



Adesilex G19 Conductive

Two-component epoxy-polyurethane adhesive for rubber and PVC conductive flooring



WHERE TO USE

Bonding of rubber and PVC conductive flooring and relevant copper strips.

Some application examples

Adesilex G19 Conductive can be used for bonding:

- conductive and static-dissipative rubber flooring;
- conductive and static-dissipative PVC flooring;
- linoleum

in all areas where the discharge of static electricity could cause explosions or disturb electrical and electronic equipment, e.g. operating rooms, chemical laboratories and factories, areas containing electronic instruments, data processing centres, etc.

ON

all substrates generally used in building including substrates that are non-absorbent and sensitive to moisture.

TECHNICAL CHARACTERISTICS

Adesilex G19 Conductive is a two-component adhesive composed of an epoxy-polyurethane polymer with special conductive fillers (component A) and a special hardener (component B). When mixed together accurately they form a black-coloured paste that is easy to apply with a notched trowel.

Adesilex G19 Conductive hardens solely through chemical reaction and without shrinkage and is flexible, resistant to humidity, water, heat and atmospheric agents. It bonds strongly to all materials commonly used in construction.

RECOMMENDATIONS

- Do not use on substrates subject to rising damp (always insert a vapour barrier between the ground and the underlying screed).
- Do not use on damp concrete (residual moisture content should not be higher than 2.5-3%).
- Do not use on fresh asphalt (wait at least 20 days).
- Do not use on bituminous surfaces that may bleed oils.
- Do not use at temperatures below +10°C or above +30°C.
- Do not use on curved surfaces or on steps if the covering does not maintain perfect contact with the substrate until setting has occurred (use **Adesilex VZ Conductive**, polychloroprenic conductive contact adhesive).

APPLICATION PROCEDURE

Substrate preparation

The substrate must be uniformly dry, flat, resistant to compression and tensile stress, free from dust, loose particles, cracks, paint, wax, oils, rust, gypsum residues or any other materials that may interfere with bonding.

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

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

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.

Screeds over layers of insulation and screeds laid directly onto earth must be poured over a vapour barrier to prevent rising damp.

When repairing cracks and crazing, consolidating screeds, forming fast-drying screeds, or levelling substrates is required, consult the MAPEI catalogue for substrate preparation products or the Technical Services Department.

Acclimatization

Before beginning the installation, ensure that the adhesive, the floor or wall covering and the substrate are acclimatized to the prescribed 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 tension caused by the packaging.

Equipotential earth contact

Equipotential earth contact (earthing) should be done in compliance with regulations (CEI, DIN, AMSO, NFPA, ANSI, etc.). Spread **Adesilex G19 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.

Mixing the adhesive

The two components of **Adesilex G19 Conductive** are delivered in pre-measured proportions:

component A: 9 kg, black;
component B: 1 kg, light yellow.

The two parts should be mixed with a mechanical stirrer until an evenly coloured paste is obtained.

Setting time and pot life vary greatly according to the ambient temperature (see the relevant table).

If too large an amount is mixed, pot life can be prolonged by dividing the material up into smaller containers and keeping them cool. Do not use at temperatures lower than +10°C because setting would be delayed too long.

N.B. The ratio of resin (component A) to catalyst (component B) is strictly determined.

Any modification to the dosage will interfere with curing of the adhesive.

Spreading the adhesive

Apply enough adhesive to the substrate with MAPEI notched trowel No. 1 to wet the back of the flooring completely.

Apply the adhesive evenly and only on as much of the surface as can be covered with flooring within 45 minutes (depending on the ambient temperature and the temperature of the substrate).

Installing the floor covering

Follow the manufacturer's installation instructions.

The floor tiles or sheets should be installed while **Adesilex G19 Conductive** is still wet, i.e. within 45 minutes at +23°C, then smoothed carefully from the centre outward toward the edges in order to ensure total transfer of the adhesive and eliminate air bubbles.

When the flooring is uneven, the deformed sections, joints and ends should be weighted down with sandbags or similar until the adhesive sets (12 to 24 hours).

Flooring installed with **Adesilex G19**

Conductive is ready for light foot traffic in approximately 12 to 24 hours. Complete setting occurs in about 3 days at an ambient temperature of +23°C.

Setting time of **Adesilex G19 Conductive** according to temperature:

Temperature in °C	30	25	20	15	10	5
Time in hours	4	8	12	18	52	64

COVERAGE

Coverage varies according to the uniformity of the substrate and the back of the floor covering: approx. 0.3-0.45 kg/m².

Cleaning

Before hardening, **Adesilex G19 Conductive** can be removed from flooring, tools, and clothing with alcohol. Afterwards it can only be removed mechanically or with **Pulicol 2000**.

Colour

Adesilex G19 Conductive is black after the two components have been mixed (component A is black, component B is light yellow).

PACKAGING

10 kg buckets. Also available in a rapid version.

STORAGE

Under normal conditions **Adesilex G19 Conductive** is stable for at least 12 months in its original sealed packaging.

SAFETY INSTRUCTIONS FOR PREPARATION AND APPLICATION

Adesilex G19 Conductive component A may irritate the eyes and skin; component B is corrosive and may cause serious burns, and is also harmful if inhaled. Both components (A and B) may cause sensitisation in those subjects sensitive to such substances.

When applying the product, we recommend the use of protective gloves and goggles and



Laying conductive PVC tiles



Installing industrial flooring in an electronics company

TECHNICAL DATA (typical values)

PRODUCT IDENTITY

	component A	component B
Consistency:	thick paste	runny liquid
Colour:	black	light yellow
Density (g/cm ³):	1.25	1.0
Dry solids content (%):	99	100
Brookfield viscosity (mPa·s):	130,000 (E rotor - 2.5 rpm)	60 (1 rotor - 50 rpm)

APPLICATION DATA (at +23°C - 50% R.H.)

Mix ratio:	component A : component B = 90 : 10
Brookfield viscosity of the mix (mPa·s):	40,000 (7 rotor - 20 rpm)
Density of the mix (kg/m ³):	1,200
Application temperature range:	from +10°C to +35°C
Pot life of the mix:	60 minutes
Open time:	60 minutes
Adjustment time:	within 90 minutes
Initial setting time:	8 hours
Final setting time:	9 hours
Set to light foot traffic:	12-24 hours
Ready for use:	after 3 days

FINAL PERFORMANCE DATA

Electrical resistance:	approx. 10,000 to 50,000 ohms
Resistance to moisture:	excellent
Resistance to ageing:	excellent
Resistance to solvents and oils:	good
Resistance to acids and alkalis:	good
Resistance to temperature:	from -40°C to +100°C
Flexibility:	yes
PEEL 90° adhesion test in compliance with EN 1372 (N/mm):	rubber: breaking point > 3 PVC: breaking point > 3
Resistance to wheeled chair stress:	suitable
Underfloor heating systems:	suitable

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to take the usual precautions for handling chemical products. We also recommend working in well ventilated areas only. If the product comes into contact with the eyes or skin, wash immediately with plenty of clean water and seek medical attention.

Adesilex G19 Conductive components A and B are also hazardous for aquatic life. Do not dispose of these products in the environment.

For further and complete information about a safety use of our product please refer to our latest version of the Material Safety Data Sheet.

PRODUCT ONLY FOR PROFESSIONAL USE.

WARNING

Although the technical details and recommendations contained in this product 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 application; 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.

Please refer to the current version of the Technical Data Sheet, available from our website www.mapei.com

**All relevant references
for the product are available
upon request and from
www.mapei.com**



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