

BIW Isolierstoffe GmbH

A market leader with history



*When it comes
to competence*



Flexibility. Opportunities. Innovations.

When it comes to competence.

BIW at a glance



3

Company locations in
Germany, Poland and China



81 Mio.€

Sales (2023) with 20 %
export quota outside the EU



600

Employees
> 24 trainees
> 33 different nationalities



5.000

Customers



8

Core industries supplied



46.000 m²

Production area



175.000

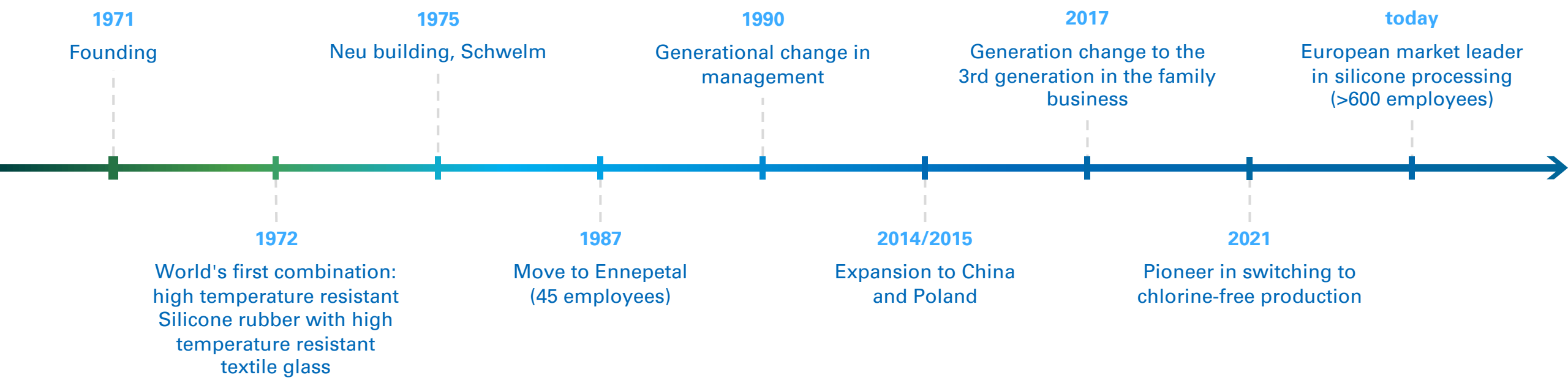
Individual products



502.000 m

Manufactured **cable
protection systems** and
silicone profiles per day

A market leader with history - Made in Germany





One company, three core competencies combined under one roof

1

Silicone Extrusion

- High temperature resistant up to +300 °C
- Cold flexible down to -80 °C
- Permanently elastic and mechanically resilient
- Physiologically harmless



2

Cable protection systems

- High mechanical strength
- Temperature & fire resistance
- Dimensional stability
- Good chemical resistance



3

Silicone molded parts

- Heat stability up to +180 °C (stabilized up to +280 °C)
- Cold flexibility down to -50 °C
- Constant mechanical and electrical properties
- Weathering, aging and UV resistance





The in-house innovation center

Research, development and prototyping



Research & Development



Prototyping

- In-house **development** of compounds
 - **Further development** of material properties
 - Test procedures in our **own laboratory area**
 - In-house tool planning and tool design
 - 3D modeling via CAD (Solid Works)
-
- Production with innovative manufacturing processes:
3D printing, crosshead extrusion, foam and co-extrusion
 - Direct transition to series production from the prototype
 - Standard-compliant qualification already in pilot series
 - **In-house tooling**
 - Comprehensive **advice**



Competence & quality convince > 5000 customers from 8 industries

Automotive ~35 %

Molded seals, high quality components & cable protection systems



Energy Technology ~20 %

Efficient insulation systems for generators and transformers, LED design profiles



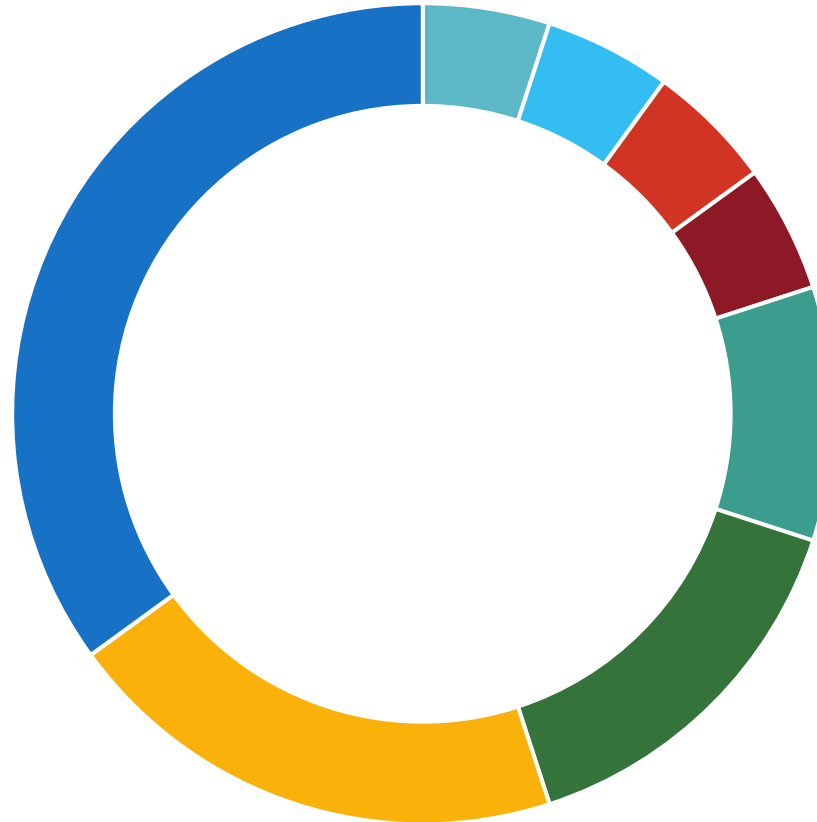
Household Appliances ~15 %

High temperature, steam and grease resistant sealing systems



Medicine & Pharma ~10 %

Hoses, molded parts and complex items such as ventilation hoses, also in clean room production



Sanitary ~5 %

Seals, components and hose lines approved for drinking water



Aviation ~5 %

Weight-saving and non-flammable system components



Heat Protection ~5 %

Thermally resilient frame seals



Railway Technology ~5 %

Fireproof functional elements, high-quality sealing systems and edge protection profiles





We go the extra mile – for employees, energy and the environment



Exciting employee offers

Extensive environmental & energy program

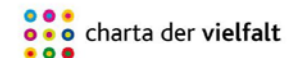


Pioneer in chlorine-free silicone production

Commitment in sport



Social commitment in associations





Our machinery includes...

54 Extrusion lines

8 Punching machines

31 Injection molding machines

5 Compounding mills

40 Impregnation lines

6 Conical Twin Mixers (CTM)

7 Molding presses

22 Tempering ovens

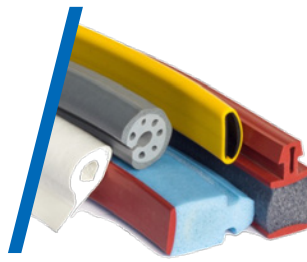
10 Film-vulcanization lines

78 Braiding machines

20 Chopping and cutting machines

106 Knitting and warp knitting machines

Silicone extrusion



10 – 90°

Shore A



0,25 – 235 mm

Hose inner Ø



1,0 – 250 mm

Square width



-80 to +300 °C

Temperature resistance

Further properties

- Permanently elastic and mechanically resilient
- Largely resistant to chemicals
- Physiologically harmless
- Tear resistant
- Fluorescent colors
- Highly transparent products

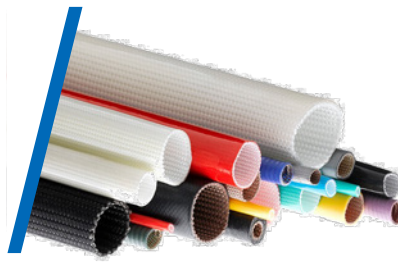
Sample products and processes

- Hoses
- Armored hoses
- Round cords
- Square
- Profiles
- Co-extrudates
- Foam profiles
- Glued frames
- Vulcanized corners
- Multilumen Tubing
- Overmolding
- Coatings
- LED applications
- 2-component injection molded parts

Assemblies

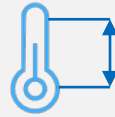
- Cutting to length / water jet cut
- Adhere
- Film vulcanization
- Gating
- Frame creation
- Drilling
- Inlay creation
- Equip self-adhesive

Cable protection systems



> 30.000

Double strokes (abrasion test)



> 500 °C

Heat resistance



Versatile

By combining different filaments
and fibers



Resistant

Against aging and chemicals

Further properties

- High mechanical strength
- High fire resistance
- Low heat conduction
- High dimensional stability
- Compatible with organic substances
- Not hazardous to the environment or water
- Non-toxic, non-carcinogenic, not respirable

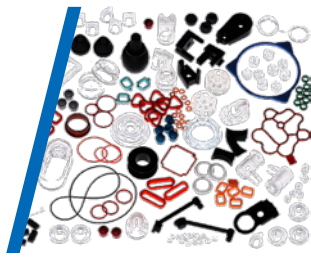
Sample products

- Hoses
- Cable bundling
- Cable shields
- Seals
- Packs
- Shields
- Heat reflectors
- Silicone, acrylic and PU-coated fabric hoses
- Impregnated, pre-rounded tubes made of textile glass and synthetic fibers

Assemblies

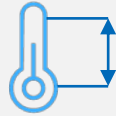
- All cable protection systems can be modified according to customer requirements
- Cut to length
- Punching
- Connecting

Silicone Molding



2 – 2500 g

Moldings weight



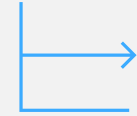
-50 to +180 °C

Heat resistance



Resistant

Against aging, weathering
and UV radiation



Constant

Mechanical & electrical properties
equal over a wide
temperature range

Further properties

- Excellent physiological tolerability
- Much higher gas permeability compared to other elastomers
- Excellent electrical insulation
- High transparency
- Good color adjustability
- Environmentally friendly

Sample products and processes

- Seals
- Membranes
- Hose elbow
- Covers
- Wrinkle coverings
- Frames
- Rings
- Overmolding
- Gating
- 2-component injection molded parts

Assemblies

- Additional gluing processes
- Marquetry
- Laser engravings
- Attach electrical contacts
- LFS Treatment



Energy Technology



Materials

The insulation materials used are characterized by their high dielectric strength, chemical and temperature resistance.

They comply with the **UL 1441** and **DIN IEC 60684 standards**, among others.

Areas of application

- electric motor construction
- wind power generator construction
- transformer construction
- power plant construction
- Mechanical and plant engineering

Application examples

- Cable assembly
- Small motor insulation
- Filling materials
- Rattle protection
- Thermal protection hoses
- Electrical insulating hoses
- Abrasion protection



Automotive



Materials

The **protective and insulating materials** used in the automotive sector are characterized by their **high temperature resistance** and the mapping of the requirements and test catalogs of the leading international OEMs (e.g. **LV312-3**, ...).

Areas of application

- Electrical on-board networks
- Temperature sensors
- Engine wiring
- Battery leads
- Seat wiring
- Air bags
- Brake lines
- Door closing techniques
- Air conditioning lines
- Molded seals
- Connector housing seals
- 2K components



Household appliances



Materials

There is hardly a household appliance without silicone parts when it works at **high temperatures** and/or comes into **contact with food**.

Areas of application

- Cooking appliances
- Canteen kitchen technology
- Household appliances
- Oven Sealing Technology
- Pyrolysis furnace technology
- Beverage machines
- Coffee machines

Standards / norm requirements

- BfR
- FDA
- KTW
- WRAS
- W270



Medicine / Pharma



Materials

The **silicone compounds** used are characterized by their **beneficial physiological properties**. They meet the requirements of **USP Class VI** and relevant chapters of ISO 10993 and various pharmacopeias.

Areas of application

- Breathing tubes
- Pressure hoses
- Drainage hoses
- Dialysis tubing, filters
- Surgical instruments, handles
- Cutlery holder
- Accessories for laparoscopy
- On request with laser and inlaid lettering



Aviation



Materials

For applications in the field of aeronautics, we have a range of tested materials based on **silicone and silicone foam**. The focus is on **weight-saving** (e.g. foamed) and **non-flammable, self-extinguishing material qualities**.

Areas of application

- Aircraft construction
- Sealing technology
- Component manufacturing
- On-board equipment (interiors)
- Galleys
- On request with precise color matching to the interior



Railway Technology



Materials

As a leading supplier, we have a range of **self-extinguishing** and low-smoke **silicone** and **textile-based** materials and seals available for rail vehicle applications. The focus is on **NF F 16101, BS6853, DIN5510, EN ISO 11925-2 and DIN EN 45545-2.**

Areas of application

- Door seals
- Window seals
- Hatch seals
- Cable protection

Edge protection profiles

- Base with metal insert
- Fully flexible
- Compact or partially foamed
- No additional fixation necessary



Sanitary



Materials

The silicone articles of the various **SANIBIW qualities** meet the requirements of national and international drinking water guidelines. BIW will provide you with **comprehensive advice** on the **right choice** of **material qualities**.

Areas of application

- Hoses
- Drinking water pipes
- Shower hoses
- Fittings
- Shower cubicles
- Sealing and joint profiles
- Assembly aids

Possible/certified standards

- | | |
|--------|---------------|
| ▪ KTW | ▪ ACS |
| ▪ W270 | ▪ NSF 61 |
| ▪ WRAS | ▪ 3A Sanitary |
| ▪ KIWA | |
| ▪ VA | |



Heat Protection



Materials

Special high-temperature-resistant **silicone foam seals** are recommended for use in **heat protection areas**. Silicone foam offers **excellent heat insulation** as well as **noise insulation**.

Areas of application

- Oven door seals
- Grommets
- Conveyor technology
- Roll covers
- Climate cabinets
- Fire hoses
- Sealing systems flexible at low temperatures
- Conveyor flap seals

BIW as part of the Silicone Group

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Emergency management: "Back-up facilities" as backup production sites for single-source supplier products