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**SPECS &  
INFORMATION**

## Smart® Band Flex ½” 13mm Band, Material POM Part No. SB-BA-FX-1/2-POM

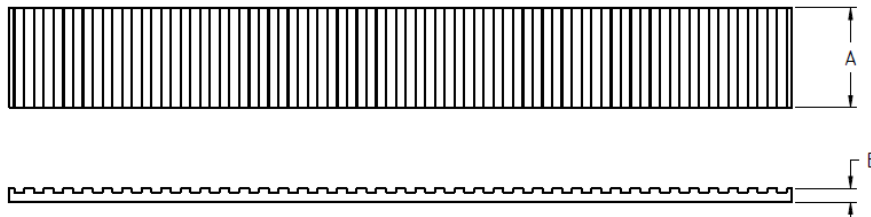


### Description

Medium duty and flexible glass fibre yarn reinforced polymer strap used together with Smart® Band Flex locking head (part number SB-BU-FX-1/2-LH-POM) or Smart® Band standard buckle (part number SB-BU-FX-1/2-ST-POM). Made from UV stabilised POM and suitable for long life, outdoor and marine use. Can be tightened using the SM-FT-2000-13-FX tightening tool.



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



Note: Material code on the bottom of the band gives polymer type and year quarter date code.  
GEN is replaced with material type e.g. POM. Q/Y is a quarter year date code e.g. 02/24

General Properties POM <sup>1</sup>		
Property	Value	Unit
Weight	26.9 ( ) +/- 2%	g/m (oz/ft)
Band Width (A)	12.7 (0.748) +/- 0.2 (0.0079)	mm (inch)
Band Thickness (B)	1.8 (0.071) +/- 0.1 (0.0039)	mm (inch)
Reel Length <sup>2</sup>	30.5 (100) +/- 1%	m (Feet)
	61.0 (200) +/- 1%	m (Feet)

<sup>1</sup>POM is the material code for Polyoxymethylene. The generic designation is Acetal

<sup>2</sup>Smart® Band 19mm comes in 1 reel length. 30.5 and 61m +/- 1%

## Material Properties POM<sup>1</sup>

Property	Dry as Moulded	Unit	Test Method
Density	1.41 (0.82)	g/cm <sup>3</sup> (oz/inch <sup>3</sup> )	ISO 1183
Water Absorption 24hr @ 23°C, 50% RH	0.2	%	ASTM D570
Tensile Modulus +23°C/+73°F	2500 (362.6)	MPa (kpsi)	ISO 527-1
Tensile Stress @ Yield +23°C/+73°F	62.0 (9.0)	MPa (kpsi)	ISO 527-2
Tensile Strain @ Break +23°C/+73°F	40	%	ISO 527-2
Flexural Modulus	2400 ()	MPa (kpsi)	ISO 178
Flexural Strength	88 (12.8)	MPa (kpsi)	ISO 178
Charpy Notched Impact Strength	9 (4.3)	kJ/m <sup>2</sup> (ft-lb/in <sup>2</sup> )	ISO 179
Heat Deflection Temperature 0.45 MPa Unannealed	156 (312)	°C (°F)	ISO 75-2/B
1.8 MPa, Unannealed	95 (203)	°C (°F)	ISO 75-2/A
Vicat Softening Temperature 50N		°C (°F)	ISO 306/B
10N	160 (320)	°C (°F)	ISO 306/B
Melting Temperature	189 (372)	°C (°F)	ISO 11357
Flammability	HB		UL 94
RoHS Compliance	✓ RoHS Compliant		
UL File Number	E48285		

<sup>1</sup>POM is the material code for Polyoxymethylene. The generic designation is Acetal

## Material Properties Glass Fibre Yarn (Individual Yarns)

Property	Value	Unit	Test Method
No of glass fibre yarns in band	5		
Yarn Tensile Strength at Break (Nominal)	340 (34.7) [76.4]	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	N/A	1850 (189) [416]	N (kgf) [lbf]	50.8 (2.0)
System Tensile Test <sup>3</sup>	50	2340 (238) [526]	N (kgf) [lbf]	50.8 (2.0)
	88.9 <sup>4</sup>	2330 (237) [524]	N (kgf) [lbf]	50.8 (2.0)
	100	2160 (220) [485]	N (kgf) [lbf]	50.8 (2.0)
	200	2110 (215) [474]	N (kgf) [lbf]	50.8 (2.0)

<sup>2</sup>Tests 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-FX-1/2-LH-POM locking head with SB-BA-FX-1/2-POM flex band.

<sup>3</sup>Diameter required from Telecordia standard number TR-TSY-000789





Property/Tool Type	Test Diameter mm	Maximum Tension during Installation <sup>5</sup>	Minimum Tension after Installation <sup>5</sup>	Unit
Nominal System Retention <sup>5</sup> SM-FT-2000-13-FX	100 (3.94)	1000 (102) [224]	400 (40) [90]	N (kgf) [lbf]

<sup>5</sup>The system retention gives an idea of the expected retention or tension during and after tightening using a Smart® Band installation tool (part number SM-FT-2000-13-FX) around a 100mm diameter steel pipe and depends on how much force the user can apply. Surface friction and the capstan effect may produce different results. Tool operated using one hand only as per recommendation.



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.



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**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