



STITCHLESS

GENERAL TECHNICAL DATA

Multi Layers/SpanBond/Special Adhesives

	WEF 210 Stitchless	WEF 803 Stitchless	GXF 3333 Stitchless	GXF 3344 Stitchless	Permaseal G1 Stitchless	SPAN BOND Series	WEF 3000 Series Stitchless
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Product Description

Features	Rigid/Very High Modulus/Low Activation Temperature/Good Durability/Embellishments Supportive Specially designed for bond heavy fabrics and materials.	High Modulus/Very Low Activation Temperature/Good Durability	Rigid/Very High Modulus/Low Activation Temperature/Good Durability Specially designed for constructions where needs high modulus.	Rigid/Very High Modulus/Low Activation Temperature/Good Durability Specially designed for constructions where needs high modulus.	Breathable/Water Proof/Very High Modulus/Low Activation Temperature/Good Durability/ Ideal for applications which needs high modulus with breathability such as CF and Combo.	Super Stretch & Recovery/Good Durability/Very Low Modulus/Medium activation temperature/Elastic Replacement Engineered for applications which need super stretch & recovery. GXF3622s - 152 µm (.006") GXF3633s - 229 µm (.009")	3 layer adhesive/Stretchy/High Recovery/Medium Modulus/Low activation temperature/Elastic replacement. Ideal for constructions where an additional stretchability required. 3003 - 76 µm (.003"), 1mil/1mil/1mil 3004: 102 µm (.004"), 1mil/2mil/1mil 3026: 152 µm (.006"), 2mil/2mil/2mil
Hand Feel & Physical Appearance	Soft / Satisfactory	Soft / Satisfactory	Stiff / Satisfactory	Stiff/ Satisfactory	Soft / Satisfactory	Very Soft / Satisfactory	Very Soft / Satisfactory
Fabric substances	Wide range of fabrics substances including polyester, Nylon, Spandex and cotton blends.	Wide range of fabrics substances including polyester, Nylon, Spandex and cotton blends.	Wide range of fabrics substances including polyester, Nylon, Spandex Blends and cotton blends.	Wide range of fabrics substances including polyester, Nylon, Spandex Blends and cotton blends.	Wide range of fabrics substances including polyester, Nylon, Spandex Blends and cotton blends.	Wide range of fabrics substances including polyester, Nylon, Spandex Blends and cotton blends.	Wide range of fabrics substances including Nylon, Polyester, Spandex Blends and cotton blends.
Ideal for	Intimates, Active, Outerwear	Intimates, Active, Outerwear	Intimates, Active, Outerwear	Intimates, Active, Outerwear	Intimates, Active, Outerwear	Intimates, Active, Outerwear	Intimates, Active, Casual wear
Customized Perforation	Yes. Please contact Worthen representative for more info.	Yes. Please contact Worthen representative for more info.	NO	NO	NO	NO	Yes. Please contact Worthen representative for more info.

Physical & Thermal Data

Available Gauges	50 µm (.002"), 100 µm (.004")	75-100 g/yd2	203 µm (.008")	254 µm (.010")	90 g/yd2 to 150g/yd2	152 µm (.006"), 229 µm (.009")	76 µm (.003"),
Chemistry	Copolyamide	Polyurethane	Polyurethane/Composite/Polyurethane	Polyurethane/Composite/Polyurethane	Polyurethane	Polyurethane/Spandex/Polyurethane	Polyurethane / Elastic / Polyurethane
Softening Point	115°C (239°F)	95°C (203°F)	60°C (140°F)	60°C (140°F)	100°C (212°F)	130°C (266°F)	95°C (203°F)
Melt Flow Index	23dg/min at 150°C / 2.16 kg	30dg/min at 175°C/2.16kg	15 dg/min at 150°C/2.16kg	15 dg/min at 150°C/2.16kg	8dg/min at 175°C/2.16kg	34 dg/min at 175°C / 2.16 kg	45dg/min at 175°C / 2.16 kg
Adhesive Weight	83.5g/m2 (per 25 µm)	65.5g/m2 (per 25 µm)	75.5g/m2 (per 25 µm)	85.5g/m2 (per 25 µm)	55 g/m2 (per 25 µm)	30 g/m2 (per 25 µm)	85.8g/m2 (per 25 µm)
Glue Line Temperature	130°C to 155°C (266°F to 311°F)	115°C to 135°C (243°F to 275°F)	90°C to 110°C (194°F to 230°F)	90°C to 110°C (194°F to 230°F)	120°C to 140°C (248 to 284°F)	150°C to 170°C (302°F to 338°F)	120°C to 165°C (248°F to 329°F)

Warm Wash Test Data

Warm Wash/Tumble dry low	Passed upto 65°C	Passed upto 65°C	Passed upto 65°C	Passed upto 65°C	Passed upto 65°C	Passed upto 65°C	Passed upto 65°C
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Modulus & Recovery for a Sample of 25.4mm width - NOTE: Modulus & Recovery is a measurement which can be changed upon the fabric blend use with the respective adhesive.

Gauge Tested	100 µm (.004")	100 g/yd2	Not Available	Not Available	90 g/yd2	152 µm (.006")	Dependent on the item
at 40%	of original length of the sample	30.6 N/in (6.9 lbf/in)	2.7 N/in (0.6 lbf/in)	Not Available	Not Available	4.4 N/in (1.0 lbf/in)	Range-4.2(0.9lbf/in) - 4.6 N(1.0 lbf/in)
at 100%		33.8 N/in (7.6 lbf/in)	5.3 N/in (1.2 lbf/in)	Not Available	Not Available	85 N/in (19.1 lbf/in)	Range-6.2(1.4lbf/in) - 8.4 N(1.8 lbf/in)
Recovery	Not Available	Not Available	Not Available	Not Available	78%	99%	99%

Recommended Bonding Conditions

Flat Press

Temperature	165°C to 190°C	120°C to 140°C	140°C to 165°C	145°C to 175°C	135°C to 155°C	155°C to 180°C	130°C to 170°C
Pressure	2.5 - 4 bar	2.5 - 4 bar	2.5 - 4 bar	2.5 - 4 bar	2.5 - 4.5 bar	2.5 - 4 bar	2.5 - 4 bar
Time	18 - 25 seconds	18 - 30 seconds	18 - 25 seconds	18 - 30 seconds	20 - 30 seconds	18 - 30 seconds	18 - 35 seconds

Continuous Bonding

Temperature	Not recommended	200°C to 255°C	220°C to 275°C	220°C to 275°C	100°C to 110°C (Fusing Lamination)	200°C to 270°C	155°C to 220°C
Pressure		1 - 1.5 bar	1 - 1.5 bar	1 - 1.5 bar	4-6 kgf/cm2 (Roller Pressure)	1.5 - 2.0 bar	1 - 1.5 bar
RPM		1.0 - 2.0 m/min	0.8 - 1.5 m/min	0.8 - 1.5 m/min	4.0 - 5.0 m/min	0.8 - 1.5 m/min	1.0 - 1.5 m/min



STITCHLESS

	WEB BOND Series	MESH BOND Series	DC Series	WPF 158 Stitchless	WPF 171 Stitchless	GXT 35F
Product Description						
Features	High stretch Low Modulus Web Adhesive developed with TPU mono layers as the base adhesive. Recommended for panty gussets and other laminations.	High stretch low modulus mesh adhesive developed as TPE and TPU form. Recommended for intimates and sports developments.	Low modulus super stretch perforated adhesive developed with WEF202 and WEF3004 as base adhesives. Ideal for waistband developments. DC02 - Ladder Cut/35mm and 50mm DC34 - Ladder Cut/35mm and 50mm	Low stretch 2 Layer Seam Tape with high range melting barrier and low range melting adhesive layer. Suitable for light to very light weighted PVC, Vinyl or polyurethane coated two layer fabrics.	Low stretch 2 Layer Seam Tape with high range melting barrier and low range melting adhesive layer. High durability. Suitable for light to very light weighted heat sensitive PVC, Vinyl or polyurethane coated two layer fabrics.	Low stretch, minimal foot print 3 Layer Seam Tape with Tricot fabric, PU Water proof barrier and TPU adhesive. High durability. Suitable for light to medium weighted 3 Layer fabrics with polyurethane membranes.
Physical Appearance & Color	White colour web filaments	Transparent/Mesh	Transparent/Perforated cut	Thin / Transparent	Thin / Transparent	Thin / White-Black-Grey-Custom Colours
Certification	OEKO-TEX, REACH Compliant,CPSIA Compliant	OEKO-TEX, REACH Compliant,CPSIA Compliant	OEKO-TEX, REACH Compliant,CPSIA Compliant	OEKO-TEX, REACH Compliant,CPSIA Compliant	OEKO-TEX, REACH Compliant,CPSIA Compliant	OEKO-TEX, REACH Compliant,CPSIA Compliant
Ideal for	Intimates,Lace & Power Mesh Laminations	Intimates,Sports and Active	Intimates,Sports and Active	Outerwear,Rain Jackets,Adventure	Outerwear,Rain Jackets,Adventure	Intimates, Active, Outerwear,Sports wear,Intim.
Standard Width(s)	1524mm	1524mm	35mm/50mm	20mm (Can be customized)	20mm (Can be customized)	20mm (Can be customized)
Physical & Thermal Data						
Composition	Polyurethane	Elastomers	Polyurethane	Polyurethane/Water Proof Barrier	Polyurethane/Water Proof Barrier	Polyurethane/Water Proof Barrier/Tricot Fabric
Total Gauge	30,45,50,60,75,90 g/m2	203 µm (.008")	100 µm (.004")	89 µm (.0035")	76 µm (.003")	305 µm (.012")
Adhesive Gauge/Weight	23.9g/m2 (per 25 µm)	20g/m2 (per 25 µm)	85.8g/m2 (per 25 µm)	40 µm (.0016")	44 µm (.00175")	165 µm (.0065")
Total Weight	N/A	N/A	N/A	99.1 g/m2	90 g/m2	228 g/m2
Softening Point	110°C (230°F)	115°C (239°F)	98°C (208°F)	102°C (215.6°F)	80°C (176°F)	100°C (212°F)
Melt Flow Index	135dg/min at 175°C / 2.16 kg	40dg/min at 175°C / 2.16 kg	34dg/min at 175°C / 2.16 kg	N/A	N/A	N/A
Glue Line Temperature	120°C to 140°C (248°F to 284°F)	125°C to 135°C (257°F to 275°F)	120°C to 130°C (248°F to 266°F)	N/A	N/A	N/A
Warm Wash Test Data						
Warm Wash/Tumble dry low	Passed upto 65°C	Passed upto 65°C	Passed upto 65°C	Passed upto 45°C	Passed upto 45°C	Passed upto 45°C
Modulus & Recovery for a Sample of 25.4mm width - NOTE: Modulus & Recovery is a measurement which can be changed upon the fabric blend use with the respective adhesive.						
Gauge Tested	30g/m2	203 µm (.008")	100 µm (.004")	N/A	N/A	N/A
at 40%	of original length of the sample	1.8 N/in (0.40 lbf/in)	2.4 N/in (0.56 lbf/in)	Range-4.2(0.9lbf/in) - 4.6 N(1.0 lbf/in)	N/A	N/A
at 100%		3.6 N/in (0.80 lbf/in)	4.2 N/in (0.95 lbf/in)	Range-6.2(1.4lbf/in) - 8.4 N(1.8 lbf/in)	N/A	N/A
Recovery	97%	99%	98%	N/A	N/A	N/A
Recommended Bonding Conditions						
Hot Air Sealing Machine/Continuous Machine/Fusing Machine						
Temperature	N/A	140°C to 180°C	155°C to 250°C	545°C to 700°C	345°C to 700°C	500°C to 700°C
Pressure	N/A	4.0 -6.0 bar	1.0 -1.5 bar	4.0 bar	4.0 bar	3.0 - 4.0 bar
Time	N/A	5.0-7.0 m/min	1.0-2.0 m/min	3.5 to 7.0 m/min	4.0 to 7.0 m/min	3.0 to 5.0 m/min
Flat Press						
Temperature	150°C to 170°C	145°C to 170°C	130°C to 170°C	Not recommended	Not recommended	120°C to 140°C
Pressure	2.5 - 4 bar	2.5 - 4 bar	2.5 - 4 bar			3.0 - 4.5 bar
Time	20 - 25 seconds	20 - 25 seconds	18 - 30 seconds			5 - 8 Seconds
Cool Pressing Time						3 - 5 Seconds