

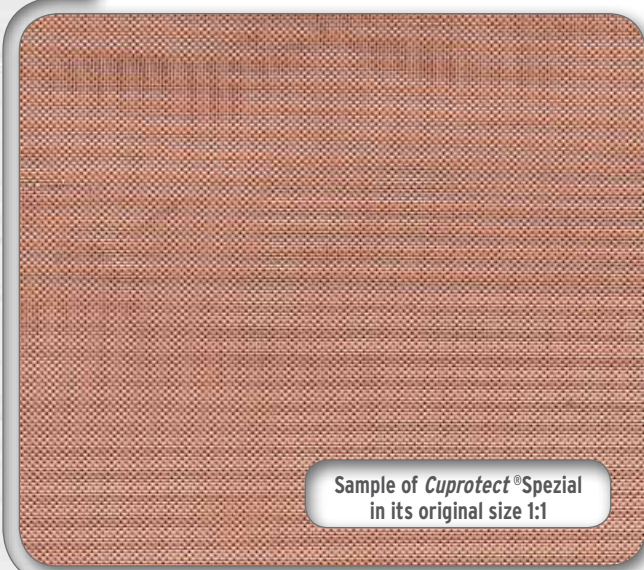
# Cuprotect® Spezial Shielding Material

Highly effective Cuprotect® shielding systems against technical radiation

## Cuprotect® SHIELDING SYSTEMS

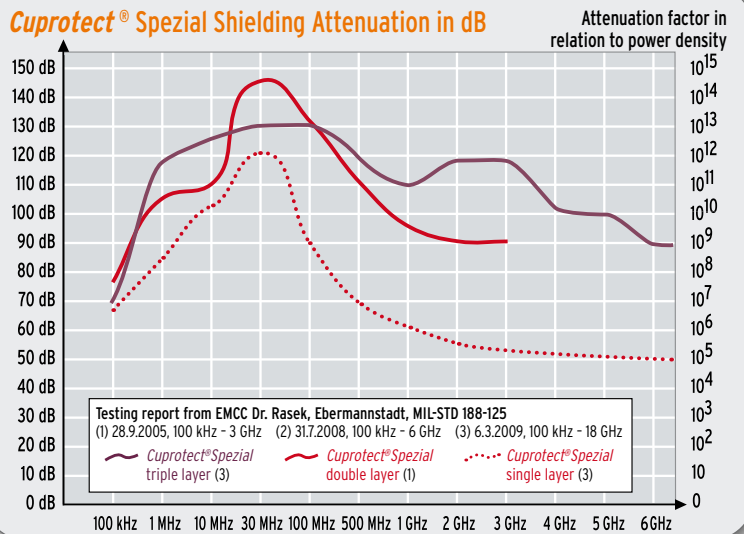
Cuprotect® shielding systems are made entirely of high-quality copper and guarantee highest shielding effectiveness and long-lasting durability.

Since 2001 they have been installed to protect against electromagnetic pollution in residential and commercial buildings, as well as in security applications in the industry, power plants, and shipbuilding.



Sample of Cuprotect® Spezial in its original size 1:1

## Cuprotect® Spezial Shielding Attenuation in dB



## Cuprotect®-PATENTS

For the RF shielding and connection techniques, Cuprotect® products have been granted patent protection:

- German Patent Office DE102005023344A1
- European Patent Office EP 1725088
- United States Patent Office US2007084631A1

An additional patent for RF shielding with a perforated sleeve has been filed with the European Patent Office under AZ 07 019 248. The patented connection techniques with pre-folded pieces of Cuprotect® are the only ones that provide an RF-tight and homogeneously conductive shielding plane.



## Cuprotect® Spezial TECHNICAL SPECIFICATIONS (Product No. CUS0002)

Electrical conductivity:	< 1 mOhm/m
Electrical resistance:	< 1 mOhm = 0.001 Ohm
Specific resistivity:	0.0175
Specific conductance:	57
Melting point:	1083 °C
Fire protection class:	A1 non-flammable building material DIN 4102-4:1994
Minimum order:	1 roll à 24 square metres = 20 linear meters
Free shipping in Germany, plus tax and handling fees.	
A wall/flooring earthing kit is shipped with each roll inside the cardboard core.	

Material:	CU-58 uncoated fine-mesh copper wire
Material thickness:	CUS-mesh 0.3 mm
Size:	W 1.20 m x L 20 m = 24 m <sup>2</sup>
Usable width:	ca. 1.12 m; material prefolded on both sides by ca. 40 mm for flat-fell seam
Area factor:	1.11
Allowance for waste:	5-20%, depending on type of installation
Open area:	53%



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## CUPROTECT®SPEZIAL IS USED IN A WIDE AREA OF APPLICATIONS

- Wood-frame housing & roofing areas (pitched roof)
- Dry construction in exterior siding, walls, and flooring
- Flat roofing: in hot bitumen or lime/cement plaster
- Exterior siding: embedded in exterior plasters, integral insulation & external thermal insulation composite system (ETICS)
- Interior walls: embedded in lime/cement plaster or interior plasters
- Flooring: embedded in screed, lime/cement plaster, tile cement, or hot bitumen
- Drainage area and foundation
- Window frames & doors with wall connection
- Shipbuilding and aircraft building
- Security applications in industry and science
- Shielding chambers

## EXAMPLES OF APPLICATIONS



Top roof shielding



Flat roof shielding with hot bitumen



Exterior shielding embedded in plaster



Exterior shielding embedded in hot bitumen



Exterior shielding embedded in ETICS



Exterior shielding in a dry construction system



Floor shielding embedded in cement plaster

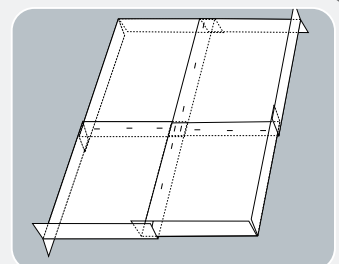
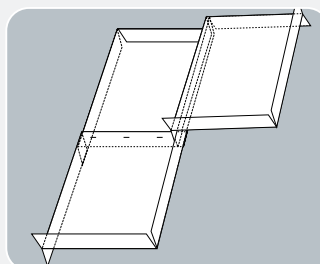
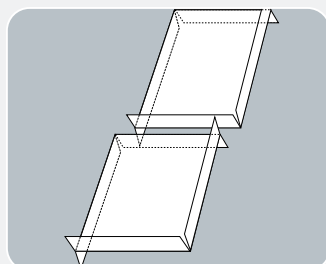
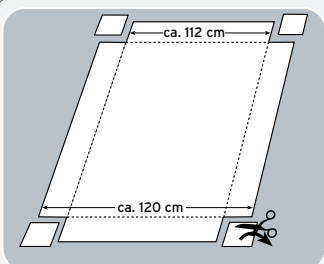


Window & door frames

## PATENTED FLAT-FELL SEAM

Prefold each of the unfolded short ends by 4 cm of the otherwise lengthwise prefolded and cut pieces, and cut out 4x4 cm pieces at the corners. Fold the left length and the top short end down, and fold the right length and bottom short end up. Prepare all *Cuproprotect®* pieces in this manner.

Following the patented flat-fell seam technique, slide the pieces into each other, carefully flatten them, and insert a staple every 5 cm with a pneumatic stapler, two staples in the overlap zone of four pieces. Continue to proceed in this manner with all other pieces. (Also see data sheet on flat-fell seam.)

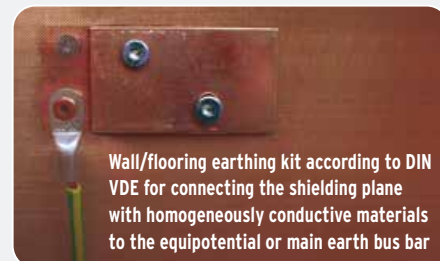


## STAPLING THE FLAT-FELL SEAM EARTHING

Flat-fell seams are stapled with the pneumatic stapler. Personal protective equipment! Only work with safety goggles and suitable work gloves (anti-vibration gloves).

Prior to preparing the surface, the earthing connections need to be put in place. The first piece of *Cuproprotect®* must be connected to the equipotential or main earth bus bar (personal safety) as it is installed.

## PERSONAL SAFETY INSTRUCTIONS



**CAUTION!** The enclosed earthing kit must be properly installed by a qualified electrician prior to the installation of the shielding; a connection must be established between the first piece of *Cuproprotect®* and the equipotential or main earth bus bar. The *Earthing Guidelines for Electricians Installing Cuproprotect® Shielding Material (edition 10/2007)* are to be considered.