

## BIW Isolierstoffe GmbH

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## Certified management system by:

- IATF16949
- ISO9001
- ISO13485
- ISO14001
- ISO50001
- IIP (Investors in People)



TECHNICAL DATASHEET

## INDUSTRIES AND APPLICATIONS



# STAR POINT INSULATION

## Typical uses

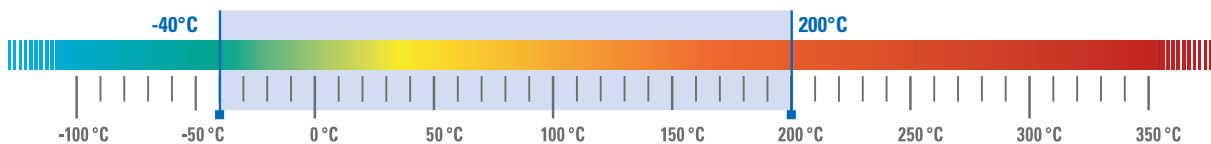
- Automotive industry
- E-mobility / hybrid
- Electrical insulation
- Electrical motors construction
- Stator construction
- Transformers construction

## Key properties

- Long-term heat resistance of  $-40^{\circ}\text{C}$  bis  $+200^{\circ}\text{C}$
- Short-term heat resistance up to  $+225^{\circ}\text{C}$
- Dielectric strength optional 1,50 kV up to 8,0 kV
- Expandable in diameter by up to 70%
- Glossy and equal silicone coating
- Very good compressibility and flexibility
- Good abrasion resistance
- Physiologically harmless
- Excellent resistance to water, water-glycol mixture, salt spray, good resistance to fuels and lubricants as well as impregnating resins during temporary exposure
- Closed on one side
- Nominal diameter 5,0 mm to 30,0 mm



## Application temperature



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INDUSTRIES AND APPLICATIONS



**STAR POINT INSULATION**

**Product description**

The STAR POINT INSULATION protective hose is a combination of a braided textile glass fibre and a special silicone coating. The special braided design ensures a high degree of radial expansion capability of up to 70% without splaying of the ends for special requirements in cable production. The STAR POINT INSULATION is closed on one side and is used, for instance, as insulation of copper wires in a stator that is built into an electric motor. It has very good resistance to high temperatures and aggressive media. If required, the STAR POINT INSULATION with its comprehensive colour palette is also available by special order in a self-extinguishing version conforming to UL 1441 VW-1 or UL94-V0

**Application properties**

Property	Standard	Test requirements	Result
Electrical strength	DIN EN 60684	Test at room temperature wall thickness 1,20+0,30 mm	Dielectrical strength > 1,5kV under 70% expansion
Flame resistance	LV 312-3 FMVSS 302	Flame height 38 mm Flame exposure 15s	Self-extinguishing, classification B

**Ageing**

Property	Standard	Test requirements	Result
Short-term ageing 240h / 225°C	LV 312-3 ISO 6722-1	Winding test	Requirements achieved
Long-term ageing 3000h / 200°C	LV 312-3 ISO 6722-1	Winding test	Requirements achieved

**Mechanical / physical properties**

Property	Standard	Test requirements	Result
Abrasion resistance	LV 312-3	Test at room temperature	Classification B
Elongation	self-test	Tapered mandrel	up to 70% stretchable

**Compatibilities**

Medium	Standard	Test requirements	Result
Ad Blue	based on LV 312-3	Storage 240h, 480h, 720h, 1000h 180°C, winding test	Requirements achieved
Biodiesel	based on LV 312-3	Storage 240h, 480h, 720h, 1000h 180°C, winding test	Requirements achieved
Break fluid	based on LV 312-3	Storage 240h, 480h, 720h, 1000h 180°C, winding test	Requirements achieved
Diesel	based on LV 312-3	Storage 240h, 480h, 720h, 1000h 180°C, winding test	Requirements achieved
Intensive cleaner	based on LV 312-3	Storage 240h, 480h, 720h, 1000h 180°C, winding test	Requirements achieved
Cold cleaning agent	based on LV 312-3	Storage 240h, 480h, 720h, 1000h 180°C, winding test	Requirements achieved

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*When it comes to competence*

INDUSTRIES AND APPLICATIONS



**STAR POINT INSULATION**

**Compatibilities**

Medium	Standard	Test requirements	Result
Fuel FAM-B	based on LV 312-3	Storage 240h, 480h, 720h, 1000h 180°C, winding test	Requirements achieved
Penetrating oil	based on LV 312-3	Storage 240h, 480h, 720h, 1000h 180°C, winding test	Requirements achieved
Radiator antifreeze	based on LV 312-3	Storage 240h, 480h, 720h, 1000h 180°C, winding test	Requirements achieved
Steering gear fluid	based on LV 312-3	Storage 240h, 480h, 720h, 1000h 180°C, winding test	Requirements achieved
Multigrade engine oil	based on LV 312-3	Storage 240h, 480h, 720h, 1000h 180°C, winding test	Requirements achieved
Engine compartment sealing	based on LV 312-3 > LV 312-3	Storage 240h, 480h, 720h, 1000h 180°C, winding test	Requirements achieved
Transformer oil	DIN EN 60684 DIN 40620 Customer specifications	Storage 24 h at room temperature winding test	Requirements achieved
Impregnation resin Voltatex 4200	DIN EN 60684 DIN 40620 Customer specifications	Storage 24 h at room temperature winding test	Requirements achieved
Impregnation resin Voltatex 4250	DIN EN 60684 DIN 40620 Customer specifications	Storage 24 h at room temperature winding test	Requirements achieved

**Ecology, Environment & Safety**

Ingredients compliant with VDA - requirements

IMDS listed

RoHS, GADSL compliant

Non-asbestos, textile glass fibres non-carcinogenic, non-hazardous to the environment, non-hazardous to water

When using and disposing of the STERNPUNKTISOLATION there are no environmentally relevant by-products expected

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**STAR POINT INSULATION****BIW-Standard dimensions****STAR POINT INSULATION (Code: GC5)**

On demand individual colours and dimensions available at any time

ID [mm]	Tol. ID [mm]	Wd [mm]	Tol. Wd [mm]	Ring [m]
5.0	±0.5	1.0	±0.3	Hose section
6.0	±0.5	1.2	±0.3	Hose section
7.0	±0.5	1.2	±0.3	Hose section
8.0	±0.5	1.2	±0.3	Hose section
9.0	±0.5	1.2	±0.3	Hose section
10.0	±0.5	1.2	±0.3	Hose section
11.0	±0.7	1.2	±0.3	Hose section
12.0	±0.7	1.2	±0.3	Hose section
13.0	±0.7	1.2	±0.3	Hose section
14.0	±0.7	1.2	±0.3	Hose section
15.0	±0.7	1.5	±0.3	Hose section