

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



ISOFLEX 210

Typical uses

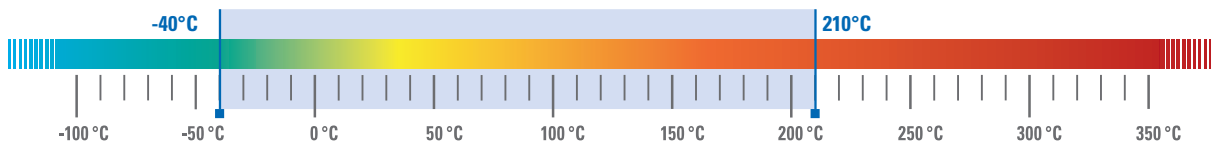
- Automotive industry
- E-mobility / hybrid
- Electrical insulation
- Cable manufacture
- Line protection

Key properties

- Long-term heat resistance of -40°C to +210°C
- Short-term heat resistance up to +235°C
- Self-extinguishing (UL)
- Good resistance to water, water-glycol mixture, salt spray, as well as to fuels and lubricants during temporary exposure
- Good elongation and compressibility
- Very flexible
- Physiologically harmless
- Excellent value for money through efficient knitting process
- Huge colour range
- Nominal diameter 3.0 mm to 35.0 mm



Application temperature



Tests / References



- IATF16949
- ISO9001
- ISO13485
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INDUSTRIES AND APPLICATIONS



ISOFLEX 210

Product description

The ISOFLEX 210 protective sleeve is a combination of a textile glass fabric and an innovative silicone coating. The silicone coating has the characteristics of resistance to high loads in processing and use. The high performance knitting process in combination with the special silicone coating convinces with quality. The special design and efficient manufacturing processes ensure an equal internal and external surface, a very good compressibility where there is special roundness and good tensibility. These characteristics makes the process of cable assembly simple and effective. ISOFLEX 210 is highly resistant to high temperatures and aggressive media. ISOFLEX 210 is available in a huge range of colours and special setting in a self extinguishing version (UL 1441 VW-1 or UL 94-V0).

Application properties

| Property | Standard | Test requirements | Result |
|------------------------------|-----------------------|---|-----------------------|
| Electrical strength | DIN EN 60684 | Testing at room temperature | > 2,5 kV |
| Flame resistance | LV 312-3 FMVSS 302 | Flame exposure 15s | Fire classification B |
| Insulation volume resistance | LV 312-3 | Temperature 23°C Relative humidity 50% 500V DC, 60s | >10 Gigaohm |

Ageing

| Property | Standard | Test requirements | Result |
|--------------------------------|------------------------|-------------------|-----------------------|
| Short-term ageing 240h / 235°C | LV 312-3 ISO 6722-1 | Winding test | Requirements achieved |
| Long-term ageing 3000h / 210°C | V 312-3 ISO 6722-1 | Winding test | Requirements achieved |

Mechanical / physical properties

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

Compatibilities

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

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Compatibilities

| Medium | Standard | Test requirements | Result |
|----------------------------|----------|---|-----------------------|
| Cold cleaning agent | LV 312-3 | Storage 240h, 480h, 720h and 1000h, 180°C, winding test | Requirements achieved |
| Fuel FAM-B | LV 312-3 | Storage 240h, 480h, 720h and 1000h, 180°C, winding test | Requirements achieved |
| Penetrating oil | LV 312-3 | Storage 240h, 480h, 720h and 1000h, 180°C, winding test | Requirements achieved |
| Radiator antifreeze | LV 312-3 | Storage 240h, 480h, 720h and 1000h, 180°C, winding test | Requirements achieved |
| Steering gear fluid | LV 312-3 | Storage 240h, 480h, 720h and 1000h, 180°C, winding test | Requirements achieved |
| Multigrade engine oil | LV 312-3 | Storage 240h, 480h, 720h and 1000h, 180°C, winding test | Requirements achieved |
| Engine compartment sealing | LV 312-3 | Storage 240h, 480h, 720h and 1000h, 180°C, winding test | Requirements achieved |
| Grease | LV 312-3 | Storage 240h, 480h, 720h and 1000h, 180°C, winding test | Requirements achieved |
| Road salt solution | LV 312-3 | Storage 240h, 480h, 720h and 1000h, 180°C, winding test and 1000h, 180°C, wrapping test | Requirements achieved |
| Water-Glycol-mixture | LV 312-3 | Storage 240h, 480h, 720h and 1000h, 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 of the ISOFLEX 210 protective sleeve there are no environmentally relevant by-products expected.

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ISOFLEX 210

BIW-Standard dimensions

ISOFLEX 210 (Code: GGH)

On demand individual colours and dimensions available at any time

| ID [mm] | Tol. ID [mm] | Wd [mm] | Tol. Wd [mm] | Ring [m] |
|---------|--------------|---------|--------------|----------|
| 3.0 | ±0.5 | 0.5 | ±0.2 | 200 |
| 4.0 | ±0.5 | 0.7 | ±0.2 | 200 |
| 5.0 | ±0.5 | 0.7 | ±0.2 | 200 |
| 6.0 | ±0.5 | 0.7 | ±0.2 | 200 |
| 7.0 | ±0.5 | 0.7 | ±0.2 | 100 |
| 8.0 | ±0.5 | 0.8 | ±0.2 | 100 |
| 9.0 | ±0.5 | 0.8 | ±0.2 | 100 |
| 10.0 | ±0.5 | 0.8 | ±0.2 | 100 |
| 11.0 | ±0.5 | 0.8 | ±0.2 | 100 |
| 12.0 | ±0.5 | 0.8 | ±0.2 | 100 |
| 13.0 | ±0.5 | 0.8 | ±0.2 | 100 |
| 14.0 | ±0.5 | 0.8 | ±0.2 | 100 |
| 15.0 | ±0.5 | 0.8 | ±0.3 | 100 |
| 16.0 | ±0.7 | 0.8 | ±0.3 | 100 |
| 17.0 | ±0.7 | 0.8 | ±0.3 | 50 |
| 18.0 | ±0.7 | 0.8 | ±0.3 | 50 |
| 19.0 | ±0.7 | 0.8 | ±0.3 | 50 |
| 20.0 | ±0.7 | 0.8 | ±0.3 | 50 |
| 21.0 | ±0.7 | 1.0 | ±0.3 | 50 |
| 22.0 | ±0.7 | 1.0 | ±0.3 | 50 |
| 23.0 | ±0.7 | 1.0 | ±0.3 | 50 |
| 24.0 | ±0.7 | 1.0 | ±0.3 | 50 |
| 25.0 | ±0.7 | 1.0 | ±0.3 | 50 |
| 26.0 | ±0.8 | 1.2 | ±0.3 | 50 |
| 27.0 | ±0.8 | 1.2 | ±0.3 | 50 |
| 28.0 | ±0.8 | 1.2 | ±0.3 | 50 |
| 29.0 | ±0.8 | 1.2 | ±0.3 | 50 |

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ISOFLEX 210

BIW-Standard dimensions

ISOFLEX 210 (Code: GGH)

On demand individual colours and dimensions available at any time

| ID [mm] | Tol. ID [mm] | Wd [mm] | Tol. Wd [mm] | Ring [m] |
|---------|--------------|---------|--------------|----------|
| 30.0 | ±0.8 | 1.2 | ±0.3 | 50 |
| 31.0 | ±0.8 | 1.2 | ±0.3 | 50 |
| 32.0 | ±0.8 | 1.2 | ±0.3 | 50 |
| 33.0 | ±0.8 | 1.2 | ±0.3 | 50 |
| 34.0 | ±0.8 | 1.2 | ±0.3 | 50 |
| 35.0 | ±0.8 | 1.6 | ±0.4 | 50 |