

## BIW Isolierstoffe GmbH

Pregelstraße 2-5  
D-58256 Ennepetal  
Tel.: +49 (2333) 8308-0  
Fax.: +49 (2333) 8308-10  
info@biw.de  
[www.biw.de](http://www.biw.de)

## Certified management system by:

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



TECHNICAL DATASHEET

## INDUSTRIES AND APPLICATIONS



## ISOFLEX SX

### Typical uses

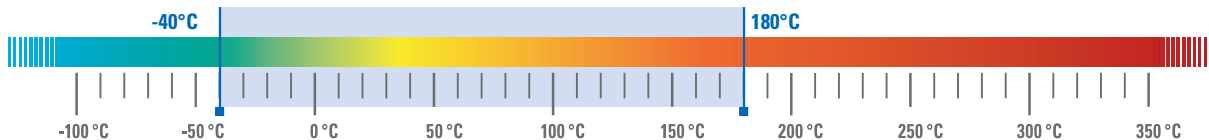
- Automotive industry
- E-mobility / hybrid
- Electrical insulation
- Cable manufacture
- Line protection

### Key properties

- Long-term heat resistance of -40°C to +180°C
- Short-term heat resistance up to +205°C
- Self-extinguishing
- Good resistance to chemicals, fuels and lubricants, water, water-glycol mixture, salt spray mist, as well as to cleaning agents of all types (soap, cold cleaner, steam) during temporary exposure
- Good elongation and compressibility
- Good cut resistance
- easy to assembly thanks to compressible and pre-rounded design
- Excellent value for money through efficient knitting process
- Physiologically harmless
- Wide range of colours
- Nominal diameter 3.0 mm to 15.0 mm



### Application temperature



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

INDUSTRIES AND APPLICATIONS



**ISOFLEX SX**

**Product description**

The ISOFLEX SX protective hose is a combination of a fine-mesh knitted textile glass fibre and a silicone coating specially developed for high mechanical loads in processing and application. The resulting tough knitting process in combination with the silicone coating provides a compelling level of quality. The special design and the efficient production process ensure a smooth inner and outer surface, good compression with special circularity and very good radial ductility. These properties and the fine-mesh knit construction of the ISOFLEX SX protective hose result in a simple and effective processing of the cable assembly. The fine-mesh knit construction (smooth inner surface) has proven especially advantageous in the assembly of long cable sets or lines. The resistance of ISOFLEX SX against high temperatures and aggressive media is very good. If required, ISOFLEX SX, with its extensive selection of colours, is also available as a special order in the self-extinguishing version in accordance with UL 1441 VW-1 or UL 94-V0.

**Application properties**

Property	Standard	Test requirements	Result
Electrical strength	DIN EN 60684	Tested at room temperature	>2,50kV
Flame resistance	LV 312-3 FMVSS 302	Flame height 38 mm Flame exposure 15s	Fire classification B

**Ageing**

Property	Standard	Test requirements	Result
Short-term ageing 240h / 205°C	LV 312-3 ISO 6722-1	Winding test	Requirements achieved
Long-term ageing 3000h / 180°C	LV 312-3 ISO 6722-1	Winding test	Requirements achieved

**Mechanical / physical properties**

Property	Standard	Test requirements	Result
Abrasion resistance	LV 312-3	Tested at room temperature	Classification A

**Compatibilities**

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

(Continued on the next page)

## BIW Isolierstoffe GmbH

Pregelstraße 2-5  
D-58256 Ennepetal  
Tel.: +49 (2333) 8308-0  
Fax.: +49 (2333) 8308-10  
info@biw.de  
[www.biw.de](http://www.biw.de)

## Certified management system by:

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



TECHNICAL DATASHEET

## INDUSTRIES AND APPLICATIONS



## ISOFLEX SX

## Compatibilities

Medium	Standard	Test requirements	Result
Fuel FAM-B	LV 312-3	Storage 240h, 480h and 1000h at 180°C, winding test	Requirements achieved
Penetrating oil	LV 312-3	Storage 240h, 480h and 1000h at 180°C, winding test	Requirements achieved
Radiator antifreeze	LV 312-3	Storage 240h, 480h and 1000h at 180°C, winding test	Requirements achieved
Steering gear fluid	LV 312-3	Storage 240h, 480h and 1000h at 180°C, winding test	Requirements achieved
Multigrade engine oil	LV 312-3	Storage 240h, 480h and 1000h at 180°C, winding test	Requirements achieved
Engine compartment sealing	LV 312-3	Storage 240h, 480h and 1000h at 180°C, winding test	Requirements achieved
Grease	LV 312-3	Storage 240h, 480h and 1000h at 180°C, winding test	Requirements achieved
Road saltsolution	LV 312-3	Storage 240h, 480h and 1000h at 180°C, winding test	Requirements achieved
Water-Glycol-mixture	LV 312-3	Storage 240h, 480h and 1000h at 180°C, 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 the ISOFLEX SX protective sleeve there are no environmentally relevant by-products expected.

## BIW-Standard dimensions

### ISOFLEX SX (Code: GSW)

On demand individual colours and dimensions available at any time

ID [mm]	Tol. ID [mm]	Wd [mm]	Tol. Wd [mm]	Ring [m]
3.0	±0.30	0.70	±0.30	
4.0	±0.30	0.70	±0.30	
5.0	±0.30	0.70	±0.30	

(Continued on the next page)

## BIW Isolierstoffe GmbH

Pregelstraße 2-5  
D-58256 Ennepetal  
Tel.: +49 (2333) 8308-0  
Fax.: +49 (2333) 8308-10  
info@biw.de  
[www.biw.de](http://www.biw.de)

## Certified management system by:

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



TECHNICAL DATASHEET

## INDUSTRIES AND APPLICATIONS



## ISOFLEX SX

## BIW-Standard dimensions

### ISOFLEX SX (Code: GSW)

On demand individual colours and dimensions available at any time

ID [mm]	Tol. ID [mm]	Wd [mm]	Tol. Wd [mm]	Ring [m]
6.0	±0.30	0.70	±0.30	
7.0	±0.30	0.70	±0.30	
8.0	±0.30	0.70	±0.30	
9.0	±0.30	0.80	±0.30	
10.0	±0.50	0.80	±0.30	
11.0	±0.50	0.80	±0.30	
12.0	±0.50	0.80	±0.30	
13.0	±0.50	1.0	±0.30	
14.0	±0.50	1.0	±0.30	
15.0	±0.50	1.0	±0.30	