

General instructions on RFID and NFC transponders

RFID/NFC transponders contain electronic components and therefore require careful handling. Please observe the following instructions:

- Avoid storing RFID/NFC transponders near electromagnetic fields at all times.
- Do not expose the RFID/NFC transponders to high temperatures. Irreversible damage to the chip (IC) can occur above 80°C.
- **Metallic surfaces (also painted, coated or otherwise covered) and direct application to liquid containers negatively influence the function of the RFID/NFC transponders. Before mounting, check whether the RFID transponders can be read at the desired location.**

For mechanical and technical malfunctions caused by improper handling, such as independent rewinding, retensioning, trimming or other changes to the design, we shall not be liable.

Transport & Storage

Protect your self-adhesive products from direct sunlight, temperature fluctuations, heat and humidity during transport and storage. A room temperature between 10°C and 20°C is recommended, otherwise the adhesive will leak out at the label edges and further processing will be more difficult. **The goods may only be transported and stored well packed and lying flat (preferably in the outer packaging supplied). Please avoid pressure, impact and weight loads!**



General instructions for mounting

For optimum mounting, the temperature of the surface should be between 15°C and 20°C. A short pressure after application ensures good surface contact. The maximum adhesive bond occurs after approx. **72 hours**. During this period, ensure that the temperature is kept at a constant temperature between **15°C and 20°C** during this period. Mounting over edges or on strongly curved substrates is not recommended.

Instructions for cleaning surfaces

Recommended cleaning depending on degree of soiling and surface:

Detergent	Dust and water soluble impurities	Greases, oils and stubborn impurities
Household cleaner	✗	
Isopropanol	✗	✗
White spirit		✗
Universal thinner		✗

For all smart-TEC products, the surfaces to be bonded must be even, clean, dry and free of grease, oil, dust and other contaminants. Please observe the manufacturer's safety instructions.

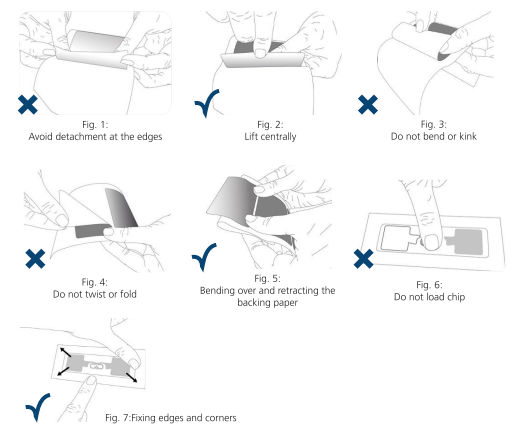
Processing recommendations for RFID/NFC labels

smart-LABEL (LF / HF / NFC / UHF)

When mounting, make sure that both the surface and the smart-LABEL are at room temperature (approx. 20°C). Repositioning the RFID/NFC transponder after initial bonding significantly reduces the adhesion. Damage to the electronic components may occur. In the case of automatic dispensing (be sure to test in advance), ensure optimum web tension and a sufficiently sharp dispensing edge.

When dispensing manually, take care not to touch the adhesive surface, especially the corners (Fig. 1), with the skin, as areas contaminated with skin grease can later no longer develop the full adhesive force. Use a thin, flat but not sharp-edged tool with a non-stick coating or siliconized paper to remove the label. Use it to lift the label as centrally as possible to avoid the risk of the corners peeling off (Fig. 2). Do not bend, fold, twist or crease the label (Fig. 3 and 4). We recommend bending and retracting the backing paper as shown in Fig. 5.

The label can then be applied and fixed with a short press. The chip of the RFID-NFC-transponder is usually raised and therefore particularly sensitive. It is therefore essential to avoid mechanical stress on the chip (Fig. 6). After applying the label, press the edges and corners firmly (Fig. 7).



Processing recommendations for RFID/NFC industrial transponders and metal tags

smart-DOME (Classic / Freestyle / Epoxy), smart-PLATE (LF / HF / NFC / UHF) und smart-CHROMOTION

In general, the same processing instructions apply to the above products as to smart-LABEL. Clean the surface to be glued as described in the Cleaning chapter. Remove the protective paper from the adhesive layer and apply the RFID/NFC transponder with a short press. For RFID/NFC transponders with a mounting hole, tighten the screw hand-tight. In case of interference, the use of plastic screws is recommended. The surface of aluminum and stainless steel transponders is often protected by protective foils, which must be removed before processing.

Certified RFID/NFC transponders according to ATEX (Directive 2014/34/EU, IECEx and UKEX)

Our RFID/NFC transponders of the type smart-DOME Freestyle and smart-DOME Classic are tested and approved for use in category 2 hazardous areas.

Special conditions of use according to EU type examination certificate:

The operating instructions, in particular the storage and operating temperatures for ex-protected RFID and NFC transponders, must be observed. Should the case case that the complete marking cannot be applied to the RFID/NFC transponders, the marking is carried out, if ATEX is the only required required directive, the marking is alternatively done by attaching the minimum information according to Annex II 1.0.5. and Annex VI 3. of Directive 2014/34/EU:



*W = calendar week, Y = year, N = item number;
The exact designation varies depending on the product and date of manufacture.

These recommendations are based on our many years of experience and careful testing under standardized conditions and are therefore not generally valid. Deviation from these conditions may lead to different results.

Please note that all information is non-binding and own application tests are recommended in advance. Liability and warranty are governed by our General Terms and Conditions. We will be pleased to advise you competently and individually on all questions regarding application.