

4titude® Heat Sealing Materials for use with the a4S Automatic Heat Sealer



The a4S Automatic Heat Sealer is compatible with the widest range of heat sealing materials available on the market. Details of available materials can be found in the following table or by visiting the 4titude® webpage www.4ti.co.uk. Note: Some seals available as sterile on request. 4titude® also offers sample rolls for evaluation purposes. Please [contact 4titude®](#).

Heat sealing material ordering information (roll width 78 mm)						
Heat seal	Clear Seal	Clear Seal Plus	Clear Weld Seal Mark II	Clear Seal 3730	Peel Seal	DMSO Resistant Peel Seal
Large diameter roll (length/number of seals)	4ti-0540 (500m/4,200 seals)	4ti-0549 (250m/2,100 seals)	4ti-0573 (610m/5,000 seals)	4ti-0580 (610m/5,000 seals)	4ti-0520 (610m/5,000 seals)	4ti-0585 (500m/4,200 seals)
Small diameter roll (length/number of seals)	4ti-0540/80 (80m/640 seals)	please enquire	4ti-0573/122 (122m/1,000 seals)	4ti-0580/122 (122m/1,000 seals)	4ti-0520/122 (122m/1,000 seals)	4ti-0585/100 (100m/800 seals)
Applications and specifications						
Application	<ul style="list-style-type: none"> qPCR Short term compound storage 	<ul style="list-style-type: none"> Bead mill applications PCR qPCR 	<ul style="list-style-type: none"> PCR (esp. water bath) qPCR Storage & disposal of hazardous materials 	<ul style="list-style-type: none"> qPCR For use with ABI 3730 Sequencer 	<ul style="list-style-type: none"> Low temperature, compound storage Short term room temperature compound storage (<5 days) PCR 	<ul style="list-style-type: none"> Low temperature/ room temperature compound storage with DMSO & other organic solvents
Special properties	<ul style="list-style-type: none"> Good optical clarity Moderate solvent resistance 	<ul style="list-style-type: none"> High tensile strength Good optical clarity 	<ul style="list-style-type: none"> Good optical clarity Resistance to DMSO 	<ul style="list-style-type: none"> Good optical clarity Some solvent resistance 	<ul style="list-style-type: none"> Can be peeled directly from -80°C freezer Moderate resistance to solvents at room temperature 	<ul style="list-style-type: none"> Can be peeled directly from -80°C freezer High resistance to solvents even at elevated temperatures
Min temp	-80°C	-80°C	-80°C	-20°C	-80°C	-80°C
Max temp	80°C (or 110°C with pressurised PCR heated lid)	80°C (or 110°C with pressurised PCR heated lid)	110°C	80°C (or 110°C with pressurised PCR heated lid)	90°C (or 110°C with pressurised PCR heated lid)	40°C
Pierceable				✓		
Peelable	✓	✓			✓	✓
RNase / DNase free	✓	✓	✓	✓	✓	✓
Material	Laminate	Laminate	Laminate	Polymer	Laminate	Laminate
Seals to	PP, PE, PS, COC	PP, PS, COC	PP	PP, PE, PS, COC	PP, COC	PP, PE, COC
a4S sealing temperature (°C) and dwell time (sec)						
96well PP plates	175 / 4	175 / 4	170 / 4	170 / 4	175 / 4	175 / 4
96well 2-component plates	175 / 3	175 / 3	170 / 3	170 / 3	175 / 3	175 / 3
384well PP plates	175 / 4	175 / 4	170 / 4	170 / 4	175 / 4	175 / 4
384well 2-component plates	175 / 3	175 / 3	170 / 3	170 / 3	175 / 3	175 / 3

PP – Polypropylene, PS – Polystyrene, COC – Cyclic Olefin Copolymer, PE – Polyethylene

4titude® Heat Sealing Materials for use with the a4S Automatic Heat Sealer (cont.)



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Heat sealing material ordering information (roll width 78 mm)							
Heat seal	Pierce Seal	Pierce Seal Strong	Foil Seal	PS Foil Seal	Thermal Bond	Black Seal	Gas Permeable Seal Mk 2
Large diameter roll (length/number of seals)	4ti-0530 (610m/5,000 seals)	4ti-0538 (610m/5,000 seals)	4ti-0535 (610m/5,000 seals)	4ti-0545 (610m/5,000 seals)	4ti-0590 (500m/4,200 seals)	4ti-0525 (610m/5,000 seals)	4ti-0598 (610m/5,000 seals)
Small diameter roll (length/number of seals)	4ti-0530/122 (122m/1,000 seals)	please enquire	4ti-0535/122 (122m/1,000 seals)	4ti-0545/122 (122m/1,000 seals)	4ti-0590/100 (100m/800 seals)	please enquire	4ti-0598/122 (122m/1,000 seals)
Applications and specifications							
Application	<ul style="list-style-type: none"> • PCR, compound storage • Sample shipping 	<ul style="list-style-type: none"> • PCR • Sample shipping • Low and room temperature compound storage with DMSO and other organic solvents 	<ul style="list-style-type: none"> • Low temperature compound storage • short-term room temperature compound storage • PCR 	<ul style="list-style-type: none"> • Low temperature compound storage • Short-term room temperature compound storage • PCR 	<ul style="list-style-type: none"> • Low temperature transportation & storage • PCR, esp. water bath cyclers • Storage of organicsolvents, acids & alkalines 	<ul style="list-style-type: none"> • Fluorescent & other light sensitive assays 	<ul style="list-style-type: none"> • Cell culture • Over night incubation • Seed and insect storage
Special properties	<ul style="list-style-type: none"> • Easily pierceable • Resistant to DMSO • Re-sealable with another Pierce Seal • Colour print identifies non-sealing surface 	<ul style="list-style-type: none"> • Suitable for long term storage • Pierceable • Peelable from COC • Very good solvent resistance, including DMSO 	<ul style="list-style-type: none"> • Re-sealable with another Foil Seal • Resistant to DMSO • Colour print identifies non-sealing surface 	<ul style="list-style-type: none"> • Re-sealable with another Foil Seal • Resistant to DMSO 	<ul style="list-style-type: none"> • Very strong seal with PP • Resistant to DMSO and other solvents 	<ul style="list-style-type: none"> • A foil-based heat seal • Coated on the sealing surface with a low fluorescence black pigment 	<ul style="list-style-type: none"> • Small pore size that allows gaseous exchange, but limits evaporation • Permeability rate >20g/m²/24h • 20µm pore size
Min temp	-20°C	-20°C	-20°C	-20°C	-200°C	-80°C	-20°C
Max temp	120°C	120°C	110°C	110°C	110°C	120°C	80°C
Pierceable	✓	✓	✓	✓			✓
Peelable		✓	✓	✓	✓	✓	✓
RNase / DNase free	✓	✓	✓	✓	✓	✓	
Material	Foil	Foil	Foil	Foil	Laminate	Foil	Woven material
Seals to	PP, PS	PP, COC	PP	PS	PP	PS	PP, PS, COC
a4S sealing temperature (°C) and dwell time (sec)							
96well PP plates	175 / 4	175 / 4	175 / 4	175 / 4	175 / 4	175 / 4	175 / 4
96well 2-component plates	175 / 3	175 / 3	175 / 3	175 / 3	175 / 3	175 / 3	175 / 3
384well PP plates	175 / 4	175 / 4	175 / 4	175 / 4	175 / 4	175 / 4	175 / 4
384well 2-component plates	175 / 3	175 / 3	175 / 3	175 / 3	175 / 3	175 / 3	175 / 3

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