

## 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



## ARA - TEX RI

### Typical uses

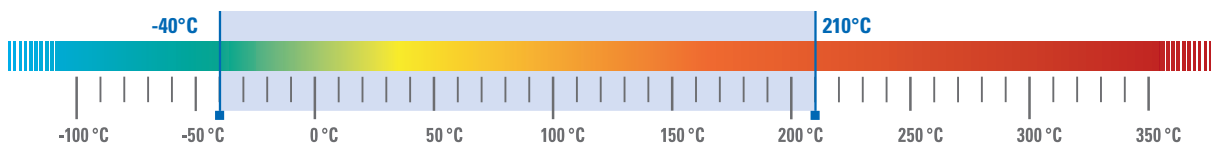
- Automotive industry
- E-mobility / hybrid
- Cable manufacture
- Line protection
- Commercial vehicles

### Key properties

- Long-term heat resistance of -40°C to +210°C
- Short-term heat resistance up to +235°C
- Institute-tested against marten bite
- Abrasion class C, standard LV 312-3
- Very good resistance to fuels and lubricants, water, salt spray, cleaning agents as well as acids and alkalis for temporary exposure
- Good cut resistance and impact resistance
- Good abrasion behavior under mechanical stress
- Colour: orange
- Nominal diameter 5.0 mm to 30.0 mm



### Application temperature



### Tests / References



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

INDUSTRIES AND APPLICATIONS



**ARA - TEX RI**

**Product description**

ARA - TEX RI is suitable for bundling cables or mechanical and thermal protection over insulating sleeves. ARA - TEX RI protective sleeve consists of a thermally and mechanically highly durable aramid fibre combination, which refines with a high temperature resistant silicone resin impregnation. The sleeve can be used in the automotive industry under extreme thermal (up to +235°C) and mechanical loads, because of the material combination. It is possible that the colour will change (orange) on temperature up to 210°C. The ARA - TEX RI protective sleeve is characterized by excellent resistance to fuels and lubricants. The ARA - TEX RI protective sleeve is specially suitable for assembling longer cable sets, because of the good stability and buckling resistance. Its combination of aramid and outstanding mechanical properties and glass with very good thermal properties produces an ideal combination for a protection sleeve and also considering the cost aspect. ARA - TEX RI is institute-tested against marten bite.

**Application properties**

Property	Standard	Test requirements	Result
Flame resistance	ISO 3795 FMVSS302 SAE J2192	Flame height 38 mm Flame exposure 15s	Fire classification A
Flexibility	DIN EN 60684-2	Temperature 23±2°C	Amplitude 28 mm
Absorbency	DIN EN ISO 9073-6	Immersion depth 30 mm Immersion time 15 min	Requirements achieved
Shrinkage	ISO 6722-1	Temperature 205°C	Requirements achieved

**Ageing**

Property	Standard	Test requirements	Result
Hydrolysis test	LV 312-3	1500h at 85°C 85% relative humidity Winding test at RT	Requirements achieved
Short-term ageing 240h / 205°C	LV 312-3 ISO 6722-1	Winding test under standard conditions	Requirements achieved
Long-term ageing 3000h / 180°C	LV 312-3 ISO 6722-1	Winding test under standard conditions	Requirements achieved
Ozone test	DIN 53509-1	Method B	Requirements achieved
Temperature and humidity cycling	ISO 6722-1	Temperature -40°C to + 175°C Humidity: 80-100% Cycles: 40	Requirements achieved

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

INDUSTRIES AND APPLICATIONS



**Mechanical / physical properties**

Property	Standard	Test requirements	Result
Abrasion resistance	LV 312-1	Temperature 23°C Frequency: 8 Hz Power: 7 N	Classification C
Pressure resistance in the heat	LV 112-1	Temp. 180°C - 290°C	Test achieved
Increased mech. requirements (Falling tool F1 / Single-core cable)	LV 312-3	Drop tower test	Classification D
Notching resistance	LV 112	10 mm/min	Classification D
Impact resistance	ISO 6722	4 h at -40°C	No breaks / cracks = OK
Tensile strength / elongation at break	LV 312-3	Tensile speed: 100 mm / min	> 4200 N

**Compatibilities**

Medium	Standard	Test requirements	Result
Ad Blue	LV 312-3	Storage at 180°C Rewetting or removal after 240h and 480h	Reirements achieved
Automatic transmission oil	LV 312-3	Storage at 180°C Rewetting or removal after 240h and 480h	Reirements achieved
Battery acid	LV 312-3	Storage at 180°C Rewetting or removal after 240h and 480h	Reirements achieved
Biodiesel	LV 312-3	Storage at 180°C Rewetting or removal after 240h and 480h	Reirements achieved
Break fluid	LV 312-3	Storage at 180°C Rewetting or removal after 240h and 480h	Reirements achieved
Diesel	LV 312-3	Storage at 180°C Rewetting or removal after 240h and 480h	Reirements achieved
Odor test	VDA 270 (B3)	At 60°C and 80°C	Noticeable, but not distracting = grade 2,4
Intensive cleaner	LV 312-3	Storage at 180°C Rewetting or removal after 240h and 480h	Reirements achieved
Cold cleaning agent	LV 312-3	Storage at 180°C Rewetting or removal after 240h and 480h	Reirements achieved
Fuel FAM-B	LV 312-3	Storage at 180°C Rewetting or removal after 240h and 480h	Reirements 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



**ARA - TEX RI**

## Compatibilities

Medium	Standard	Test requirements	Result
Penetrating oil	LV 312-3	Storage at 180°C Rewetting or removal after 240h and 480h	Reirements achieved
Radiator antifreeze	LV 312-3	Storage at 180°C Rewetting or removal after 240h and 480h	Reirements achieved
Steering gear fluid	LV 312-3	Storage at 180°C Rewetting or removal after 240h and 480h	Reirements achieved
Multigrade engine oil	LV 312-3	Storage at 180°C Rewetting or removal after 240h and 480h	Reirements achieved
Engine compartment sealing	LV 312-3	Storage at 180°C Rewetting or removal after 240h and 480h	Reirements achieved
Grease	LV 312-3	Storage at 180°C Rewetting or removal after 240h and 480h	Reirements achieved
Road saltsolution	LV 312-3	Storage at 180°C Rewetting or removal after 240h and 480h	Reirements achieved
Water-Glycol-mixture	LV 312-3	Storage at 180°C Rewetting or removal after 240h and 480h	Reirements achieved

## Ecology, Environment & Safety

Ingredients compliant with VDA - requirements

IMDS listed

RoHS, GADSL compliant

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

In use and disposal of the ARA – TEX RI protective sleeve there are no environmentally relevant co- products expected

## 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



**ARA - TEX RI**

## BIW-Standard dimensions

### ARA - TEX RI (Code: ARX)

On demand individual colours and dimensions available at any time

ID [mm]	Tol. ID [mm]	Wd [mm]	Tol. Wd [mm]	Ring [m]
5.0	± 0.30	0.50	+0.40	100
6.0	± 0.30	0.60	+0.40	100
7.0	± 0.30	0.60	+0.40	100
8.0	± 0.30	0.60	+0.40	50
9.0	± 0.30	0.60	+0.40	50
10.0	± 0.30	0.60	+0.40	50
12.0	± 0.50	0.60	+0.40	50
13.0	± 0.50	0.60	+0.40	50
15.0	± 0.50	0.60	+0.40	50
17.0	± 0.50	0.60	+0.40	50
18.0	± 0.50	0.60	+0.40	50
20.0	± 0.50	0.60	+0.40	25
22.0	± 0.70	0.60	+0.40	25
24.0	± 0.70	0.60	+0.40	25
26.0	± 0.70	0.60	+0.40	25
28.0	± 0.70	0.60	+0.40	25
30.0	± 0.70	1.50	+0.80	25