anti-Radiation Paint)

Product Description

ISONEM ANTIRADIATION PAINT is a paint that acts as a shield against high and low frequency electromagnetic radiation and also insulates the environment from radiation by pulling the electromagnetic field in the environment. It does not contain heavy metals and chemicals that threaten human health.

Usage Areas

GSM base stations, TV and radio transmitters, radar, wireless, wireless networks and power lines in the private areas of the interior and exterior of the housing, hospitals, military facilities and nuclear power plants, such as sensitive places, also used in our daily life of electronic goods (TV, radio, refrigerator, iron, microwave oven, washing machine, dishwasher, telephones, etc.) can be used to prevent the negative effects of emitted electromagnetic radiation and to isolate private living areas from electromagnetic radiation.

ACCORDING TO MEASUREMENT RESULTS of DOKUZ EYLUL UNIVERSITY ELECTRICAL AND ELECTRONICS ENGINEERING DEPARTMENT;

GSM 900 MHz frequency band up to 30dB (1000 times power attenuation, 99.9%) has been found to have shielding properties. The average shielding values of the relevant samples are given in the table in the commonly used special purpose communication frequency regions.

Decibel and percentage of attenuation result:

	810 - 915 MHz GSM 900	1785 -1805 MHz GSM 1800	2110-2200 Mhz 3G	2400-2500 MHz WIFI-BT
Decibel of Shielding	30dB	24dB	22dB	19dB
Percentage % of Shielding	%99,9	%99,6	%99,2	%98,7

DEVICES ELECTRIC FIELD INTENSITIES

·Electric Blanket: 250 V/m
·Computer Monitor Front (Scuba): 25 V/m
·Toaster: 40 V/m
·Music Set: 90 V/m
·Notebook (Wireless On): 100 V/m
·Refrigerator: 60 V/m
·Iron: 60 V/m
·Mixer: 50 V/m
·Microwave Oven: 250 V/m
·Behind Comp. Monitor (Scuba): 80 V/m
·Base Station: 10 V/m
·Vacuum Cleaner : 16 V/m
·Coffee Machine: 30 V/m
·Water heater: 130 V/m
·Hair Dryer: 40 V/m
·Television: 30 V/m

ISONEM ANTIRADIATION PAINT can be used in areas where shielding is needed. Although a very different value is not measured between the grounded and groundless measurement results of the product, grounded use is recommended if possible.

Technical Specifications

Density (25°C, g/mL)	:	1,20 ± 0,10
pH (25°C)	:	7.0 – 9.0
Viscosity (25°C, mPa.s)	:	10000 - 11000
Solid content (% Weight)	:	70 ± 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
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	:	Black

Application Procedure

Surface preparation: Before application, the surfaces should be clean, free from substances such as oil, dirt, mud, and particles that shield should be cleaned.

Application method: ISONEM ANTIRADIATION PAINT, ready to be applied, should be applied on one or two layers depending on the shielding efficiency of the desired electromagnetic radiation including walls and ceilings on the interior. The application must be applied to all interior surfaces except the floor without spaces. The application is made with a brush. After the first layer has dried, the end of the grounding kit is plugged into an earthed outlet and the silver wire part of the apparatus is stuck with acrylic paste or plaster. The plaster dry after, it is applied one more layer of ISONEM ANTIRADIATION PAINT. After finishing the application, the top coat can be painted with the desired paint or coated with wallpaper or coating products. This situation does not cause weakening of the properties of ISONEM ANTIRADIATION PAINT.

Application Conditions / Limitations

Application	:	In perpendicular to each layers
Surface humidity	:	Dry surface
Primer usage	:	X
Primer consumption	:	X
Product usage	:	2 layers
Product consumption	:	1 – 1,5 kg/m²
Paintable (Coverage) Area	:	6 - 10 m²/bucket
Between two coats	:	4 hours
Recommended application tools	:	Roller (synthetic epoxy), brush
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.

Other ISONEM products recommended: -

IMPORTANT

The surface should be protected from rain, water, mechanical loads and impacts for 24 hours during and after the application.

Packaging & Storage

Packaging	:	10 kg in PP buckets
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 (ANTI RADIATION PAINT)
DoP No: 12

	STANDARD VALUE	CONTROL VALUE
Permeabilityto 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
Capillaryabsorption and permeabilityto water	w < 0,1 kg/m^2.h^{0,5}	0,05 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		

Statement of Responsibility