

**MAPEI**

Ultrabond Eco V4 Conductive



Light-coloured adhesive in water dispersion with very low emission of volatile organic compounds (VOC) for conductive flooring



WHERE TO USE

Bonding of conductive vinyl, rubber and textile floor coverings in interiors.

Some application examples

Use **Ultrabond Eco V4 Conductive** for bonding:

- conductive vinyl flooring in all areas where discharges of static electricity could cause explosions or disturb electrical and electronic equipment, e.g. surgical rooms, chemical laboratories and factories, areas containing electronic instruments, data processing centres, etc.;
- conductive needlepunch and carpet flooring

ON

all absorbent and moisture-stable substrates normally used in building.

TECHNICAL CHARACTERISTICS

Ultrabond Eco V4 Conductive is a synthetic resin based adhesive in water dispersion with special fibres that ensure electrical conductivity, formulated in an easily trowelable light grey paste.

Ultrabond Eco V4 Conductive is not inflammable with very low emission of volatile organic compounds (EMICODE EC1), so it is absolutely harmless to the health of the installer and the end-user. It can therefore be stored with no special precautions.

Ultrabond Eco V4 Conductive has high early grab and after a waiting time that varies from 0 to 10 minutes (at +23°C) is ready for installing any type of PVC flooring, as long as the substrate is absorbent. The maximum open time is approximately 15 minutes at +23°C.

When dry, after about 24 to 48 hours, the **Ultrabond Eco V4 Conductive** film is flexible and bonds strongly with good cohesion.

RECOMMENDATIONS

- To install conductive flooring which does not allow vapour transmission on non-absorbent surfaces use **Adesilex G19 Conductive** or **Adesilex VZ Conductive**.
- Do not use at temperatures below +15°C or above +35°C (follow the floor covering manufacturer's installation instructions).
- Do not use on substrates subject to rising damp.

APPLICATION PROCEDURE

Preparing the substrate

The substrate must be uniformly dry, absorbent, flat, sound, mechanically strong, free of dust, loose particles, paint, wax, oils, rust, gypsum residues or any other materials that may interfere with bonding, and be free of cracks.

Check moisture content throughout the entire thickness of the substrate with a carbide or electric hygrometer, keeping in mind that the latter gives only approximate values.

Ultrabond Eco V4 Conductive



Spreading Ultrabond Eco V4 Conductive



Laying conductive PVC tiles with Ultrabond Eco V4 Conductive

The moisture content must be as follows: a maximum of 2.5 to 3% for cementitious substrates and 0.5% for gypsum or anhydrite based substrates.

It is essential to make sure that no rising damp is present.

Unbonded screeds laid over light-weight concrete, or over layers of insulation and screeds laid directly onto earth must be carried out over a vapour barrier to prevent rising damp.

To repair cracks in the substrate, consolidate screeds, form fast-drying screeds and level uneven substrates, it is recommended to refer to the section in the MAPEI catalogue concerning the preparation of substrates or contact the Technical Advisory Department.

Acclimatising

Before installing, make sure that the flooring, the adhesive and the substrate are acclimatised to the recommended temperature.

Several hours before installation the floor covering should be removed from its wrapping and unrolled, or at least loosened, to acclimatise it and reduce the tensions caused by the packaging.

Equipotential earth contact

Equipotential earth contact (earthing) should be done in compliance with regulations (CEI, DIN, AMISO, NFPA, ANSI, etc.). Spread the **Ultrabond Eco V4 Conductive** with a fine-notched trowel to bond the copper strips (0.08 to 0.10 mm thick and 10 to 25 mm wide) of the conductive grid to the substrate. Alternately, **Adesilex VZ Conductive** can be used. Test the conductivity of the grid before installing the flooring.

Spreading the adhesive

Stir the **Ultrabond Eco V4 Conductive** in the bucket thoroughly, in order to achieve a homogeneous distribution of the conductive fibres. Then apply it on the substrate evenly with a notched trowel in sufficient quantity as to wet the back of the flooring completely. Waiting time varies from 0 to 10 minutes at approx. +23°C, depending on the absorbency of the substrate and environmental temperature and humidity.

Installing the floor covering

Follow the manufacturer's installation instructions.

After the waiting time has elapsed, the flooring must be installed within the open time of the adhesive, i.e. maximum 15 minutes, depending on the type of substrate and ambient temperature and humidity. Press the surface of flooring immediately with a wooden trowel (or similar) or roller from the centre toward the edges in order to ensure total transfer of the adhesive and eliminate air bubbles.

Deformed flooring may need further pressing.

READY FOR USE

The floor is set to light foot traffic in several hours, depending on the temperature, the

absorbency of the substrate, and the porosity of the flooring. Complete setting occurs after approx. 24 to 48 hours.

Cleaning

While still wet, **Ultrabond Eco V4 Conductive** can be removed from flooring, tools, hands and clothing with water. Once dry it can be removed with alcohol or with **Pulicol**.

CONSUMPTION

Consumption varies according to the uniformity of the substrate and the back of the floor covering: approx. 0.3 to 0.4 kg/m².

PACKAGING

Ultrabond Eco V4 Conductive is available in 16 kg buckets.

STORAGE

Protect from frost during transit and storage.

Avoid prolonged exposure to temperatures below 0°C.

Under normal conditions **Ultrabond Eco V4 Conductive** is stable for at least 24 months in its original sealed packaging.

SAFETY INSTRUCTIONS FOR PREPARATION AND APPLICATION

Ultrabond Eco V4 Conductive is not hazardous according to the regulations norms on the classification of mixtures. It is recommended to take the usual precautions for handling chemical products. The Safety Data Sheet is available on request.

PRODUCT FOR PROFESSIONAL USE.

WARNING

Although the technical details and recommendations contained in this data sheet correspond to the best of our knowledge and experience, all the above information must, in every case be taken as merely indicative and subject to confirmation after long-term practical applications; for this reason, anyone who intends to use the product must ensure beforehand that it is suitable for the envisaged application. In every case, the user alone is fully responsible for any consequences deriving from the use of the product.



This symbol is used to identify Mapei products which do not contain solvents, and which give off a low level of volatile organic compounds (VOC); proof of MAPEI's commitment in safeguarding the environment.



This symbol is used to identify MAPEI products which give off a low level of volatile organic compounds (VOC) as certified by GEV (Gemeinschaft Emissionskontrollierte Verlegetwerkstoffe e.V.), an international organisation for controlling the level of emissions from products used for floors.

**All relevant references
of the product are available
upon request**

TECHNICAL DATA (typical values)	
PRODUCT IDENTIFICATION	
Consistency:	creamy paste
Colour:	light grey
Density (g/cm³):	1.05
pH:	7
Dry solids content (%):	70
Brookfield viscosity (mPa·s):	70 000 (6 rotor - 10 rpm)
Storage:	24 months in original sealed packaging. Avoid prolonged exposure to frost
Hazard classification according to EC 99/45:	none. Before using refer to the "Safety instructions for preparation and application" paragraph and the information on the packing and Safety Data Sheet
EMICODE:	EC1 - very low emission
Customs class:	3506 91 00
APPLICATION DATA (at +23°C - 50% R.H.)	
Application temperature range:	from +15°C to +35°C
Waiting time:	from 0 to 10 minutes
Open time:	15 minutes
Set to light foot traffic:	after 2 to 4 hours
Ready for use:	after approx. 24 to 48 hours
FINAL PERFORMANCE DATA	
Electrical resistance:	R = 20,000 ohms
Resistance to moisture:	good
Resistance to ageing:	excellent
Resistance to solvents and oils:	fair
Resistance to acids and alkalis:	good
Resistance to wheeled chair stress:	good
Underfloor heating systems:	suitable
PEEL 90° adhesion test according to EN 1372 standards (N/mm): – conductive PVC:	1.5



Example of conductive PVC laid in operating theatres - European Institute of Oncology - Italy

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