4titude® Sealing Solutions

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4titude® offers the widest range of plate sealing solutions available on the market. You can choose between sealing with strip caps, mats, lids, adhesive seals in strip or plate format, and heat seals in flexible formats up to plate size. The choice of an optimised sealing solution is particularly important for (q)PCR because thermal cycling can be associated with evaporation of reaction reagents.

Please see below for a brief overview of our sealing solutions for PCR plates and strips and refer to our webpage www.4ti.co.uk/seal or the **4titude® Sealing Solutions Product Overview brochure** for more details.

Strips of Sealing Caps

- Available in strips of 8 or 12, either domed or flat optical caps
- Universal fit for all 4titude® PCR tube strips and PCR plates
- CrystalStrips™ made of a special polymer with improved optical properties leading to high transmission rates, ideally suited for small samples with low signal intensity

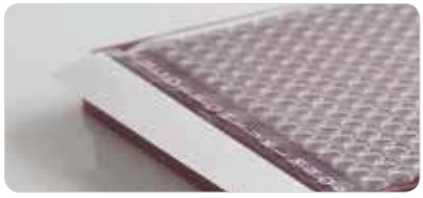
Code	Details	Strips/Case
4ti-0751	Strips of 8 flat optical caps	300
4ti-0783	*as above*	125
4ti-0752	Strips of 8 domed caps	300
4ti-0782	*as above*	125
4ti-0755	CrystalStrip™, crystal clear strips of 8 flat optical caps	300
4ti-0755/125	*as above*	125
4ti-0788	Strips of 12 flat optical caps	200

Rigid Polystyrene Plate Lids

- Protect samples from contamination and evaporation
- A variety of lids are available from our PCR Plate Lids & FrameStar® Lids (see below) and Microplate Lids product range

Code	Details	Lids/Case
4ti-0285	Ultra-Low Universal Lid, ultra-low profile, without condensation rings, non-sterile	100
4ti-0287	FrameStar® 96 NGS Lid, for use with 4ti-0960/RIG, with condensation rings, non-sterile	50
4ti-0288	PCR Plate Lid, low profile, without condensation rings, non-sterile	50
4ti-0289	FrameStar® 96 Lid, for use with 4ti-0770, without condensation rings, non-sterile	50

Adhesive Sealing



4titude® offers the widest range of adhesive sealing solutions available on the market. You have the option to choose your seal based on a wide variety of properties offered including peelability, pierceability, gas permeability, optical clarity, temperature stability and solvent resistance.

Most of our adhesive sheet seals are supplied with convenient tabs on both ends for ease of application. These tabs enable easy peeling for seal removal and peelable seals leave the sealing surface residue free after removal. We also offer a number of our seals in various roll formats compatible with most roll sealers on the market, for ease of use or for automation.

Highest flexibility to meet your application needs

Example: PCR Seal

- Durable transparent polyester film with a strong adhesive layer, peelable
- Enables high integrity and efficiently prevents sample evaporation
- Recommended for PCR and other optical applications as well as sample storage
- Also available in two flexible formats as perforated sheets, to enable tearing into either 8 well or 12 well strips and as half plate seals to match the size of our FrameStar® 192 Well Semi-Skirted PCR Plate

Code	Details	Sheets/Case
4ti-0500	Sheets (135 x 80 mm)	100
4ti-0500/8	Vertically perforated for division into 12 strips of 8 wells, sheets (115 x 100 mm)	100
4ti-0500/12	Horizontally perforated for division into 8 strips of 12 wells, sheets (137 x 71 mm)	100
4ti-0500/HP	Half plate size sheets (70 mm x 80 mm)	100

Example: qPCR Seal

- Clear, non-sticky film with a strong pressure-activated adhesive, peelable
- Recommended for qPCR and other imaging techniques including crystallisation
- Also available as half plate seals to match the size of our FrameStar® 192 Well Semi-Skirted PCR Plate

Code	Details	Sheets or Rolls/Case
4ti-0560	Sheets (140 x 77 mm)	100
4ti-0560/HP	Half plate size sheets (70 mm x 77 mm)	100
4ti-0561	Roll (100 m x 80 mm, approx. 700 seals)	1

Heat Sealing

Heat sealing is the gold standard method of plate and tube sealing

- Superior sealing performance compared to cap, mat and adhesive sealing
- 100% complete seal prevents sample loss by evaporation – maximum sample security
- Prevents leakage and contamination
- Allows the use of smaller reagent volumes – reagent cost savings
- Available as sheets, for use with manual and semi-automated sealers, such as our 4s3™ Sheet Heat Sealer, and in multiple roll formats compatible with specified automated heat sealers, such as our a4S Roll Heat Sealer
- You have the option to choose your seal based on a wide variety of properties offered including peelability, pierceability, gas permeability, optical clarity, temperature stability and solvent resistance

Example: Peel Heat Seal, for PCR

- Peelable laminate seal compatible with PP plates
- Can be removed from PP plates by peeling, even when plate has been removed directly from -80°C storage
- Suitable for very low temperature storage & high temperature uses
- Recommended for PCR

Code	Details	Sheets or Rolls/Case
4ti-0520	Roll (610 m x 78 mm, approx. 5,000 seals)[1,5]	1
4ti-0520/122	Roll (122 m x 78 mm, approx. 1,000 seals)[1]	1
4ti-0522	Roll (500 m x 115 mm, approx. 6,250 seals)[2,5]	1
4ti-0521	Sheets (125 mm x 78 mm)	100

Example: Clear Heat Seal, for qPCR

- Optically clear, suitable for imaging and qPCR, peelable
- Suitable for imaging, fluorescence detection, and colorimetric assays
- Recommended for qPCR and other imaging techniques including crystallisation

Code	Details	Sheets or Rolls/Case
4ti-0540	Roll (500 m x 78 mm, approx. 4,200 seals)[1,5]	100
4ti-0540/80	Roll (80 m x 78 mm, approx. 640 seals)[1]	1
4ti-0540/REMP	Roll (500 m x 78 mm, approx. 4,200 seals)[3]	1
4ti-0542	Roll (350 m x 115 mm, approx. 4,400 seals)[2,5]	1
4ti-0542/REMP	Roll (350 m x 115 mm, approx. 4,400 seals)[4]	1
4ti-0541	Sheets (125 mm x 78 mm)	100

[1] Compatible with 4titude® a4S Automatic Roll Heat Sealer/Thermo Fisher ALPS 300™ and ALPS 3000™/KBiosystems Wasp™/KBioscience FlexiSeal and Cube; [2] Compatible with Agilent (Velocity 11) PlateLoc®; [3] Compatible with REMP Portrait Heat Sealer (PHS); [4] Compatible with REMP Landscape/Stacking Heat Sealers (LHS/SHS); [5] Sample rolls available