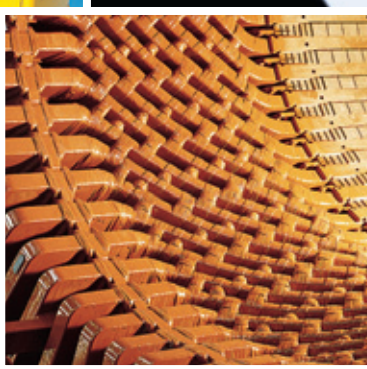
# The whole world of Electrical Insulations.





*Best insulated by* KREMPEL GROUP

# Everything motors, transformers and high-voltage machines need:

## Everything for motors

**Slot insulations, phase insulations, slot closures:**
✔ KREMPEL presspaper
✔ KREMPEL multi-layer insulation materials
for the thermal classes 130, 155, 180 and 200

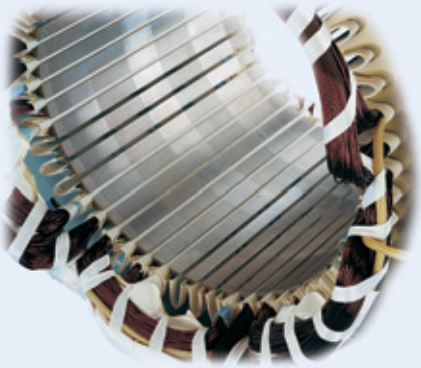
**Slot wedges:**
✔ WACOSIT® plastic profiles
for the thermal classes 155 and 180

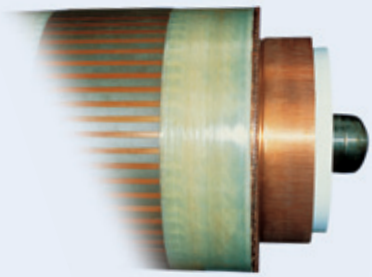
**Armature and rotor banding:**
✔ HYPERTEN banding tapes

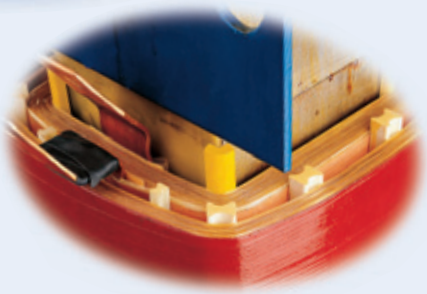
**Finishing and consolidating:**
✔ VIDATAPE woven tapes

**Lead-out and joint insulation:**
✔ VIDAFLEX insulation sleevings

**Endwinding tying:**
✔ VIDACORD tying cords







## Everything for dry-type transformers

**Vertical separators:**
✔ PREPREG GGID
Glass fabric with polyesterimide resin impregnation
✔ PREPREG EVID
Multi-layer insulation with polyesterimide resin coating
✔ PREPREG EVBD + PREPREG EVBE
Multi-layer insulations with epoxy resin coating

**Cast-resin strengthening for HV coils:**
✔ VERDUR GRBE
Glass roving fabric with cured epoxy resin

**Outer bandings:**
✔ PREPREG EFID
Thread-reinforced polyester non-woven
with polyesterimide resin impregnation
✔ PREPREG EFBE
Thread-reinforced polyester non-woven
with epoxy resin impregnation

**Insulation cylinders:**
✔ AKAFOL H polyester film laminates

**Core banding:**
✔ HYPERTEN banding tapes

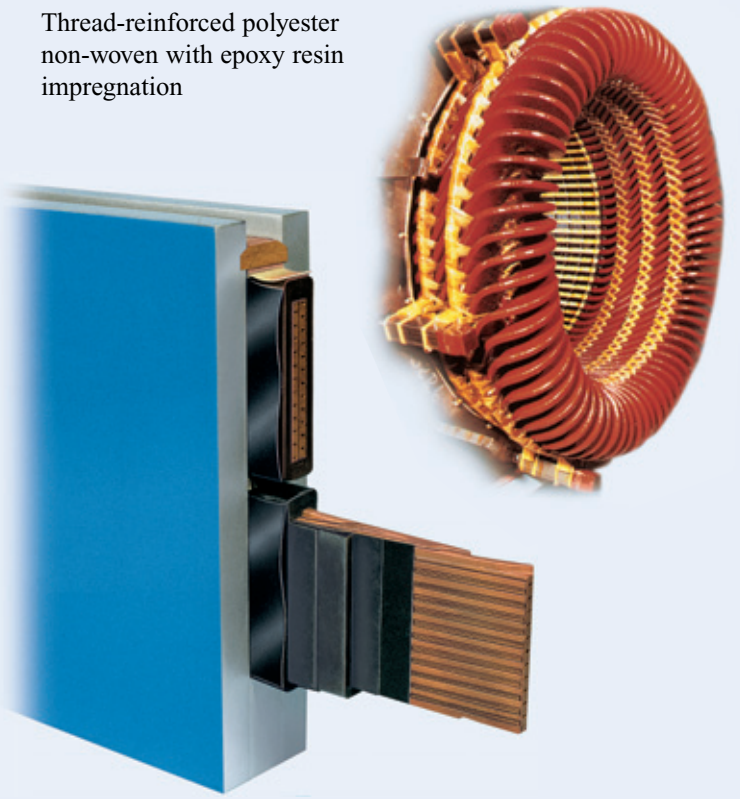
**Supports and spacers:**
✔ WACOSIT® corner profiles and dogbones

## Everything for oil-filled transformers

**Vertical separators:**
- ✔ PSP 3055 RPT – Transformer presspaper
- ✔ PREPREG CTBD
  Presspaper with epoxy resin coating
- ✔ KREMPEL-DPP
  Diamond dotted presspaper

**Insulation cylinders and cooling channels:**
- ✔ PSP 3050 - Transformer pressboard
- ✔ KREMPEL corrugated board
- ✔ Ladder ducts and ladder grids made from pressboard

**Outer bandings:**
- ✔ PREPREG EFBD
  Thread-reinforced polyester non-woven with epoxy resin impregnation



### ...for rotors

**Main and conductor insulation for windings:**
- ✔ VERDUR
  Single-layer glass hard fabric with resin coating
- ✔ PREPREG NPBE
  NOMEX® paper with epoxy resin coating

**Insulating spacers and packers:**
- ✔ WACOSIT® rectangular profiles

**U and L channels:**
- ✔ PREPREG GGBE
  Glass fabric with epoxy resin impregnation

## Everything for high-voltage machines...

### ...for stators

**Coil and bar consolidation:**
- ✔ TRIPREG-STABIL
  Multi-prepreg system with epoxy resin for shorter process times as well
- ✔ PREPREG ELBD
  Longitudinal polyester non-woven with epoxy resin

**Conductor and turn insulation:**
- ✔ CONDUCTOBOND, KREMICA.*flex*
  Mica tapes

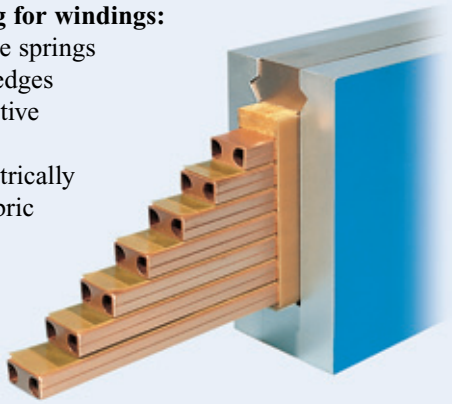
**Fillers for conductor stacks:**
- ✔ KREMPEL-ERKITT
  Electrically conducting epoxy resin mastic
- ✔ KREMPEL-ISKITT
  Electrically insulating epoxy resin mastic

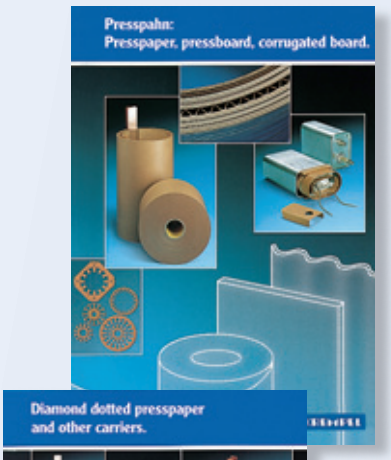
**Main insulation:**
- ✔ NOVOBOND, NOVOFILM, KREMICA.*therm*
  Mica tapes for resin-rich technique
- ✔ NOVOPORE, KREMICA.*por*
  Mica tapes for vacuum-pressure impregnation (VPI)
- ✔ Electrically conductive surface materials as outer, inner and end corona protection

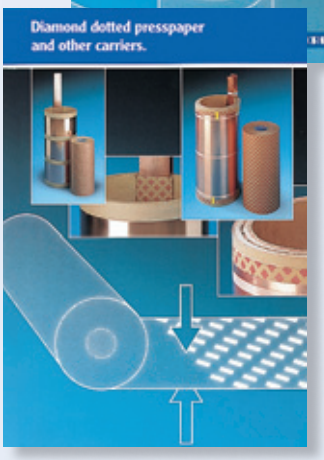
**Endwinding sealing:**
- ✔ HYPERSEAL sealing tapes (Resin rich & VPI)

**Endwinding bracing:**
- ✔ VIDACORD tying cords
- ✔ VIDATAPE woven tapes

**Packing and wedging for windings:**
- ✔ Insulating top ripple springs
- ✔ WACOSIT® slot wedges
- ✔ Electrically conductive side ripple springs
- ✔ PREGNIT-R – electrically conductive hard fabric






## Presspahn: Presspaper, pressboard, corrugated board

Presspahn is a proven surface insulation material on cellulose basis for the thermal class 105. Depending on the type of cellulose, fibre conditioning and machinery settings, KREMPEL supplies a variety of presspaper and pressboard types with very specific characteristics.

**Standard types of KREMPEL presspaper and pressboard**

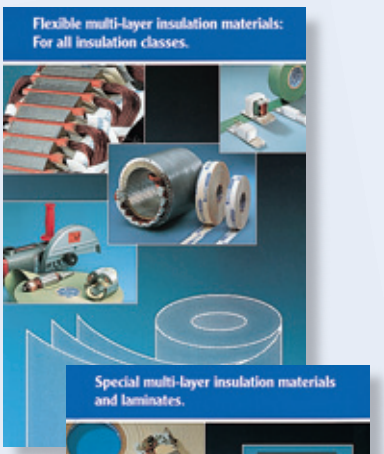
| Designation | Type Presspaper | Pressboard | Colour | Applications |
|---|---|---|---|---|
| **Machine presspahn** | Psp 3020 | Psp 3010 | brown | Punched and moulded parts, coil formers, stator and rotor end plates, stamped shims |
| **High-grade presspahn** | Psp 3040 | Psp 3030 | grey/black | Slot linings, circumferential insulations, interleaving insulations for electrical machines, punched parts |
| **Transformer presspahn** | Psp 3055 | Psp 3050 | natural colour | Insulating components in oil-filled transformers, vertical separators, core insulations |
| **Capacitor presspahn** | Psp 3065 | Psp 3060 | natural colour | Insulating components in oil-type capacitors, vertical separators |
| **Special presspaper NUTOFLEX** | Special quality with a high expansion | | violet | Circumferential insulations, slot linings, punched and moulded parts |
| **Corrugated board** | Special corrugated quality | | natural colour | Cooling channels in oil-filled transformers |
| **Ladder duct Ladder grids** | Ladders made of pressboard with presspaper carriers | | natural colour | Cooling channels in oil-filled transformers |
| **KREMPEL-DPP** | Diamond dotted presspaper | | natural colour resin: red | Vertical separators in oil-filled transformers |

The properties and characteristics of the presspaper and pressboard materials are standardised in IEC 60641. Besides the high breakdown voltage and the high capacity for impregnation with transformer oil (dielectric mix of oil-cellulose), the pressboard can withstand high heat loads for short periods of time (e.g. 350 °C for a few seconds) because the material has no melting point. Also, the presspaper and pressboard can be punched, folded, cut and in some cases be shaped as well.

With "KREMPEL-DPP" – **D**iamond-**P**attern epoxy-coated **P**apers – KREMPEL presspaper is available with a diamond dotted resin coating. Applying pressure at an elevated temperature for a certain length of time leads to partial adhesive bonding of the electrical conductors with the vertical separators. The channels that thereby develop can be used to remove air and the moisture from the transformer. The voids can subsequently be filled with liquid insulation material.

## Multi-layer insulation materials

Flexible multi-layer insulations from KREMPEL are produced by adhesive-bonding plastic films with presspaper, non-wovens, fabric or plastic-paper materials. Multi-layer insulations are normally produced as three-layer combinations whereby the plastic film is in the middle. Depending on the material combination, very specific ranges of values can be designed for the operating temperature, ductility, tensile strength, elongation, breakdown voltage, capacity for impregnation and the rigidity of the multi-layer. Special, UL-recognised grades are also available.





**Standard designs of KREMPEL multi-layer insulation materials**

| Designation | Structure | Thermal class | Applications |
|---|---|---|---|
| **TRIVOLTON® H** | Presspaper + polyester film + presspaper | 130 | Slot insulations, slot closures, circumferential insulations, vertical and core insulations, punched parts |
| **TRIVOLTON® HP** | Polyester film + presspaper | 130 | Slot insulations, slot closures, circumferential insulations, vertical and core insulations, punched parts |
| **TRIVOLTON® HPH** | Polyester film + presspaper + polyester film | 130 | Slot insulations, slot closures, circumferential insulations, vertical and core insulations, punched parts |
| **PHASOFLEX II** | as TRIVOLTON HP, grained | 130 | Phase insulations |
| **TRIVOLTHERM® P** | Polyester non-woven + polyester film + polyester non-woven | 130/155 | Slot insulations, slot closures, punched parts |
| **EVITHERM** | as TRIVOLTHERM P, impregnated with resin on both sides | 155 | Slot insulations, slot closures |
| **TRIVOLTHERM® TF** | as TRIVOLTHERM P, impregnated with resin on both sides and particularly smooth surface | 155 | Slot insulations, slot closures |
| **TRIVOLTHERM® N** | NOMEX® + polyester film + NOMEX® | 155/180 | Slot insulations, slot closures, punched parts |
| **PHASOTHERM®** | NOMEX®-NK + polyester film + NOMEX®-NK | 155 | Phase insulations |
| **TRIVOLTHERM® NKN** | NOMEX® + polyimide film* + NOMEX® | 180 | Slot insulations, slot closures, interleaving insulations |
| **TRIVOLTHERM® GKG** | Glass fabric + polyimide film* + glass fabric | 200 | Slot insulations, conductor insulations, vertical separators |
| **AKAFOL H** | Multi-layer polyester film | 130 | Insulating cylinders, punched parts |
| **AKAFOL PH-2** | Polyester film + PEN film | 155 | Inter-turn insulations |

*e.g. KAPTON®  NK = uncalendered

The combination of plastic film and fibrous material gives both technical as well as economic advantages. The plastic film guarantees the outstanding electrical and mechanical properties whereas the fibrous material ensure good impregnation and protect the film. Flexible multi-layer insulations can be cut, folded, embossed and to a certain extent, can be cold and hot-shaped as well.


## Prepregs

KREMPEL prepregs are produced by impregnating or coating presspaper, non-wovens, fabrics, films or multi-layer insulation materials with various resins which are still in the reactive B-stage.

**Standard types of KREMPEL prepregs**

| PREPREG type series | Backing material | Resin | Thermal class |
|---|---|---|---|
| CTBD | Presspaper | Epoxy | 120 |
| CTBD-VST | Presspaper | Epoxy | 120 |
| EDBD | Polyester film | Epoxy | 130 |
| CVBD-VST | TRIVOLTON® H | Epoxy | 130 |
| EVBD | TRIVOLTHERM® P | Epoxy | 130 |
| EVBE | TRIVOLTHERM® P | Epoxy | 130 |
| NVBD-VST | TRIVOLTHERM® N | Epoxy | 155 |
| NVBE | TRIVOLTHERM® N | Epoxy | 155 |
| EVID | TRIVOLTHERM® P | Polyesterimide | 155 |
| PVBD | AKAFOL PH-2 | Epoxy | 155 |
| NPBE | NOMEX® | Epoxy | 155 |
| ELBD | Polyester longitudinal non-woven | Epoxy | 130 |
| ELBE | Polyester longitudinal non-woven | Epoxy | 155 |
| EFBD | Thread-reinforced polyester non-woven | Epoxy | 130 |

| PREPREG type series | Backing material | Resin | Thermal class |
|---|---|---|---|
| EFBD-VST | Thread-reinforced polyester non-woven | Epoxy | 130 |
| EFBE | Thread-reinforced polyester non-woven | Epoxy | 155 |
| ELID | Polyester longitudinal non-woven | Polyesterimide | 155 |
| EFID | Thread-reinforced polyester non-woven | Polyesterimide | 155 |
| GWBD | Glass tangled non-woven | Epoxy | 155 |
| GWBE | Glass tangled non-woven | Epoxy | 155 |
| GWID | Glass tangled non-woven | Polyesterimide | 155 |
| GGBD | Glass fabric | Epoxy | 130 |
| GGBE | Glass fabric | Epoxy | 155 |
| GRBE | Glass roving fabric | Epoxy | 155 |
| GGID | Glass fabric | Polyesterimide | 155 |
| GGID-HT | Glass fabric | Polyesterimide | 180 |
| GGID-H | Glass fabric | Polyesterimide | 180 |
| GGHH | Glass fabric | Polyimide | 200 |

Prepregs are used in transformer and electrical machinery construction to insulate and secure current-carrying parts. The electrical conductors are permanently bonded to the insulation by subsequently curing the resin. Processing prepregs is very straightforward.

Certain construction tasks in electrical engineering call for the use of single-layer insulations with a cured-resin impregnation or coating. Despite their low material thickness, KREMPEL polyester hard non-wovens, glass hard fabrics and vulcanised hard fibres are characterised by very high values for the breakdown voltage and for the creepage current resistance, as well as by their high rigidity and compressive strength.

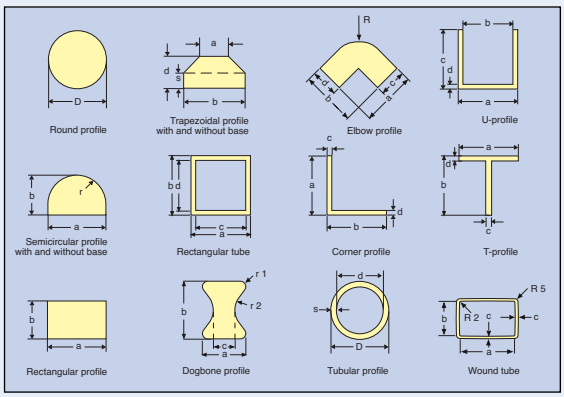
## Side and top ripple springs and fibre-reinforced plastic sheets

Electrically conducting KREMPEL side ripple springs and electrically insulating KREMPEL top ripple springs are used in high-voltage generators as slot filling material. By the interaction between the spring effect and the electrical conductivity, side ripple springs constitute the electrically securing element in closing the side slot; by the interaction between the spring effect and the electrical insulation, top ripple springs constitute the mechanically securing element in closing the slot. Besides shaped parts, KREMPEL also manufactures fibre-reinforced plastic sheets from glass, carbon or aramide fibres, and epoxy, polyimide and other resin systems.

## Fibre-reinforced pultruded plastic profiles »WACOSIT®«

KREMPEL supplies continuous pultruded tubes and profiles. These are designated »WACOSIT®«. Rovings and/or thin fabric tapes made of glass, carbon or aramide fibres are used as the reinforcing material here. These are impregnated with modified epoxy or polyester resins which are then cured.

**WACOSIT® Standard profiles and tubes**




Because of their outstanding mechanical, electrical, thermal and chemical properties, WACOSIT® products are used in solving the more difficult construction tasks. Tooling is available for more than 3,000 standard profiles. Special profiles to meet specific customer requirements is a service from KREMPEL the customer can rely on.


## Mica products

Mica is a high-grade mineral insulating material with unique insulation properties. It is used as the main insulation and conductor insulation in high-voltage machines. In our products, micapaper is used as the base material which is then combined with synthetic resins and suitable backing materials, e.g. glass fabrics, polyester films or non-wovens, to give the required mechanical strength.

**Standard types of JSI and KREMPEL mica tapes**

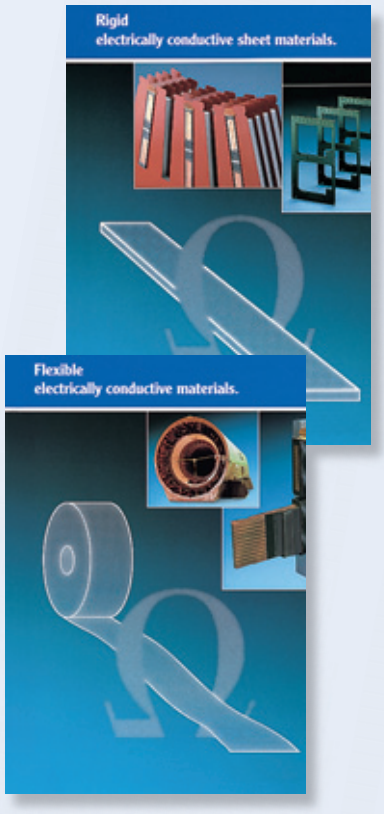
| Mica tape type | Structure | Processing | Applications |
|---|---|---|---|
| **NOVOBOND S, SX, SA and NOVOFILM** | Glass fabric or polyester film + micapaper, resin impregnated | Resin rich technique | Main insulation of H.V. rotating machines |
| **NOVOBOND F** | Glass fabric + micapaper, resin impregnated | Resin rich technique | Highly flexible, semi-flexible endwindings and coil leads after curing |
| **POLYMICA** | Polyester film backed and faced micapaper products with either woven glass fabric or uni-directional glass yarns | Resin rich technique | Flexible endwindings and coil leads to meet flexible winding requirements |
| **NOVOPORE** | Glass fabric or polyester film + micapaper, with low resin contents | VPI technique (Vacuum Pressure Impregnation) | Main insulation in H.V. machines |
| **CONDUCTOBOND** | Polyester film backed and/or faced + micapaper, resin impregnated | Resin rich technique and VPI technique | Conductor and turn insulation in H.V. machines |
| **NOVOFLEX** | Glass fabric + micapaper, silicone elastomer resin impregnated | Resin rich technique | Flexible endwindings and coil leads |
| **CABLEFLEX** | Glass fabric + micapaper, silicone elastomer resin impregnated | – | Fireproof layer in fire survival cables |
| **KREMICA.*flex*** | Fabric (e.g. glass) or film (e.g. PET; PI) + micapaper, resin-impregnated | Resin rich technique and VPI technique | Conductor insulation, main insulation, flexible coil leads, especially in H.V. machines and generators |
| **KREMICA.*therm*** | Fabric (e.g. glass) or film (e.g. PET; PI) + micapaper, high resin content | Resin rich technique | Main insulation of H.V. machines and generators |
| **KREMICA.*por*** | Fabric (e.g. glass) or film (e.g. PET; PI) + micapaper, low resin content | VPI technique | Main insulation of H.V. machines and generators |

The high-resin NOVOBOND and KREMICA mica tapes are processed by the so-called resin-rich technique ( = hot pressing). The low-resin NOVOPORE and KREMICA mica tapes are processed by the VPI method ( = Vacuum Pressure Impregnation).

## Electrically conductive materials

Flexible electrically conductive non-wovens and electrically conductive fabrics from KREMPEL are produced by impregnating non-woven or fabric materials with bonding agents containing electrically conductive particles. The concentration of these particles can be varied. Different types can also include zinc naphthenate as a catalyst. KREMPEL supplies rigid electrically conductive sheet materials for special applications as well.

Electrically conductive materials are used in high-voltage machines, high-voltage transformers and high-voltage cables in order to regulate the overall insulation, increase the reliability and to extend the service life. Depending on the application in question as banding material (KREMPEL electrically conductive non-wovens and electrically conductive fabrics) or slot filling materials (KREMPEL conductive sheets and glass fibre-reinforced plastic springs), these materials possess very specific mechanical, thermal and electrical properties.



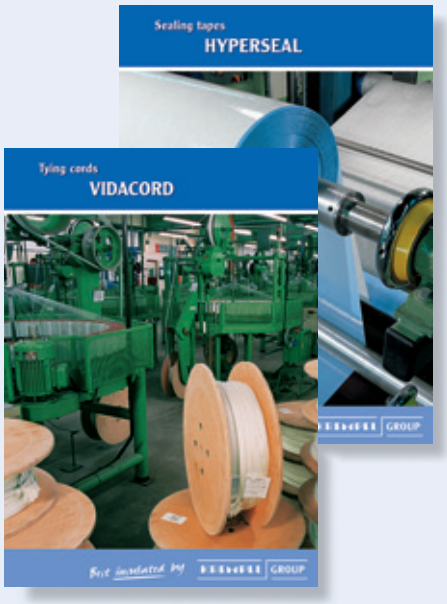

**Standard types of KREMPEL conducting non-wovens and conducting fabrics**

| Type | Backing material | Applications | Resistance range (Ω/□) |
|---|---|---|---|
| **06 EWR 15 AA** | Polyester tangled non-woven | Corona protection, slot filling | 400 - 6 000 |
| **07 EWR 05 AA** | Polyester tangled non-woven | Corona protection, slot filling | 400 - 5 000 |
| **10 EWR 02 AA** | Polyester tangled non-woven | Corona protection, slot filling | 400 - 20 000 |
| **12 EWR 01 AA** | Polyester tangled non-woven | Corona protection, slot filling | 400 - 6 000 |
| **03 ELR 19 AA** | Polyester longitudinal non-woven | Corona protection, banding | 400 - 1 000 |
| **06 ELR 14 AA** | Polyester longitudinal non-woven | Corona protection, banding | 400 - 1 000 |
| **06 ELR 14 CB** | Polyester longitudinal non-woven | Corona protection, slot filling | 1 200 |
| **06 ELR 14 CC** | Polyester longitudinal non-woven | Corona protection, slot filling | 150 - 1 500 |

| Type | Backing material | Applications | Resistance range (Ω/□) |
|---|---|---|---|
| **03 EFR 13 AA** | Thread-reinforced polyester non-woven | Corona protection, banding | 1 000 - 2 000 |
| **03 EFR 13 BA** | Thread-reinforced polyester non-woven | Corona protection, banding | only 400 |
| **07 EFR 18 AA** | Thread-reinforced polyester non-woven | Corona protection, banding | 400 - 5 000 |
| **04 ESR 22 AA** | Polyester stretch non-woven | Potential equalisation in converters and cables | 400 - 1 000 |
| **04 ESR 22 AA-sk (self-adhesive)** | Polyester stretch non-woven | Potential equalisation in converters | 400 - 1 000 |
| **05 GGR 32 AA** | Glass fabric | Corona protection, banding | 400 - 1 000 |
| **10 GGR 31 AA** | Glass fabric | Corona protection, banding | 400 - 1 000 |
| **AKASIC 4b** | Glass-polyester hybrid fabric | End corona protection (resin-rich technique) | – |

**Standard types of KREMPEL conducting sheets**

| | | |
|---|---|---|
| **PREGNIT GGBE-R** | Glass fabric | Slot filling material |
| **PREGNIT ELBE-R** | Polyester longitudinal non-woven | Slot filling material |
| **PREGNIT EWBE-R** | Polyester tangled non-woven | Slot filling material |




## Sealing tapes »HYPERSEAL«

HYPERSEAL sealing tapes are made from glass or polyester fabrics or combinations of the two, whereby manufacturing can be controlled to give low-resin (VPI) or resin-rich (B-state) sealing tapes. The B-state of the impregnating resins is adjusted such that a defined resin flow, and by this the designed sealing characteristics, will be reached – as required for example for conductor and coil windings and endwinding insulations. The VPI sealing tapes for electrical machines are given an additional polyester film on one side.

## Tying cords »VIDACORD«

VIDACORD tying cords from JSI are glass and/or polyester-braided or knitted tying cords which can have a glass or polyester fibre outer depending on the requirements e.g. where a polyester-braided outer with a glass filler is preferred.

## Banding tapes »HYPERTEN«

| Type | Thermal class |
|---|---|
| HYPERTEN 2000 HP | 180 |
| HYPERTEN ZF | 180 - extreme high tensile strength |

HYPERTEN tapes are resin-impregnated, unidirectional glass banding tapes.

HYPERTEN banding tapes are used in rotors to control the centrifugal forces in conductors and winding elements, as well as to brace the cores in transformer construction.


## Woven tapes »VIDATAPE«

VIDATAPE from JSI are woven tapes made from either glass or polyester yarns as well as from combinations of different yarn types, e.g. glass/polyester, glass/aramide or glass/copper wire. Special variants: Tapes made using pre-shrunk or high-shrinkage polyester yarns.

VIDATAPE woven tapes are used in a very wide range of taping applications, e.g. as the finishing layer and in tying, in electrical engineering and rotating machines as well as in the production of transformers.

## Insulation sleevings »VIDAFLEX«

| Structure of VIDAFLEX insulation sleevings | Thermal class |
|---|---|
| Silicone elastomer sleevings | > 180 |
| Glass or polyester sleevings, coated with acrylic or polyurethane resins | 155 |
| Glass sleevings, coated with silicone resin or elastomers | > 180 |
| Glass braided sleevings | > 200 |
| Expandable sleevings for cable harnesses | - |

VIDAFLEX insulation sleevings from JSI can either be extruded from silicone elastomer compounds or braided/knitted using glass or polyester yarns. The fibre-based sleevings are then impregnated/coated with silicone, acrylic or polyurethane resins.

Excellent protection against electrical, thermal and mechanical stresses is given for cables, strands and conductors depending on the type of VIDAFLEX insulation sleeving used. The quality grades available for VIDAFLEX meet BS, IEC, ASTM and NEMA standards. Various types are also CSA- and UL-recognised.


## High-temperature polyimide films »KAPTON®«

The KAPTON® polyimide film manufactured by Du Pont exhibits many desirable properties otherwise not found in this unique constellation for polymer film materials. KAPTON® will withstand continuous operation at temperatures up to +230 °C and can be used for short-term operation at temperatures from -269 °C to +400 °C. The film has no melting point, is flame-retarding, self-extinguishing and only starts charring at +800 °C.

It is above all the ability to retain the excellent chemical, mechanical and electrical properties over a wide temperature range which opens up many possibilities for KAPTON® in construction and engineering. Polyimide film is particularly suitable for applications where the operating temperatures are high.

**KREMPEL is the authorised distributor for KAPTON®**
**for Germany, Austria and Eastern Europe.**
**KAPTON® is a registered trademark of Du Pont.**

KREMPEL GROUP

**www.krempel-group.com**

# KREMPEL GROUP

## Headquarters and worldwide distribution

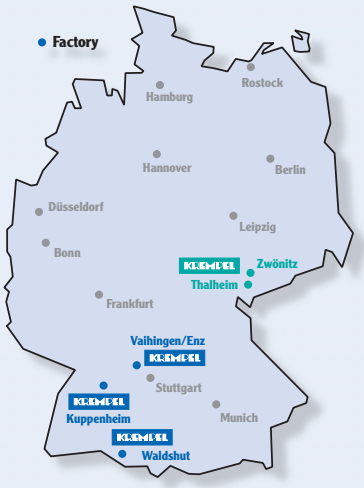
KREMPEL

Headquarters


August Krempel Soehne GmbH+Co. KG
Papierfabrikstrasse 4 · D-71665 Vaihingen/Enz
Germany
Tel. +49 (0) 7042 915-0
Fax +49 (0) 7042 15985
e-mail: info@krempel.com
www.krempel-group.com


Vaihingen Factory

Kuppenheim Factory

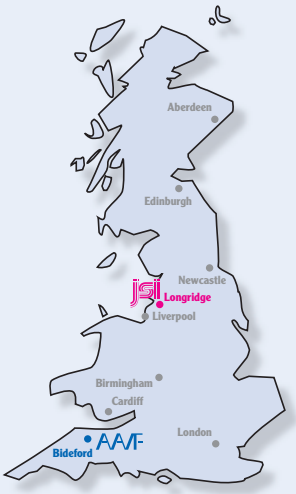



## Members of the KREMPEL-GROUP

Thalheim Factory

Zwönitz Factory

Waldshut Factory




JSI

Longridge Factory


Jones Stroud Insulations Ltd.
Longridge · Preston · PR3 3BS
United Kingdom
Tel. +44 (0) 1772 783 011
Fax +44 (0) 1772 784 200
e-mail: info@jsi.krempel.com


AAVF

Bideford Factory


Anglo-American Vulcanized Fibre Ltd.
Clovelly Road · Bideford · Devon · EX39 3EX
United Kingdom
Tel. +44 (0) 1237 475 501
Fax +44 (0) 1237 479 879
www.aavf.co.uk · e-mail: info@aavf.co.uk


KREMPEL

Xiamen Factory/China


Krempel Insulations Xiamen Co., Ltd.
No. 2 · Yangguang Road (S)
Xinyang Industrial Zone · Haicang District
Xiamen · China
Tel. +86-592-296 2919
Fax +86-592-296 2920
e-mail: china@krempelasia.com



## Distribution Agencies for the KREMPEL-GROUP

**For the countries**
**Austria, Bosnia-Herzegovina, Bulgaria, Croatia, Czech Republic, Hungary, Macedonia, Montenegro, Poland, Romania, Serbia, Slovakia, Slovenia**

KREMPEL

August Krempel Soehne
Vertriebsgesellschaft m.b.H. Wien
Marksteinergasse 13 · A-1210 Wien · Austria
Tel. +43 (0) 1 5975 345
Fax +43 (0) 1 5964 226
e-mail: info@krempel.at

**United Kingdom**

KREMPEL

KREMPEL LIMITED
Longridge · Preston · PR3 3BS
United Kingdom
Tel. +44 (0) 1772 783 011
Fax +44 (0) 1772 784 200
e-mail: info@jsi.krempel.com

**USA**

KIT KREMPEL INSULATION TECHNOLOGIES

Krempel Insulation Technologies, LP
Birchwood Plaza #5 · 143 Raymond Road
PO Box #7 · Candia NH 03034 - 0007
Tel. 603-483-8030
Fax 603-483-8355
e-mail: dsklarski@krempel-usa.com

**Asia**

KREMPEL

KREMPEL-GROUP
Asia-Pacific Office
333 LPN Building, Tower 1
24th floor, Unit C1
Soi Chaypuang, Viphavadi-Rangsit Road
Ladyao, Jatujak
Bangkok, 10900
Thailand
Tel. +66-2-618-8112
Fax +66-2-618-8114
e-mail: info@krempelasia.com

**Further representation in**
Argentina, Australia, Brazil, Canada, Chile, Columbia, Denmark, Finland, France, Greece, Hong Kong, India, Iran, Israel, Italy, Japan, Jordan, Korea, Malaysia, Mexico, the Netherlands, New Zealand, Norway, Pakistan, Peru, Portugal, South Africa, Spain, Sweden, Switzerland, Taiwan, Thailand, Turkey, Uruguay, Venezuela, Vietnam.




082006 · Printed in Germany · G/S/K


## Look inside: www.krempel-group.com