

Microseal® 'P' and 'P+' Sealing Pads for Motorized Lids

Microseal 'P' and 'P+' adhesive-backed sealing pads are designed for applications in which several successive runs may be sealed with the same seal. For high-throughput applications using a robotically controlled motorized lid, these pads eliminate the need for manual addition and removal of microplate seals. Each pad may be used for at least 25 PCR runs, and can be periodically surface-treated with dilute bleach for cleaning and decontamination. Both pads are autoclavable and moderately resistant to UV irradiation.

Microseal 'P+' pads are a new design that delivers improved sealing performance. They have optimal sealing capabilities with all polypropylene plates, both 96- and 384-well. Microseal 'P+' pads should be used only with Moto Alpha™ lids (ALP-2296 and ALP-2238), which actively prevent plates from sticking to the lid or the sample block. For the older style Power Bonnet™ lids, use the original Microseal 'P' pads.

Directions for Use

1. Before the first use and before each series of runs, clean and decontaminate each Microseal 'P' or 'P+' pad as follows. Saturate a lab tissue with a 1:10 dilution of chlorine bleach (0.5% sodium hypochlorite) and place it on the pad for one minute.¹ Rinse the pad in deionized water and allow it to dry before attaching it to the heated lid. Be careful to prevent bleach solution from contacting the cycler block.
2. For MJ thermal cyclers with adjustable heated lids, set the lid pressure by turning the thumbwheel clockwise until strong resistance is felt, or about 1/2–3/4 turn past the point of initial contact with the PCR plate. For the new motorized lids (ALP-2296 or ALP-2238), lid pressure is applied automatically.

¹ Prince AM and Andrus L, PCR: How to kill unwanted DNA, BioTechniques 12, 358–359 (1992)

Microseal 'P' and 'P+' Pads

MSP-1001	10 pads per package	For use with Power Bonnet lids (ALP-1296 and ALP-1238)
MSP-1002	10 pads per package	For use with Moto Alpha lids (ALP-2296 and ALP-2238)

Related Products

MSL-2012	Auto-sealing lids, flat	Tight-sealing, reusable metal lids with attached 'P+' pads for sealing PCR plates before, during, and after cycling
MSL-2222	Auto-sealing lids, arched	Self-releasing, reusable metal lids with attached 'P+' pads for sealing PCR plates before and during cycling
MSL-2222	Auto-sealing lids, arched, wide tab	Lids have wide tabs along two edges to provide a larger surface for robotic grippers

Sealer Comparison Chart

Product	Product Highlights	Compatibility
Microseal 'A' film MSA-5001 (50 sheets)	<ul style="list-style-type: none"> Smooth application and release — no aerosol generation Peel-away release liner for pristine sealing surface PCR volumes $\geq 10 \mu\text{l}$ (96-well) or $\geq 5 \mu\text{l}$ (384-well) 	All PCR plates, tube strips
Microseal 'B' adhesive seals MSB-1001 (100 sheets)	<ul style="list-style-type: none"> Clear adhesive seal for thermal cycling or fluorescent assays Plate storage or transport before or after cycling (ambient to -40°C) PCR volumes $\geq 10 \mu\text{l}$ (96-well) or $\geq 5 \mu\text{l}$ (384-well) 	All polypropylene PCR plates
96-well PCR plate sealing mats 223-9442 (5 mats)	<ul style="list-style-type: none"> Reusable mat — ideal for sequencing Smooth release — no aerosol generation PCR volumes $\geq 10 \mu\text{l}$ 	96-well polypropylene PCR plates
Microseal 'P' and 'P+' pads MSP-1001 MSP-1002 (10 pads)	<ul style="list-style-type: none"> Reusable sealing pad adheres to the heated lid Use MSP-1001 with Power Bonnet™ motorized lid (ALP-1296, ALP-1238), using PCR volumes $\geq 15 \mu\text{l}$ (96-well) or $\geq 10 \mu\text{l}$ (384-well) Use MSP-1002 with Moto Alpha™ motorized lid (ALP-2296, ALP-2238), using PCR volumes $\geq 10 \mu\text{l}$ (96-well) or $\geq 5 \mu\text{l}$ (384-well) 	All 384-well and 96-well PCR plates with raised well rims
Auto-sealing lids MSL-2012 (flat) MSL-2022 (arched) MSL-2032 (arched, wide-tab) (4 lids)	<ul style="list-style-type: none"> Reusable, robot-placeable sealer reduces evaporation during reaction assembly and seals tightly during thermal cycling Flat lid can be used for postcycling storage; PCR volumes $\geq 3 \mu\text{l}$ (96-well) or $\geq 1 \mu\text{l}$ (384-well) Arched lids can be removed by robotic arms; PCR volumes $\geq 5 \mu\text{l}$ (96-well) or $\geq 1 \mu\text{l}$ (384-well) 	Hard-Shell and Microseal skirted PCR plates

Microseal 'P' and 'P+' Pads Effectively Seal the Following Vessels

Product	PCR Reaction Volumes	Product Highlights
Microseal skirted 96- and 384-well PCR plates MSP-series	5–125 μl (96-well) 5–25 μl (384-well)	<ul style="list-style-type: none"> High-throughput robot-friendly design in 1-component, thin-wall polypropylene 96-well format is compatible with DNA Engine Opticon® real-time PCR detection systems
Hard-Shell® skirted 96- and 384-well PCR plates HSP-series	5–125 μl (96-well) 5–30 μl (384-well)*	<ul style="list-style-type: none"> Unique 2-component design resists warping and shrinkage Rigid skirt/deck for lab automation; thin-wall polypropylene wells for optimal thermal cycling 96-well format is compatible with DNA Engine Opticon real-time PCR detection systems
Multiplate™ unskirted PCR plates, low-profile and full-height MLL-series MLP-series	5–125 μl	<ul style="list-style-type: none"> High-performance, versatile, inexpensive plates can easily be cut to desired size when running fewer than 96 samples Low-profile plates are more rigid; reduce potential for condensate formation Available in 96- and 48-well formats

* Reliable cycling of substantially smaller volumes has been demonstrated using 384-well Hard-Shell plates with Microseal 'P+' pads and high-pressure motorized lids. Please inquire for more information.

Practice of the patented polymerase chain reaction (PCR) process requires a license. Bio-Rad and MJ brand thermal cyclers and systems include an Authorized Thermal Cycler and may be used with PCR licenses available from Applied Biosystems. Their use with Authorized Reagents also provides a limited PCR license in accordance with the label rights accompanying such reagents. Some applications may also require licenses from other third parties.

