ITAL SHIELD

PROTEZIONE ELETTROMAGNETICA

ITALSHIELD HFS 61

SHIELDING PAINT

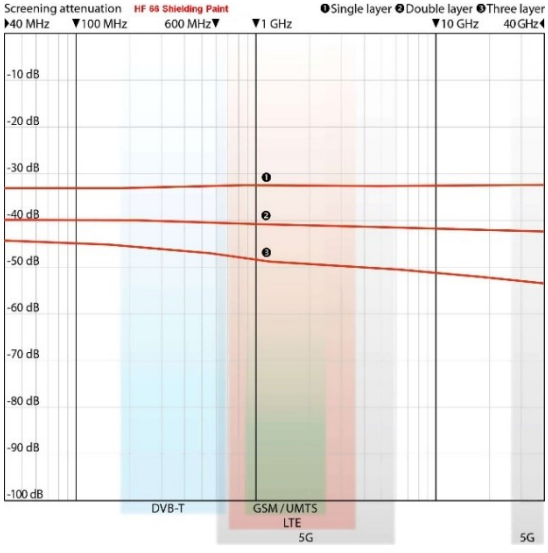
1 and 5 litres plastic containers

- High Quality Wall Paint for all kinds of application.
- Protection up to 67 dB certified by TUV-SUD.
- High shielding, adherence, resistance.
- Certificated by TÜV-SÜD.

Shielding paint, covering High Frequency (HF) radiations and Low Frequency (LF) electric fields.

High shielding power, adherence and resistance with fine pigmentation.

With phenomenal physical and chemical properties, combined with an environmentally friendly technology.



Electromagnetic fields attenuation:

at 1 GHz:		**at 40 GHz:**	
Single Layer	-39 dB	Single Layer	-40 dB
Double Layer	-49 dB	Double Layer	-54 dB
Triple Layer	-59 dB	Triple Layer	-67 dB.

Ground application: Excellent adherence on all bases, either internal or external.

Wall painting: preferably to be used under synthetic-based or water-based paints, dispersion silicate paints, façade paints or silicone resin-based paints.

Grounding connections (indispensable): we strongly recommend using our grounding straps and grounding plates in order to ensure a perfect discharge to the ground of all electrostatic fields.

For more information: maurizio@italshield.com – tel.+39/328/2147399 (+W.app-Telegram)

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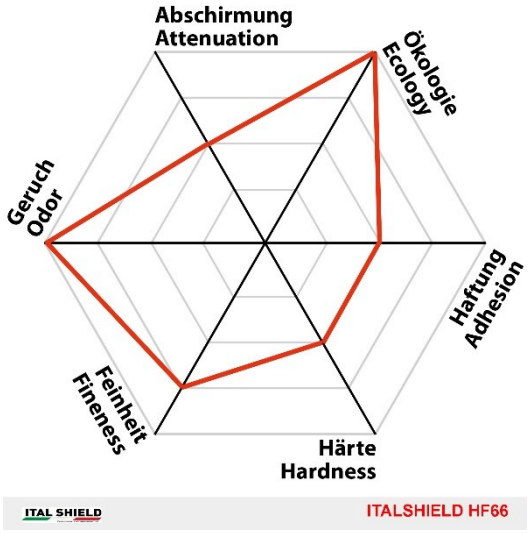
Frost resistance: Our product is tested for a minimum of 5 frost-defrost cycles

Composition: water, acrylic emulsion, natural graphite, carbonium, additives, preservatives (BIT, INN, MIT)

LET'S PREPARE TOGETHER TO THE UPCOMING INSTALLATION OF 5G ANTENNAS !!

We continue to develop our paints; we achieved almost a linear shielding attenuation for a very wide range of frequencies. The frequency range we can cover with our shielding paints includes both 5G frequency spectra: FR1 (600 MHz - 6 GHz) e FR2 (24 GHz - 40 GHz)

Our paints do NOT contain nanoparticles.



Our paints are developed according to strict ecological criteria.

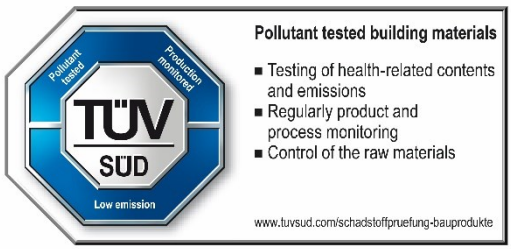
For example, we use carbonium with the lowest possible emission on the market and natural untreated graphite.

We consciously do not use graphene, a nanomaterial in which the potential for danger is still completely unknown.

The entire production process, including quality control, emission behaviour and economical use of preservatives, is subject to monitoring.

TÜV-SÜD certification

We have our shielding paints monitored and certified by TÜV-SÜD.



Paint bucket: 5 litres
Weight: 7200 grams
Packaging:
230x230x250 mm

Paint bucket: 1 Liter
Weight: 1500 grams
Packaging:
100x100x230 mm

Custom tariff: 32091000

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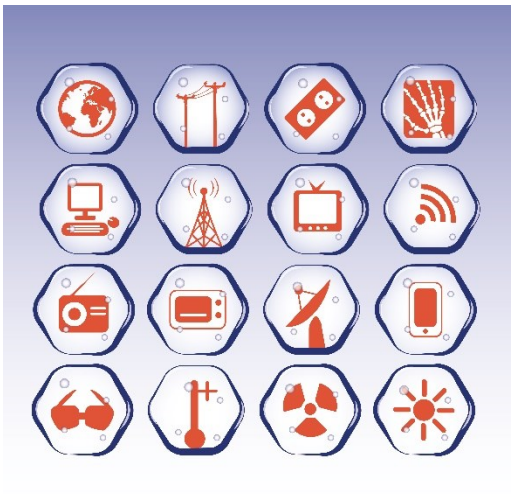
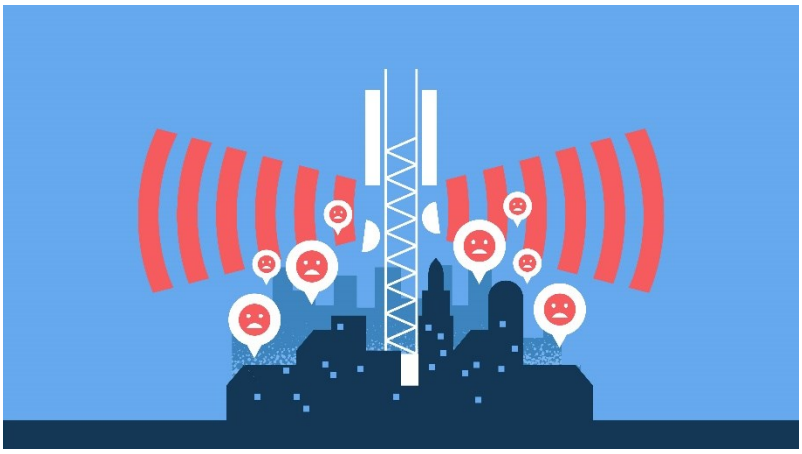
WHERE IT IS ESSENTIAL TO BE USED

- ☞ Private homes, especially bedrooms and children's rooms
- ☞ Kindergartens and schools
- ☞ Hospitals
- ☞ Server rooms
- ☞ In all closed spaces near HF antennas, Radio and TV transmitters, high voltage cables, mobile phone repeaters, especially 5G and 6G



WHY BEING PROTECTED AGAINST ELECTOMAGNETIC FIELDS



The possible health effects after the exposure to electromagnetic waves are essentially of three types: short-term effects (1-electrosensitivity) and long-term effects, which include (2) cancers and (3) other chronic conditions (e.g., infertility and disease neurodegenerative.

The effects on health can also be divided into two basic categories: acute effects, which can occur as an immediate consequence of short but high exposures above a certain threshold; and chronic effects, which can occur after even long periods of latency as a result of mild but prolonged exposure over time, without any certain threshold.

These effects have a probabilistic nature: as the duration of exposure increases, the probability of contracting damage increases.

Generally, high-energy microwave radiation at frequencies from 300 MHz to 300 GHz can be carcinogenic and cause thermal effects by increasing the temperature of exposed organisms. The same type of microwave radiation at lower frequencies, from 100 kHz to 300 MHz, does not have the same effect, except at higher intensities. It is very important to note that electromagnetic radiation sources characterized by field frequencies below 300 GHz can be associated with the non-ionizing type of radiation.

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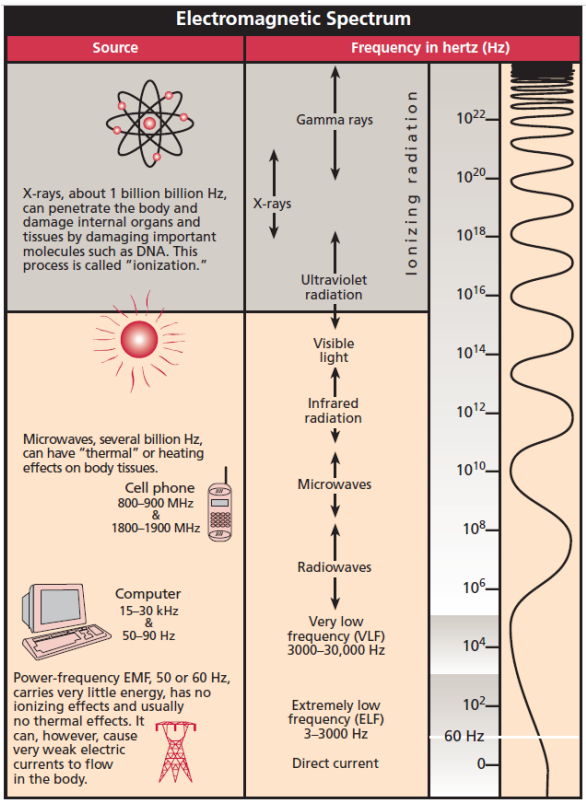

Low frequency electromagnetic fields are the source of another type of electromagnetic radiation, as in the case of power lines or power transformers. These electromagnetic fields characterized by field frequencies of 50 Hz (in Italy and in Europe) or 60 Hz (for example in the United States) are almost stationary and their two field components (electric and magnetic) can be considered separate. The magnetic component appears to pose the greatest health problems.

Furthermore, as already observed in numerous studies, there are strong correlations between exposure to electromagnetic fields and a reduction in male and female fertility.

These are some of the main ailments and diseases encountered in the presence of electromagnetic fields:

☞ Various neurological / neuropsychiatric effects, including changes in brain structure and function, changes in various types of psychological responses, and changes in behaviour.

☞ At least eight different endocrine (hormonal) effects.

☞ Cardiac effects that affect the electrical control of the heart, including changes in ECGs, producing arrhythmias, changes that can be life threatening.

☞ Chromosome breakdown and other changes in the chromosome structure.

☞ Histological changes in the testes.

☞ Cell death (called "apoptosis"), an important process in neurodegenerative diseases.

☞ Lowering of male fertility, including reduced sperm quality and function and also decreased female fertility (less studied).

☞ Oxidative stress.

☞ Changes in calcium flows and into the marking via calcium.

☞ Cellular DNA damage, including single-stranded breaks and double-stranded breaks in cellular DNA and also deoxyguanosine (8-OHdG) in cellular DNA.

☞ Cancer, which is likely to be involved in these DNA changes, but also increased rates of tumor-promoting events.

☞ Therapeutic effects, including stimulation of bone growth.

☞ Cataract formation (previously believed to be thermal, now not known exactly).

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☞ Breaking of the blood-brain barrier.

☞ Reduction of melatonin and interruption of sleep.

For these reasons it is essential, today more than ever, to become aware of, and protect yourself from the dangers represented by electromagnetic pollution. A particular source of danger is represented by the future 5G (and soon 6G) mobile phone lines which will be spread in high concentrations in every corner of the city.

For more detailed information, please consult:

www.italshield.com

https://www.inquinamento-italia.com/inquinamento-elettromagnetico/

LET'S LOVE OURSELVES,

BE PROTECTED

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Technical Shield – Wall paints for electro-magnetic shielding

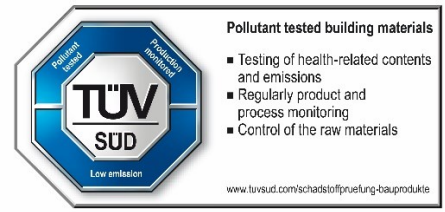
	HFS 61
Tipo prodotto Product type	Pittura Paint
Formato d'uso Delivery form	Liquido Liquid
Applicazione Scope of application	Interna, Esterna Interior, Exterior
Capacità di copertura Coverage p. layer	4 – 8 m²/l
Sottostrati Substrates	Quasi tutti Almost all
Tipologia protezione Shielding type	HF + NF HF + LF
Riduzione | Shielding 1 - 40 GHz (4 m²/l)	1-Strato | 1-layer **44 dB - 54 dB**
Riduzione | Shielding 1 - 40 GHz (4 m²/l)	2-Strato | 2-layer **53 dB - 72 dB**
Schirmung | Shielding 1 - 40 GHz (4 m²/l)	3-Strato | 3-layer **60 dB - 90 dB**
Sost. ambientale Soustainability	Elevata High
Collante Binding agent	Acrilato puro Pure acrylate
Contenuto VOC VOC content	0.18 g/l
Conservazione Preservation	64 ppm BIT 34 ppm INN 3 ppm MIT
Certificazione Certifications	**TÜV-SÜD**
Classe ignifuga Fire behaviour	DIN EN 13501-1
Colore Color	Schwarz Black
Forza adesiva Adhesive strength	**7.6 N/mm²**
Viscosità Viscosity Brookfield	1400 mPas
Valore Sd Sd-value	≈ 0.1 m
Valore PH pH value	8
Densità Density	1.26 kg/l
Resist. congelamento Frost resistance	5 cicli 5 cycles
Scadenza prodotto Shelf life	12 mesi 12 months

Specific Use

Base Paint, with high electrical conductivity for shielding from high frequency electromagnetic fields and / or low frequency electric fields.

TÜV-SÜD Certification

Our products are certified and monitored by the German certification body TÜV-Süd. The entire production process, including quality controls, respect for the environment, correct use of chemical agents is constantly monitored.



Important safety guidelines

All paints have a high colouring power, therefore it is recommended to proceed with caution.

Clean stains immediately, avoid letting them dry. Do not inhale sprays, vapours or powders. Make sure that the environment is ventilated during the painting and drying process. Do not eat, drink, smoke while painting. Rinse thoroughly in case of contact with skin or eyes.

Content of VOC

See the table. The limit value from EU Reg. For category A / a is 30g / l (def. 2010)

Ingredients

Water, natural graphite, pure acrylics dispersion, carbon black, additives, preservation (BIT, INN, MIT).

Preservatives

If indicated in the table, the product may contain BIT (1,2- Benzisothiazolin-3-on), INN (Zink-Pyrithion) and MIT (2-Methyl-4-isothiazolin-3-on) for storage. In case of allergies please consult your doctor.

Grounding

Regulation

Conductive coatings are considered: "external conductive parts", which must have an equipotential connection to an earthing system.

Grounding plates

We recommend to use only our ITAL SHIELD grounding plates. For further information, consult the specific technical data sheets.

Usage of ITAL SHIELD PAINTS

Brief guide to usage

- Pre-treat the substrate with our ItalShield Primer
- Drill the application holes for the grounding plates
- The grounding tape must be continuous, without gaps on all surfaces to be painted, as indicated in our grounding sheet
- apply the wall paint with 1,2 or 3 layers in relation to the desired shielding power
- At the end of the last drying, fix the grounding plates
- For the next procedure, please read the "Finishing" tab.

Minimal temperature for the application

The minimum temperature of the air and the substrate, for a correct application is 5 ° C / 41 ° F. The same works for the drying process.

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Substrate

The substrate must be clean, degreased and dry. Absorbent or porous surfaces must be pre-treated with our Primer. Old layers of paint or tapestries must be removed before application.

Excellent bonding characteristics is demonstrated on all types of substrates, such as emulsion paints, building panels, upholstery, concrete, drywall, plasterboards, polystyrene, wood, glass, plastic, etc.

Usage of ITAL SHIELD primer

Absorbent or porous surfaces must be pre-treated with our Primer ItalShield. Without it, the binding agent soaks into the substrate together with the water. This will result in a worsening of the physical characteristics.

How many layers are needed

One layer is recommended for a cheaper procedure. Two layers represent a valid cost / benefit compromise allowing to standardize the shielding on the surface and obtaining high redundancy. Three layers of paint allow to reach the maximum attenuation level in dB values.

Consumption

The consumption of the paint depends on the quality and absorbency of the substrate. On average, consumption can be calculated at 4 m² / liter, this quantity allows the attenuation assigned in the technical data sheet. A cheaper installation can reach 8 m² / liter, but the attenuation will remain approximately 5-10 dB lower than established.

Preparation

The conductive parts tend to settle on the bottom of the plastic jar. It is therefore necessary to vigorously shake the container and mix properly through the use of a drill with a special mixing blade. **Never mix with water or other products.**

Application

- ☞ Always use a high quality roller with a pile length of at least 10-13 mm. To have a good shielding, it is essential to apply the paint evenly, with the same thickness all over. **Do not leave uncovered areas**! Always dip the roller with the same amount of paint and always try to cover areas of the same size.
- ☞ Foam or foam rollers are less suitable as they often release an uneven amount of paint.
- ☞ Spray painting is possible, with a nozzle size from 0.2 to 0.5 mm..

Drying time

Allow to dry for 24-48 hours before repainting. Protect from rain for at least 48 hours.

Finishing

In order to protect the viscoplastic and black surfaces from mechanical stress and humidity, it is recommended to apply an additional 2-3 coats of standard paint. As there are a wide variety of colours and paints around the world, we can never give a guarantee for a specific combination. Many purely mineral coatings and eco-paints adhere poorly to the graphite surface of our shielding paints. We always recommend a test coat on a sample.

On internal walls: With high quality wall paints, with high hiding power, or silicate dispersion paints. Alternatively, glue with wallpaper, fiberglass fabrics, etc...

On external walls: With high-quality dispersion paints and silicone resins, well-covering, highly water-repellent coatings.

Under plaster or tiles: Because of the high adhesive tensile strength (> 1 N / mm²), our product can be used under plasters, after applying primer or fixative. **Never use purely mineral plasters, they do not adhere!**

Further information

Storage

Store in a cool place, without the risk of freezing and out of the reach of children. Keep the opened containers tightly closed and in a ventilated place.

Conservation period

Maximum 12 Months, Check the label stuck on the container.

Disposal after use

Cleaning of the tools must be carried out immediately after use, with water and detergent. Containers must be completely empty for recycling. The dried material residues can be disposed in the household waste. They must never be released into the sewer, water and soil.

Identification marks

Water hazard class: 1 (VwVwS)
Waste code: 08 01 12 (AVV)
Hazardous ingredients: –
ADR: –
UN-number: –
Transport hazard class: –
Environmental dangers: ––

Disclaimer

The above information have been compiled basing on the latest state of development and application technology. Since use and application are beyond our control, no responsibility can derive from the content of this sheet. In any case, the user is obliged to evaluate the processing professionally, taking into account the properties and suitability of the product. Any information that goes beyond the content of this sheet or deviates from it requires our written confirmation. Our general terms and conditions apply exclusively. With the publication of this technical data sheet, all previous publications are to be considered outdated and lose their validity..