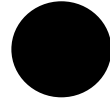


iQ parts
IQ-PARTS-SHOP.COM



**SPECS &
INFORMATION**

Smart® Band 19mm, Material PA66 Part No. SB-BA-3/4-PA66

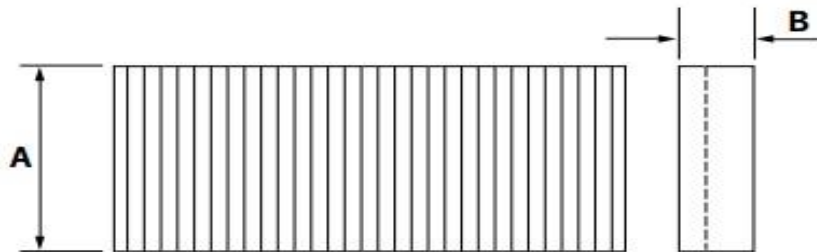


Description

Patented heavy duty glass fibre yarn reinforced polymer strap used together with a Smart® Band Hybrid buckle.



Outline Dimensions (General Tolerance $\pm 0.2\text{mm}$)



| General Properties PA66 ¹ | | |
|--------------------------------------|---------------------|-------------|
| Property | Value | Unit |
| Weight | 69.8 (0.750) +/- 2% | g/m (oz/ft) |
| Band Width (A) | 19.1 (0.752) | mm (inch) |
| Band Thickness (B) | 3.55 (0.138) | mm (inch) |
| Reel Length ² | 30.5 (100) +/- 1% | m (Feet) |
| | 61.0 (200) +/- 1% | m (Feet) |

¹PA66 is the material code for Polyamide 66. The generic designation is Nylon 66

²Smart® Band 19mm comes in 2 reel lengths. 30.5 and 61m +/- 1%



| Material Properties PA66 ¹ | | | | |
|---|----------------|-------------------|--|-------------|
| Property | Dry as Moulded | Conditioned 50%RH | Unit | Test Method |
| Density | 1.14 (0.66) | | g/cm ³ (oz/inch ³) | ISO 1183 |
| Water Absorption @ 23°C Equilibrium @ 50% RH | 2.4 | | % | ISO 62 |
| | 8.5 | | % | ISO 62 |
| Tensile Modulus +23°C/+73°F | 3000 (435) | 1400 (577) | MPa (kpsi) | ISO 527-2 |
| Tensile Stress @ Yield +23°C/+73°F | 83 (12.0) | 66 (9.6) | MPa (kpsi) | ISO 527-2 |
| Tensile Stress @ Break +23°C/+73°F | 93 (13.4) | 90 (13.1) | MPa (kpsi) | ISO 527-2 |
| Tensile Strain @ Yield +23°C/+73°F | 4.5 | 25 | % | ISO 527-2 |

¹PA66 is the material code for Polyamide 66. The generic designation is Nylon 66



| Material Properties PA66 ¹ Cont'd | | | | |
|---|----------------|-------------------|--|-------------|
| Property | Dry as Moulded | Conditioned 50%RH | Unit | Test Method |
| Tensile Strain @ Break +23°C/+73°F | 25 | 105 | % | ISO 527-2 |
| Flexural Modulus | 2900 (420) | 1350 (196) | MPa (kpsi) | ISO 178 |
| Flexural Strength | 86 (12.5) | 22 (3.2) | MPa (kpsi) | ISO 178 |
| Charpy Unnotched Impact Strength +23°C/+73°F -30°C/-22°F -55°C/-67°F | No break | | kJ/m ² (ft-lb/in ²) | ISO 179 |
| | No break | | kJ/m ² (ft-lb/in ²) | ISO 179 |
| | | | kJ/m ² (ft-lb/in ²) | ISO 179 |
| Charpy Notched Impact Strength +23°C/+73°F -30°C/-22°F | 6.6 (3.1) | | kJ/m ² (ft-lb/in ²) | ISO 179 |
| | 5.3 (2.5) | | kJ/m ² (ft-lb/in ²) | ISO 179 |
| Heat Deflection Temperature 0.45 MPa, Unannealed 1.82 MPa, Unannealed | 200 (392) | | °C (°F) | ISO 75-2/B |
| | 70 (158) | | °C (°F) | ISO 75-2/A |
| Vicat Softening Temperature 50N 10N | 236 (457) | | °C (°F) | ISO 306/B |
| | 255 (491) | | °C (°F) | ISO 306/B |
| Melting Temperature | 260 (500) | | °C (°F) | ISO 11357 |
| Flammability | HB | | | UL 94 |
| RoHS Compliance | RoHS Compliant | | | |
| UL File Number | | | | |

¹PA66 is the material code for Polyamide 66. The generic designation is Nylon 66

| Material Properties Glass Fibre Yarn (Individual Yarns) | | | |
|--|---------------------|---------------|-------------|
| Property | Value | Unit | Test Method |
| No of glass fibre yarns in band | 11 | | |
| Tensile Strength at Break | 900 (91.8) [202.25] | N (kgf) [lbf] | ISO 3341 |
| Melting Point | 750 (1382) | °C (°F) | |

Mechanical Tests:



| Property | Test Diameter mm | System Yield Strength | Unit | Test Speed mm/s |
|--|------------------|-----------------------|---------------|-----------------|
| Straight Tensile Test ³ System Tensile Test ³ | N/A | 9890 (1009) [2223] | N (kgf) [lbf] | 10 |
| | 200 | 11910 (1215) [2677] | N (kgf) [lbf] | 10 |
| | 280 | 13190 (1345) [2965] | N (kgf) [lbf] | 10 |
| | 400 | 11600 (1183) [2608] | N (kgf) [lbf] | 10 |
| | 600 | 12720 (1297) [2859] | N (kgf) [lbf] | 10 |
| | 800 | 11460 (1169) [2576] | N (kgf) [lbf] | 10 |

³Tests carried out in HCL laboratory at room temperature ~20°C and ~50% humidity on a steel half shell pipe arrangement. System tests carried out using a SB-BU-3/4-HY-PA66 buckle with SB-BA-3/4-PA66 band



Technical Data Sheet



| Property/Tool Type | Test Diameter mm | Maximum Tension during Installation | Minimum Tension after Installation | Unit |
|-------------------------------|------------------|-------------------------------------|------------------------------------|---------------|
| System Retention ⁴ | | | | |
| SM-FT-1000-19 | 400 | 6000 (612) [1349] | 2500 (255) [562] | N (kgf) [lbf] |
| SM-FT-2000-19 | 400 | 3500 (357) [787] | 2000 (204) [450] | N (kgf) [lbf] |
| SM-FT-3000-19 | 400 | 6500 (663) [1461] | 3500 (357) [787] | N (kgf) [lbf] |

⁴The system retention is the expected retention or tension during and after tightening using a Smart® installation Tool and depends on tool setup and use. Surface friction and the capstan effect may produce different results



Further Technical Information and Design Guidelines can be found in the following booklets:

- Smart® Products Technical Booklet



Important Notice to User

Shelf Life: Store in a cool dry area in original cartons and use within 5 years after date of receipt.

Warranty: HCL warrants that all products when stored, used and maintained in accordance with HCL's written instructions will meet or exceed the above specification. HCL makes no other warranties or conditions, expressed or implied, including, but not limited to, any implied warranty or condition of merchantability or fitness for a particular purpose or any implied warranty or condition arising out of a course of dealing, custom or usage of trade. If any HCL product does not conform to this warranty then only replacement or refund of the affected parts will be considered.

Limitation of Liability: Except where expressly prohibited by law, HCL will not be liable for any damage or loss arising from the use of the HCL product.

Product Use: It is the user's responsibility to determine the suitability of the product for the task it is to be used for. HCL reserve the right to continually improve its product and would advise the user to contact HCL at all times to ensure they have up to date current data to work with.





info@iq-parts.nl
Harsweg 34A
2461 EZ Ter Aar
T +31 252 624 126
The Netherlands