



EMI Shielding

Thermal Management

EMI-tec

Berlin - Budapest - Shanghai

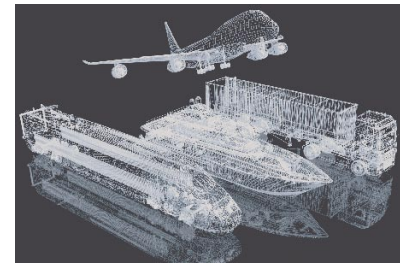
The EMI-tec

The owner-run, traditional company was founded in 1969 as the Engineering Office Helmut Kahl. In 1986 the EMI-tec Elektronische Materialien GmbH was founded.

Cooperationen with local universities in conjunction with basic development/research and worldwide qualified suppliers, are the basis of competent development and solutions for innovative high-tech products for commercial and military applications. The EMI-tec develops basic materials and components. In addition, the EMI-tec constructs innovative manufacturing equipment & technologies, including machinery, tools and test equipment. The EMI-tec has manufacturing facilities in Budapest (1992) and Shanghai (1999) with experience in small and large series which offers worldwide more than 100 employees a job. Furthermore the EMI-tec is working with global partners in strategic countries and provides the market-leading dispense technology.

The EMI-tec operates several large facilities for serial vacuum evaporation.

The EMI-tec engineers offers rapid prototyping & counseling skills for design and engineering. EMI and also supports you during the development phase, design and construction of complete production lines for moldings, metallization, dispensing and innovative technologies in accordance with specific customer requirements



Main Branches

EMI Shielding and Thermal Management



Automotive



Aerospace



Medicine



Railway



Measurement



Communication



Maritime



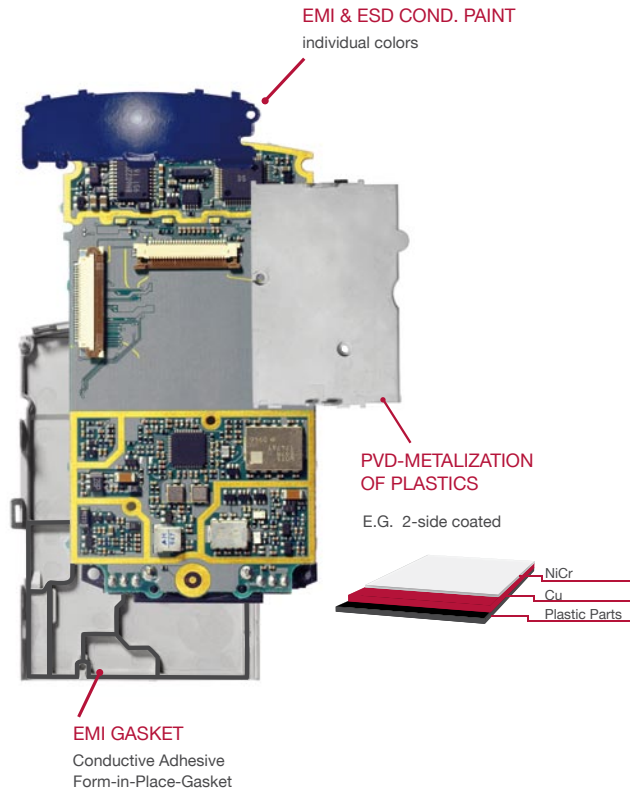
Optics



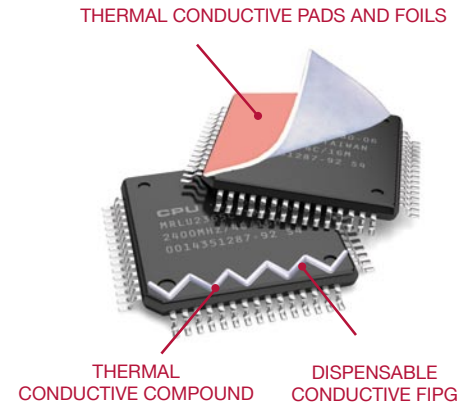
And more

worldwide presence

EMI Shielding



Thermal Management



EMI SHIELDING

Product range

Conductive
Compound
Form-in-Place
Gaskets

Conductive
Adhesive

Conductive
Coatings

Conductive
Elastomer
Gaskets

Transparent
EMI
Shielding

Absorber

CONDUCTIVE COMPOUNDS | FORM-IN-PLACE GASKETS

KEY POINTS

EMI-tec conductive compounds are particularly long time stable, highly conductive without preload with exceptionally low closing forces, a particularly wide temperature range and outstanding compression set

The EMI-tec Form-in-Place Gaskets offers an excellent height-width ratio, which allows particularly small seal widths and heights (from 0,3 mm up to 1,8 mm, or greater)

The Form-in-Place Gasket was developed and approved for high-tech air and space applications, automotive, telecommunication products (base stations, telephones, tetra communication devices and many more)

CONDUCTIVE COMPOUNDS

Micro-Sil Compound

highly conductive

- Very low forces for closing the cabinets – super soft material
- Leading room temperature curing 1K materials
- Longtime stable no protection against galvanic corrosion necessary
- The compound can be applied directly on bare metal
- Longtimestable - no surface protection against galvanic corrosion nessecary
- Without any preforce
- Easily deformable compounds allow compensation of tolerances between parts with lesser height
- Extra wide temperature range
- Outstanding compression set
- Reusable seal with high reliability
- Re-sealing of the shelter possible
- Silicone-free available

CC-Micro-Sil Compound

surface conductive

- Form in Place material with a soft non-conductive inner core
 - Covered with electrical high conductive material
- Especially suitable for large gasket dimensions
- Low costs and low compression forces



CONDUCTIVE ADHESIVE

KEY POINTS

- High electrical and thermal conductive glue
- From soft elastic to stress resistant bonds
- Soft elastic adhesive cures at room temperature and are excellent for tolerance compensation and vibration damping
- Epoxy conductive glue can cure really slow or very fast too and is particularly reliable strong conductive adhesive

CONDUCTIVE COATINGS

KEY POINTS

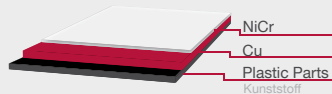
- Conductive Vacuummetallization
- Conductive Paints

CONDUCTIVE COATINGS

EMI-Shield - Conductive Vacuummetalization (PVD)

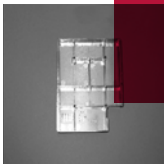
- Conductive vacuum metallization for EMI
- No electroplating necessary
- Single-sided, all-sides or partial coatings possible
- Special high screening performance through a unique combination of different metals - Multiple metal layers possible in a single operation
- Several vacuum metallization equipment available
- Typical materials used for the coating
Cu / CrNi, Cu / Sn, Sn, Cr / Ni, Al, Au, Ag
- The applied layer thicknesses are generally in 1-4 μ

e.g. 2-fold Coating



EX-Shield - Conductive Coatings

- Conductive paint for ESD applications
- High hardness and scratch resistance
- Surface resistance from 10^5 bis 10^9 Ohm adjustable
- Resistant to oil and various solvents
- Colour (satin finish) accordingly
RAL table can be set



CONDUCTIVE ELASTOMER GASKETS

KEY POINTS

As a result of special customer requirements and decades of research, EMI-tec offers a wide range of high-quality conductive elastomer gaskets. The elastomer gaskets for EMI Shielding have a lower volume resistance and are highly elastic and deformable, while protecting against galvanic corrosion. They are characterized by a large operating temperature range. EMI-tec conductive elastomer gaskets allows an elastic shielding with plates, extruder products, or fittings suitable to your drawing.

CONDUCTIVE ELASTOMER GASKETS

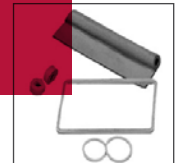
EX-Seal Sheets

- Conductive elastomer sheets with low volume resistance
- Large operating range
- Standard or customized up to 1300 mm length
- High elasticity and deformability with extremely low corrosion
- Protection against galvanic corrosion
- In combination with untreated metal long-term stable
- Minimum height tolerances possible - particularly flat material



EX-Seal Die-cutted parts

- Die-cutted parts according to your needs
- highly conductive with low volume resistance
- Large operating range
- High elasticity and deformability with extremely low corrosion
- Protection against galvanic corrosion
- In combination with untreated metal long-term stable



CONDUCTIVE ELASTOMER GASKETS

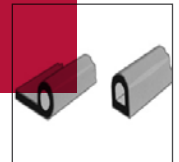
EX-Seal Rings

- Customized rings in small / large cross sections and diameter
- Without burr
- Highly conductive with low volume resistance
- Large operating range
- High elasticity and deformability with extremely low corrosion
- Protection against galvanic corrosion
- In combination with untreated metal long-term stabile



CC-Seal Surface Conductive Gaskets

- Elastomer coated for EMI Shielding like extrusion material or molded parts according to your needs
- Large cross sections, high conductive surface for the skin effect
- Excellent softness for easiest deformation



CONDUCTIVE ELASTOMER GASKETS

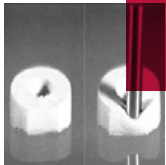
Soft-Seal

particular soft elastomer gasket

- Sealing material for EMI Shielding with low closing forces
- Soft and smooth under compression
- Excellent electrically conductive

EMI-Sil

- Self-adhesive combined gaskets
- Non-conductive environmental gasket with a high conductive inner layer
- Customized shape



TRANSPARENT EMI SHIELDING

KEY
POINTS

EMI-tec EX-Clear is a transparent electrically conductive coated foil for EMI Shielding.

The EMI-tec Ex-Clear Foil is for safe EMI RFI Shielding and ESD Shielding of displays, instruments as well as control surfaces on glass, plastic parts or foil.

ABSORBER

KEY
POINTS

EMI-tec EX-Att Absorber materials are highfrequency absorbing materials.

EMI-tec EX-Att are available as sheets, sections or molded parts, as well as for Form-in-Place Gasket.

TRANSPARENT HEATING

Direct Heat | directly applied heating

The EMI-tec special multi-functional heating concept is especially for displays and sensors
The heating concept can be applied directly on nearly every surface or shape. Even convex and concave molded polycarbonate parts can be heated. EMI-tec Direct Heat heating system is very flexible acc. to your needs.

THERMAL MANAGEMENT

EMI-tec thermal management products like thermally conductive films, Gap Filling Pads and products such as LQ-Therm, which is liquid and adapts to your individual form and cures during use.

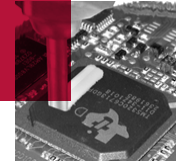
THERMAL MANAGEMENT

EX-Therm - Gap Filler Pads

- Mechanically flexible, thermally conductive passages for better compensation for tolerances
- compensating thermomechanical tensions as well as an outstanding thermal conductivity
- Available in soft and ultra-soft
- Particularity, soft and smooth
- Electrically insulating with high breakdown voltage
- Natural 2-sided adhesive for easy installation
- Self-adhesive type with PSA available
- Non-flammable acc. to UL94 V0
- Without glass fiber reinforcement for consistent hardness over all thickness

LQ-Therm - dispensable thermal management

- Mechanically flexible, thermally conductive passages for better compensation for tolerances
- compensating thermomechanical tensions as well as an outstanding thermal conductivity
- Electrically insulating mono-component based on elastomers.
- Can be applied directly on the heat dissipating components
- Excellent adhesion
- High insulation
- High operation temperature and high elasticity
- High viscosity, dispensing, and spreadable



THERMAL MANAGEMENT

EX-Therm Foils – Thermal Conductive Foils

- Electrically insulating thermal conductive foil with high breakdown voltage
- Fiber glass reinforced structure for protection against puncture, tear and shear
- Low surface roughness offers better adaptation to different contact areas
- Requires low contact pressure
- Soft, smooth, and elastic surface
- Self-adhesive type with PSA
- Non-flammable acc. to UL94 V0



ENVIRONMENTAL SEALING

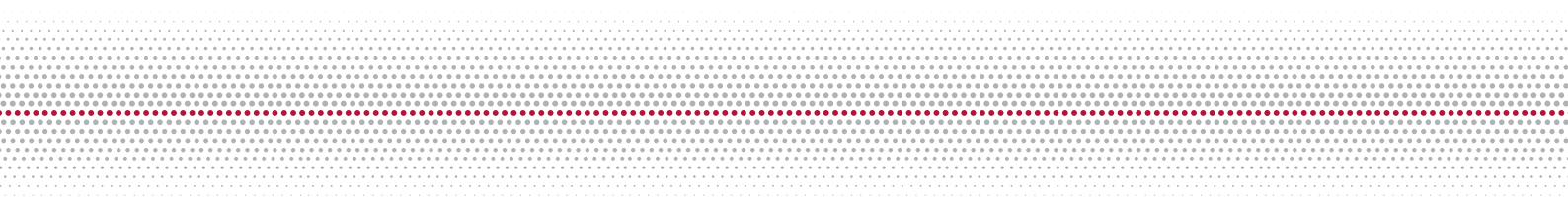
Form-in-Place Compound / non-conductive

EMI-tec Micro-Sil® MN materials are 1k non-conductive Form-in-Place sealing materials.

EMI-tec Micro-Sil® MN-XXX-BZ1A1 has good oil and water-glycol resistance and an outstanding temperature range. It delivers brilliant performance with softness and very good compression set.

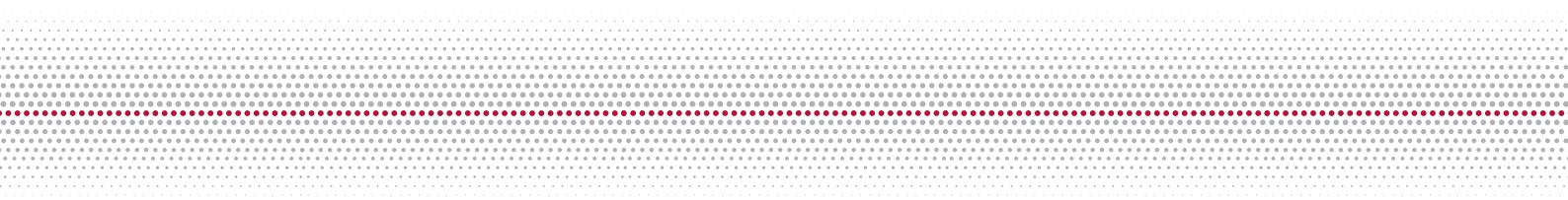
NOTES

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