

# Self-adhesive tapes for safety, durability, efficiency and cost savings of charging stations for electric vehicles

Use of self-adhesive tapes makes charging stations more fire-safe, weatherproof and resistant to chemicals, heat and impacts. A charging station is exposed to varying climatic conditions, different temperatures, vibrations and shocks. Besides being durable and efficient, charging stations should above all be safe. The use of self-adhesive tapes and foams combines mounting with both sealing (air, moisture, dirt and water) as well as insulating (electrical and thermal). Also thermal conductivity for efficient heat dissipation and the prevention of hotspots are among the possibilities.

#### **About Stokvis Tapes**

Our goal is to provide high-quality solutions to improve our customers' operational efficiency and minimise waste of materials. You will find that our products are more energy efficient, lighter and quieter.

Stokvis Tapes will help you improve your production process, reduce costs, develop new products and sell more.

#### How do we do this?

- Knowledgeable and experienced material and converting specialists within the automotive and electronics market.
- Global reach local support.
- ISO 7 & ISO 8 cleanroom production facilities.
- Stokvis Tapes is the world's largest independent converter of self-adhesive components.
- Innovative, cost-effective solutions for simple to complex needs.
- Full spectrum of rotary, flatbed and laser die cutting to match your needs.
- Technical support & lab testing.

To meet these needs, Stokvis Tapes offers optimal solutions of high-quality products for a wide range of applications in the ev industry.

#### Our solutions include the following applications:

- air gap bonding of control panels and electrical components;
- · assembly of components made from different substrates;
- electrical insulation and flame retardants;
- thermal insulation and heat management;
- grounding and EMI/RFI shielding;
- ventilation of moisture and air;
- NVH insulation and noise reduction;
- sealing and protection against dirt, dust, moisture and water:
- temporary fixing of movable parts during transport;
- surface protection during production, transport and handling.



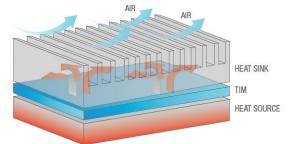
## Advantages of self-adhesive tapes and foams

#### **Structural bonding**

**StokBond** is a double-sided acrylic foam tape range with an adhesive layer cured by UV light for structural mounting. These tapes adhere to a wide variety of substrates by acting on the microscopic surface of materials, resulting in excellent adhesion and shear resistance. Highly resistant to ageing, temperature, moisture, water and UV light. The acrylic foam tapes offer excellent vibration damping, shock absorption, sealing and resist thermal expansion.

This product is used for a versatile range of assembly and bonding applications in the electronics, automotive and aerospace industries. The double-sided tapes replace mechanical fasteners and welds. These products are widely used for joining plastics such as PP, PVC, PMMA, PC, PET, as well as aluminium, steel and glass.





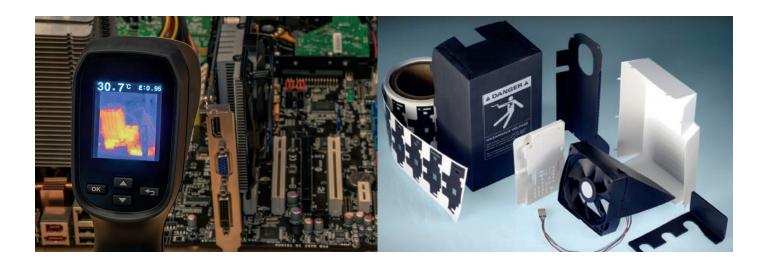
Correctly selected Thermal Interface Material (TIM) secures the good connection and stable heat flow between heat source and heat sink.

### Insulation, thermal stability and flame retardancy

Self-adhesive thermal interface materials (TIM) offer highly thermally conductive and electrically insulating solutions. This comprehensive self-adhesive range combines connecting the heat source with the heat sink, allowing efficient cooling of electronic components at the same time. In addition to excellent thermal conductivity, these TIMs have good heat and weather resistance and protect against fire and smoke development.

**StokTherm** is thermally conductive and offers excellent electrical insulating properties. These products comply with the UL 94V-0 fire classification. Available in various thermal conductivities (W/mk), hardnesses (Shore 00) and thicknesses (mm), it is therefore ideal for filling gaps between electronic components. StokTherm helps regulate the temperature inside the charging station and protects against overheating. This reduces the risk of malfunctions and ensures a longer service life.

**ITW Formex®** flame retardant polypropylene and polycarbonate materials provide superior electrical insulation and are ideal barrier materials for use in vehicle electrical systems around the world. These products meet the UL 94V-0 fire rating. The foldable insulating material is available in rolls and as sheets. ITW Formex® can be easily manufactured in various shapes and sizes.



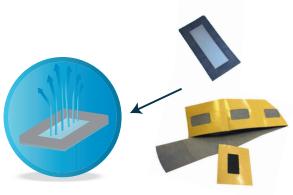
#### Protection against weather, moisture and dust

Charging stations are often located outdoors and exposed to a variety of weather conditions. Self-adhesive tapes and foams can be used to seal lead-throughs and joints air- and watertight, protecting the charging station's internal components from moisture and dust. This prevents corrosion and damage to electronic components, increasing safety and extending the life of the charging station.

**StokSeal** is based on elastomeric polyurethane or silicone foam that is highly compressible. It seals against air, dust, moisture and water. The product groups cover a wide range of densities and hardnesses. Its excellent mechanical resistance makes it the best choice for high-performance sealing, cushioning and shock absorption applications.

**StokVent** for high-quality ventilation. This product combines good ventilation properties with excellent protection against intrusion of dust and water through a high-quality filter material. This product allows high air permeability without tearing, allowing trapped air and/or moisture to breathe out. The acrylic adhesive ensures good adhesion to various substrates. This product is highly resistant to ageing and moisture.





## **Grounding and EMI/RFI shielding**

Stokvis supplies self-adhesive tapes coated with an electrically conductive acrylic adhesive layer for EMI/RFI shielding and static discharge applications. We have various conductive carriers available, such as copper, copperised PET fabric with PU padding material or nickel-copper-based conductive foams.

Self-adhesive single-sided copper foil, also available in embossed copper foil, conforms well to the substrate. It is solderable and resistant to oxidation and discolouration. The acrylic adhesive layer has very good conductive properties to prevent static charge.

**StokEMI** electrically conductive copperised PET fabric wrapped around polyurethane foam with open cell structure is highly conductive and has good compression. Very applicable for filling gaps between electronic components where grounding and thermal conductivity are required.

Conductive foam based on nickel and copper has an excellent combination of low compression with high shielding properties. This electrically conductive acrylic foam conducts electricity through its thickness (Z axis) and through its adhesive layer (X and Y axes). These properties make the product ideal for EMI/RFI shielding and as an EMI/RFI gasket on metal surfaces. Available in various thicknesses, with and without conductive self-adhesive layer.





#### **Safety**

Self-adhesive tapes can be used to securely fix cables and wires and protect them from damage. This minimises the risk of short circuits or other electrical problems.

## Cost savings, efficiency and durability

Thinner materials can be used when using self-adhesive tapes. This provides weight and cost savings compared to traditional fastening methods.

Self-adhesive tapes are easy to apply; mounting does not require specialised installation equipment. When using self-adhesive tapes, there are no curing times as with curing adhesives and PUR foams.

Self-adhesive tapes are removable if necessary so that components can be disassembled and/or recycled.

High-quality self-adhesive tapes are abrasion-resistant and can withstand frequent use and exposure to temperatures and weather conditions. They retain their adhesion and protective properties over a long period of time, resulting in a durable and reliable functioning of the charging station.

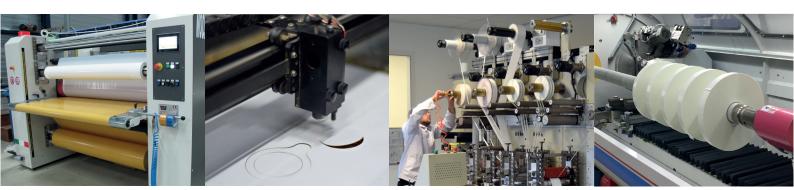
# **Customised tapes**

Self-adhesive tapes are available in various dimensions and materials, almost any shape and size is possible, making them suitable for various charging station designs. They are flexible and can be modified to meet specific installation needs.

#### **Advantages of customisation:**

- fits the application perfectly;
- more appealing end result;
- faster to apply than traditional fastening methods;
- optimise your process;
- various new material combinations are possible;
- less wastage.







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