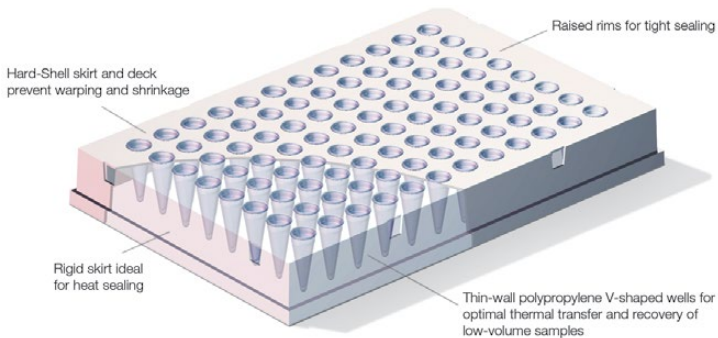


# Hard-Shell® 96-Well PCR Plates

- Low-Profile Skirted
- High-Profile Semi-Skirted
- Low-Profile Semi-Skirted

Hard-Shell PCR Plates represent an innovative concept in PCR plate design. The skirt and deck are molded from a rigid thermostable polymer, preventing robotic handling problems due to plate warping. This hard shell prevents the distortion and shrinkage that may occur when regular single-component polypropylene PCR plates are exposed to the high temperatures of thermal cycling or heat sealing. The thin-wall wells are molded of virgin polypropylene selected for low DNA binding. The raised rims around each well allow tight sealing using a variety of procedures, including pressure-, adhesive-, and heat-sealing methods.



**Hard-Shell Low-Profile 96-Well Skirted PCR Plates**

8- x 12-well array, package of 50 plates

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|          |   |
|----------|---|
| HSP-9601 | Clear well, white shell   |
| HSP-9901 | Clear well, white shell, barcoded on 2 sides<br>(Row H and Column 12) |
| HSP-9611 | Clear well, red shell   |
| HSP-9621 | Clear well, yellow shell  |
| HSP-9631 | Clear well, blue shell  |
| HSP-9641 | Clear well, green shell   |
| HSP-9661 | Clear well, black shell   |
| HSP-9655 | White well, white shell   |
| HSP-9955 | White well, white shell, barcoded on 2 sides<br>(Row H and Column 12) |
| HSP-9665 | White well, black shell   |
| HSP-9635 | White well, blue shell  |
| HSP-9645 | White well, green shell   |
| HSP-9666 | Black well, black shell   |

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**Hard-Shell High-Profile 96-Well Semi-Skirted PCR Plates**

8- x 12-well array, package of 25 plates

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|          |  |
|----------|--|
| HSS-9601 | Clear well, clear shell  |
| HSS-9641 | Clear well, green shell  |
| HSS-9901 | Clear well, clear shell, barcoded on 3 sides<br>(Row H, Column 1, and Column 12) |
| HSS-9665 | White well, black shell  |

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**Hard-Shell Low-Profile 96-Well Semi-Skirted PCR Plates**

8- x 12-well array, package of 25 plates

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|          |   |
|----------|---|
| HSL-9601 | Clear well, clear shell   |
| HSL-9901 | Clear well, clear shell, barcoded on 2 sides<br>(Row H and Column 12) |
| HSL-9641 | Clear well, green shell   |
| HSL-9605 | White well, clear shell   |
| HSL-9905 | White well, clear shell, barcoded on 2 sides<br>(Row H and Column 12) |
| HSL-9645 | White well, green shell   |

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**Seals and Accessories**

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|          |  |
|----------|--|
| MSA-5001 | <b>Microseal® 'A' Film</b> , 50 seals                                |
| MSB-1001 | <b>Microseal 'B' Adhesive Seals</b> , optically clear, 100 seals     |
| MSC-1001 | <b>Microseal 'C' Optical Seals</b> , 100 adhesive seals              |
| MSF-1001 | <b>Microseal 'F' Foil</b> , 100 adhesive seals                       |
| MSR-0001 | <b>Sealing Roller</b> , for adhesive film seals                      |
| 181-4000 | <b>PX1™ PCR Plate Sealer</b> , semiautomated heat sealing instrument |
| 181-4030 | <b>Optically Clear Heat Seal</b> , 100 seals                         |
| 181-4035 | <b>Permanent Clear Heat Seal</b> , 100 seals                         |
| 181-4040 | <b>Pierceable Foil Heat Seal</b> , 100 seals                         |
| 181-4045 | <b>Peelable Foil Heat Seal</b> , 100 seals                           |
| TCS-0801 | <b>Domed 8-Cap Strips</b> , clear, 120 strips                        |
| TCS-0803 | <b>Optical Flat 8-Cap Strips</b> , ultraclear, 120 strips            |
| TCS-1201 | <b>Domed 12-Cap Strips</b> , clear, 200 strips                       |

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Please request bulletin 5496 for more information about Hard-Shell PCR Plates, including dimension details, and bulletin 6090 for more information about seals and accessories.

# Hard-Shell PCR Plate Compatibility Chart

|  | Low-Profile 96-Well Skirted PCR Plates  | High-Profile 96-Well Semi-Skirted PCR Plates                                      | Low-Profile 96-Well Semi-Skirted PCR Plates                                       |
|--|---|---|---|
|  |  |  |  |

|                              |   |              |              |
|------------------------------|---|--------------|--------------|
| Catalog number               | HSP-9xxx  | HSS-9xxx     | HSL-9xxx     |
| Well height                  | Low-profile                                       | High-profile | Low-profile  |
| Skirt                        | Full-skirted                                      | Semi-skirted | Semi-skirted |
| Maximum well volume          | 200 µl  | 350 µl       | 200 µl       |
| ANSI/SBS standard dimensions | Yes   | No           | Yes          |
| Autoclave specification      | 121°C, 20 min                                     |              |              |
| Centrifuge specification     | Up to 2,250 x g in a swing-out rotor              |              |              |
| Application temperature      | -80 to 121°C                                      |              |              |
| Storage                      | Room temperature; avoid sun and ultraviolet light |              |              |
| Cleanroom production         | Free of DNase, RNase, and human DNA               |              |              |

## Thermal Cycler Compatibility\*

|   |   |   |   |
|---|---|---|---|
| Bio-Rad® C1000™, C1000 Touch™, S1000™   | • | • | • |
| Bio-Rad® T100™  |   | • |   |
| Bio-Rad® DNA Engine®, DNA Engine Tetrad® and Tetrad 2, DNA Engine Dyad®, Dyad Disciple™, PTC-100® | • | • | • |
| Bio-Rad® iCycler®   |   | • |   |
| Applied Biosystems 0.2 ml Tube Cyclers (2720, 9700, Veriti, etc.)                                 |   | • |   |
| Applied Biosystems 0.1 ml Tube Cyclers (9800 Fast, Veriti Fast, etc.)                             |   |   | • |
| Eppendorf Mastercycler Series   | • | • | • |

## Real-Time PCR Detection System Compatibility\*

|   |   |   |   |
|---|---|---|---|
| Bio-Rad® CFX Connect™, CFX96™, CFX96 Touch™, CFX96 Touch Deep Well          | • |   | • |
| Bio-Rad® iCycler iQ®, iQ™5, MyiQ™, MyiQ™2                                   |   | • |   |
| Bio-Rad® Chromo4™   | • | • |   |
| Bio-Rad® DNA Engine Opticon® and Opticon 2                                  | • |   |   |
| Applied Biosystems Standard Systems (7500, 7900HT, etc.)                    |   | • |   |
| Applied Biosystems Fast Systems (7500 Fast, 7900HT Fast, ViiA 7 Fast, etc.) |   |   | • |
| Eppendorf Mastercycler ep <i>realplex</i>                                   | • | • | • |
| Stratagene Mx Series  |   | • |   |

## Other Instrument Compatibility\*

|  |   |   |  |
|--|---|---|--|
| Applied Biosystems Capillary DNA Sequencers (3700, 3730, etc.) |   | • |  |
| Idaho Technology LightScanner                                  | • |   |  |

\* 96-well instruments.

**Note:** The Hard-Shell 96-Well and 384-Well 480 PCR Plates have been specifically designed for the Roche LightCycler 96 and 480 Real-Time PCR Systems. Please request bulletin 5496 for more information about these plates.

Eppendorf and Mastercycler are trademarks of Eppendorf AG. LightCycler is a trademark of Roche Diagnostics GmbH. LightScanner is a trademark of Idaho Technology Inc. Mx is a trademark of Stratagene Corporation. StepOnePlus is a trademark of Applied Biosystems. Veriti is a trademark of Applied Biosystems. ViiA is a trademark of Life Technologies Corporation.

Hard-Shell plates are covered by one or more of the following U.S. patents or their foreign counterparts owned by Eppendorf AG: U.S. Patent Numbers 7,347,977; 6,340,589; and 6,528,302.

Bio-Rad's thermal cyclers and real-time thermal cyclers are covered by one or more of the following U.S. patents or their foreign counterparts owned by Eppendorf AG: U.S. Patent Numbers 6,767,512 and 7,074,367.

Visit [bio-rad.com/web/hardshell96](http://bio-rad.com/web/hardshell96) for more information.



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