

# Corning Microplates

## Product Selection Guide

For Assays and Cell Culture



CORNING



## Introduction

Corning Life Sciences is pleased to present our new Microplate Selection Guide. In this guide, you will find a selection of Corning's newest and most requested products for assays and high throughput screening.

For up-to-date information on Corning Life Sciences' comprehensive range of products, go to [www.corning.com/lifesciences](http://www.corning.com/lifesciences).

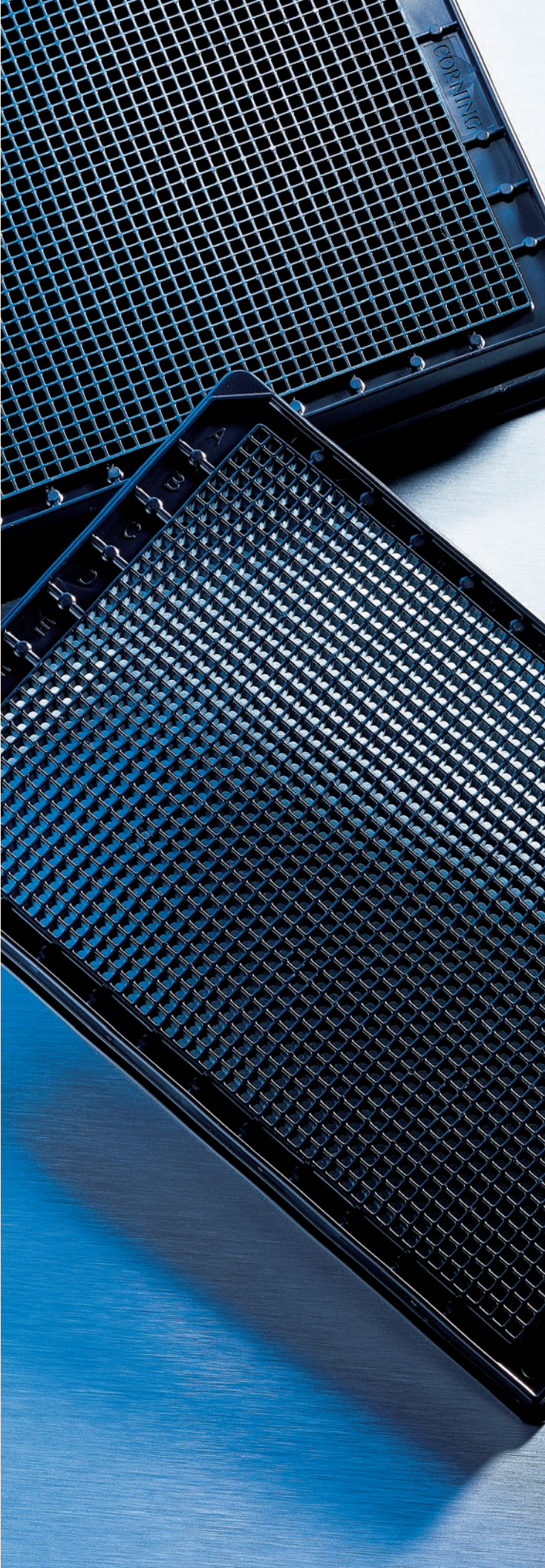
For additional product information, please visit [www.corning.com/lifesciences](http://www.corning.com/lifesciences), or call 1.800.492.1110. Customers outside the United States, please call 1.978.442.2200 or contact the local support office listed on the back cover.

## Ordering Information

Corning products are available through any authorized Corning support office or distributor. Please see our website for a complete listing. To place an order, simply contact the distributor of your choice. For each requested product, provide the Corning catalog number, product description, and desired quantity.

### Abbreviations Used

PDL – Poly-D-Lysine  
PLL – Poly-L-Lysine  
PLO – Poly-L-Ornithine  
NBS – Nonbinding Surface  
TC – Tissue Culture  
NT – Not Treated  
ELISA – Enzyme-linked Immunosorbent Assay  
HB – High Bind  
MB – Medium Bind



## Corning Microplates for Assays and Cell Culture

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## Overview

### Designed for Performance

Corning has been setting the standard for excellence in life sciences labware for over 85 years. With our comprehensive line of plasticware, including assay products, we continue to be an industry leader. Corning strives for the highest standards in product design and plastics molding.

Corning® microplates and accessories are manufactured under strict process controls guaranteeing consistent product performance. Our manufacturing facilities are in compliance with cGMP standards and are ISO 9001 registered.

Customers can request a Certificate of Compliance for any Corning microplate. Also available are detailed product descriptions and drawings that highlight product dimensions and testing procedures. All are available by contacting your local Corning Life Sciences office. See the back cover of this guide for a listing.

### The Equipment Compatibility Program

#### Quality and Compatibility from Corning

Corning Life Sciences maintains a comprehensive equipment compatibility program in which leading equipment manufacturers certify the compatibility of our products with their instruments.

Corning microplates offer compatibility with a wide range of laboratory instrumentation, including microplate readers, microplate washers, liquid handling instruments, automation accessories, and robotic systems. To make it easy to identify the Corning microplates that perform well with your instruments, we have assembled an Equipment Compatibility Guide with the help of manufacturers from throughout the industry. The Guide is available at [www.corning.com/lifesciences](http://www.corning.com/lifesciences). To ensure the accuracy of this reference guide, we invited leading manufacturers to test our microplates on their instruments using extensive criteria for fit and function. For example, a microplate reader manufacturer would have tested a Corning microplate for proper fit in the microplate carrier, suitable optical performance, and compatibility with all of the instrument's accessories, including microplate stackers and bar code readers. If the microplate met all criteria, the manufacturer then signed a form certifying that the microplate was tested for fit and function and found compatible with their instrument and all relevant accessories. So you have their assurance, as well as ours, that the Corning microplates you choose will perform as intended. Please use this Equipment Compatibility Guide with confidence.

## Corning® 96-well Microplates

Corning offers a complete line of 96-well microplates for laboratory miniaturization and automation. These microplates are available for different applications:

- ▶ 96-well assay microplates
  - General assays – Not treated, nonbinding surface, covalent binding, high binding, flexible vinyl (PVC), and UV microplates
  - Cell-based assays – Tissue culture-treated, Corning® CellBIND® surface, Poly-D-Lysine, and Ultra-Low Attachment polystyrene microplates
  - Immunoassays – EIA/RIA polystyrene microplates (medium and high binding)
- ▶ 96-well polystyrene Corning Stripwell™ microplates
- ▶ 96-well polypropylene storage microplates and cluster tubes

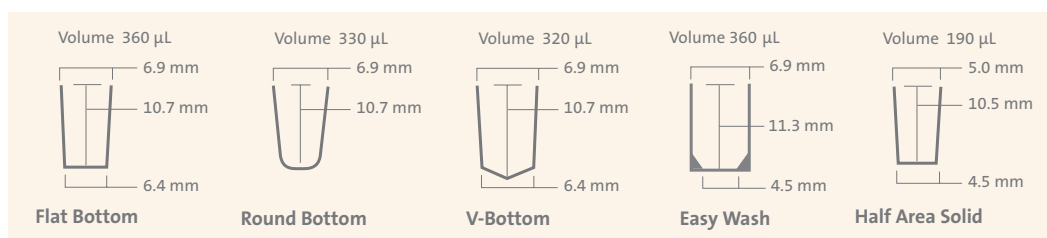
For information on 96-well microplates for PCR and genomics, see the **Corning Genomics Product Selection Guide (CLS-MP-009)**.

Corning offers a wide variety of 96-well assay microplates. They are organized into five groups:

- ▶ Clear polystyrene microplates
- ▶ Solid black and white polystyrene microplates
- ▶ Clear bottom black and white polystyrene microplates
- ▶ UV microplates
- ▶ Clear flexible vinyl (PVC) microplates

Corning 96-well polystyrene microplates are offered in standard volume formats and in lower volume format (Corning half area microplates). Corning 96-well polystyrene microplates have plate dimensions (length x width x height) of 127.76 x 85.48 x 14.22 mm that meet standard ANSI/SBS footprint dimensions for microplates.

96-well Plate Types	Well Bottom	Total Well Volume (µL)	Recommended Working Volume (µL)
Standard	Flat	360	75 to 200
Standard	Round	330	75 to 200
Standard	V	320	75 to 200
Standard	Easy Wash	360	75 to 200
Half area, solid	Flat	190	25 to 125
Half area, clear bottom	Flat	205	25 to 125



### 96-well Geometry and Dimensions

Corning tissue culture-treated microplates have the same surface treatment used on other Corning culture vessels. In addition to this traditional surface, Corning offers three additional surfaces: Corning CellBIND surface treatment for improving consistency and even cell attachment, a Poly-D-Lysine coating for enhancing attachment of difficult-to-attach cell lines, and an Ultra-Low Attachment surface for minimizing cell attachment.

For microplate selection process and additional information, see the **Corning® and Falcon® Microplates Selection Guide (CLS-C-DL-MP-014)**.





## Corning® 96-well Clear Polystyrene Microplates

- ▶ Sterile
- ▶ Nonpyrogenic
- ▶ Lids are available where indicated.

Refer to the Microplate Accessories section for information about microplate accessory products, including sealing tapes and mats.

Cat. No.	Format	Well Bottom	Surface Treatment	Sterile	Qty/Pk	Qty/Cs
3360	Standard	Round	TC-treated	Yes	25	100
3366	Standard	Round	High binding	No	25	100
3367	Standard	Round	Not treated	Yes	1	50
3788	Standard, with lid	Round	Not treated	Yes	20	100
3795	Standard	Round	Not treated	Yes	25	100
3798	Standard	Round	Not treated*	No	25	100
3797	Standard	Round	Not treated	No	25	100
3799	Standard, with lid	Round	TC-treated	Yes	1	50
7007	Standard, with lid	Round	Ultra-Low Attachment	Yes	1	24
3894	Standard, with lid	V	TC-treated	Yes	1	50
3896	Standard	V	Not treated	Yes	1	48
3897	Standard	V	Not treated	No	25	100
3898	Standard	V	Not treated*	No	25	100
2507	Standard	Flat	Carbo-BIND	No	1	50
2509	Standard	Flat	Sulfhydryl-BIND	No	1	50
3300	Standard, with lid	Flat	Corning CellBIND	Yes	5	50
3361	Standard, with lid	Flat	High binding	Yes	20	100
3370	Standard, with lid	Flat	Not treated	Yes	20	100
3474	Standard, with lid	Flat	Ultra-Low Attachment	Yes	1	24
3585	Standard, with lid**	Flat	TC-treated	Yes	5	50
3590	Standard	Flat	High binding	No	1	100
3591	Standard	Flat	Not treated	No	1	50
3595	Standard, with lid**	Flat	TC-treated	Yes	1	50
3596	Standard, with lid	Flat	TC-treated	Yes	1	50
3598	Standard, with lid	Flat	TC-treated	Yes	5	100
3599	Standard, with lid	Flat	TC-treated	Yes	1	100
3628	Standard, with lid	Flat	TC-treated	Yes	20	100
3641	Standard	Flat	Nonbinding	No	25	100
3841	Standard, with lid	Flat	Poly-D-Lysine	Yes***	20	100
3997	Standard, with lid	Flat	TC-treated	Yes	10	50
9017	Standard	Flat	Not treated	No	25	100
9018	Standard	Flat	High binding	No	25	100
3690	Half Area	Flat	High binding	No	25	100
3695	Half Area	Flat	Not treated	No	25	100
3696	Half Area, with lid	Flat	TC-treated	Yes	1	50
3697	Half Area, with lid	Flat	TC-treated	Yes	20	100
3368	Standard	Easy Wash	Not treated	No	25	100
3369	Standard	Easy Wash	High binding	No	25	100

\* Processed to improve hydrophilicity for hemagglutination and similar assays.

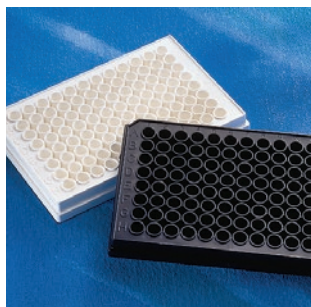
\*\* Special low evaporation lid.

\*\*\* Aseptically manufactured.

### Corning CellBIND® Surface for Optimizing Cell-based Assay Performance

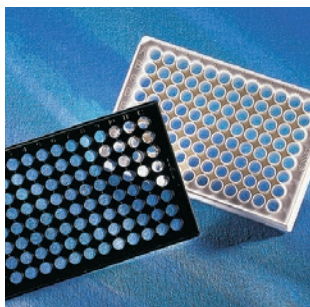
- ▶ Available in 96- and 384-well black clear bottom microplates and 96-well clear solid microplates
- ▶ Surface treatment provides consistent cell attachment and may improve attachment of difficult-to-attach cell lines.
- ▶ Not a coating; requires no special handling, and is stable at room temperature
- ▶ Sterile
- ▶ Nonpyrogenic

### Corning® 96-well Solid Black and White Polystyrene Microplates



- ▶ Designed to reduce well-to-well cross-talk
- ▶ White microplates enhance luminescent signals and have low background luminescence.
- ▶ Black microplates have low background fluorescence and minimize light scattering.

Cat. No.	Format	Color	Well Bottom	Surface Treatment	Sterile	Qty/Pk	Qty/Cs
3605	Standard	White	Round	Nonbinding	No	25	100
3789	Standard	White	Round	Not treated	No	25	100
3792	Standard	Black	Round	Not treated	No	25	100
4590	Standard	Black	Round	Carbo-Bind	No	1	50
4591	Standard	Black	Round	Ultra-Low Attachment	Yes	1	24
3362	Standard	White	Flat	TC-treated	Yes	25	100
3600	Standard	White	Flat	Nonbinding	No	25	100
3650	Standard	Black	Flat	Nonbinding	No	25	100
3912	Standard	White	Flat	Not treated	No	25	100
3915	Standard	Black	Flat	Not treated	No	25	100
3916	Standard, with lid	Black	Flat	TC-treated	Yes	20	100
3917	Standard, with lid	White	Flat	TC-treated	Yes	20	100
3922	Standard	White	Flat	High binding	No	25	100
3925	Standard	Black	Flat	High binding	No	25	100
3990	Standard	White	Flat	Nonbinding	No	5	25
3991	Standard	Black	Flat	Nonbinding	No	5	25
3642	Half area	White	Flat	Nonbinding	No	25	100
3686	Half area	Black	Flat	Nonbinding	No	25	100
3688	Half area, with lid	White	Flat	TC-treated	Yes	20	100
3693	Half area	White	Flat	Not treated	No	25	100
3694	Half area	Black	Flat	Not treated	No	25	100
3875	Half area, with lid	Black	Flat	TC-treated	Yes	20	100
3992	Half area	White	Flat	Nonbinding	No	5	25
3993	Half area	Black	Flat	Nonbinding	No	5	25



### Tip for Improving Optical Performance in Fluorescent Assays

Corning® Special Optics 96-well microplates have black walls with ultra-thin, clear bottoms for sharp, clear images and minimal background in fluorescent assays.

## Corning® 96-well Clear Bottom Black and White Polystyrene Microplates

- ▶ Bottoms are 60% thinner than conventional polystyrene microplates, resulting in lower background fluorescence and enabling readings down to 340 nm.
- ▶ Opaque walls prevent well-to-well cross-talk.
- ▶ Optically clear flat bottom permits direct microscopic viewing.

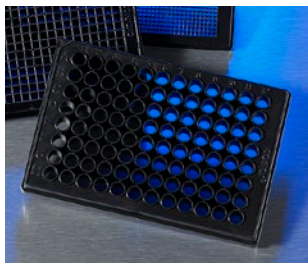
Cat. No.	Format	Color	Well Bottom	Surface Treatment	Sterile	Qty/Pk	Qty/Cs
3340	Standard, with lid	Black	Flat	Corning CellBIND®	Yes	5	50
3372	Standard, with lid	Black	Flat	Poly-D-Lysine	Yes	10	50
3601	Standard	Black	Flat	High binding	No	25	100
3603	Standard, with lid	Black	Flat	TC-treated	Yes	1	48
3604	Standard	White	Flat	Nonbinding	No	25	100
3610	Standard, with lid	White	Flat	TC-treated	Yes	1	48
3614	Special Optics	Black	Flat	TC-treated	Yes	25	100
3615	Special Optics	Black	Flat	Not treated	No	25	100
3631	Standard	Black	Flat	Not treated	No	25	100
3632	Standard	White	Flat	Not treated	No	25	100
3651	Standard	Black	Flat	Nonbinding	No	25	100
3720	Special Optics	Black	Flat	TC-treated	Yes	5	25
3843	Standard, with lid	White	Flat	Poly-D-Lysine	Yes*	20	100
3842	Standard, with lid	Black	Flat	Poly-D-Lysine	Yes*	20	100
3903	Standard, with lid	White	Flat	TC-treated	Yes	20	100
3904	Standard, with lid	Black	Flat	TC-treated	Yes	20	100
4594	Standard	Black	Flat	Fibronectin	No	20	100
3995	Standard	White	Flat	Nonbinding	No	5	25
3809	Standard	White	Flat	Corning CellBIND	Yes	20	100
3721	Half area	Black	Flat	TC-treated	Yes	5	25
3880	Half area	Black	Flat	Not treated	No	25	100
3881	Half area	Black	Flat	Nonbinding	No	25	100
3882	Half area, with lid	Black	Flat	TC-treated	Yes	20	100
3883	Half area	White	Flat	Not treated	No	25	100
3884	Half area	White	Flat	Nonbinding	No	25	100
3885	Half area, with lid	White	Flat	TC-treated	Yes	20	100
3886	Half area	White	Flat	TC-treated	Yes	25	100
3887	Half area	Black	Flat	TC-treated	Yes	25	100
3994	Half area	White	Flat	Nonbinding	No	5	25

\*Aseptically manufactured.

For other surface-treated microplates, see the **Extracellular Matrices, Biologically Coated Surfaces, and Permeable Support Inserts Product Selection Guide** (CLS-DL-AC-012).



### Corning® 96-well Multi-coated Microplates



- ▶ Corning 96-well multi-coated microplate allows you access to six different surface treatments on a single plate.
- ▶ Useful when determining the correct surface for your assay requirements
- ▶ Single surface microplates can then be used for the full screen or experiment.
- ▶ Surfaces include Poly-D-Lysine, collagen type I, gelatin, fibronectin, and tissue culture-treated.

Cat. No.	Description	Lid	Qty/Cs
3823	96-well, black with clear bottom, multi-coated microplate	Yes	10

### Corning 96-well Spheroid Microplates

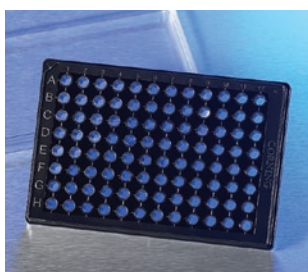


With their novel and proprietary design, these microplates are ideal for generating and analyzing 3D multicellular spheroids in the same microplate. The Ultra-Low Attachment surface enables uniform and reproducible 3D multicellular spheroid formation. The black opaque microplate body shields each optically clear, round bottom well from well-to-well cross-talk.

- ▶ Optically clear round bottom with black opaque microplate body
- ▶ Covalent attachment of Ultra-Low Attachment surface to reduce cellular adhesion to well surface
- ▶ Novel well geometry aids in the generation of uniform, single spheroids across all wells, which enables automated visualization.
- ▶ Unique design shields each well to minimize well-to-well cross-talk.
- ▶ You can culture and assay spheroids in the same microplate, without the need for transfer to a new microplate.

Cat. No.	Description	Qty/Pk	Qty/Cs
4520	96-well spheroid microplate, black, clear bottom, round, Ultra-Low Attachment surface, sterile	10	50
4515	96-well spheroid microplate, black, clear bottom, round, Ultra-Low Attachment surface, sterile	5	5

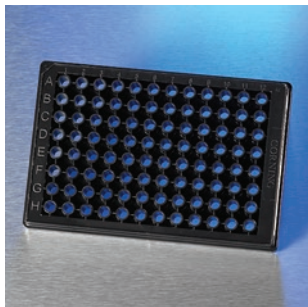
### Corning 96-well High Content Screening Microplates with Film Bottom



With an ultra-clear film, a 127  $\mu\text{m}$  film thickness, and an unprecedented flatness (whole plate and intra-well), these microplates are ideal for high resolution cellular imaging applications. The microplate and film are manufactured from cyclic olefin copolymer (COC), which has excellent optical properties, chemical resistance, and mechanical stability.

- ▶ COC material allows for broad chemical resistance (including DMSO) and high mechanical stability.
- ▶ Ultra-clear film with 127  $\mu\text{m}$  thickness is well suited for imaging microscopy.
- ▶ Inter- and intra-well film bottom flatness within 50  $\mu\text{m}$  and 10  $\mu\text{m}$ , respectively, optimized for high content applications
- ▶ Low auto-fluorescence and birefringence

Cat. No.	Description	Qty/Pk	Qty/Cs
4680	Half area, film bottom, black, clear bottom, flat, with lid, TC-treated, sterile	4	16



### Corning® 96-well High Content Screening Microplates with Glass Bottom

High optical quality, glass bottom, black microplates are ideal for performing high content cell-based assays using imaging systems. The glass bottom provides a flat and optically clear surface that reduces autofocus time, increases throughput, and is ideal for cell growth.

- ▶ High optical quality and scratch resistant glass
- ▶ Glass bottom thickness of 200 µm is well suited for imaging microscopy.
- ▶ Bottom flatness <50 µm to ensure planarity for imaging devices
- ▶ Low background fluorescence and minimal cross-talk provides the highest possible optical quality for cell-based assays.
- ▶ Half area 96-well microplate reduces reagent consumption.

Cat. No.	Description	Sterile	Qty/Pk	Qty/Cs
4580	96-well half area glass bottom microplate, uncoated, with lid	Yes	1	10
4582	96-well half area, glass bottom microplate, Collagen coated, with lid	No	1	10
4584	96-well half area, glass bottom microplate, Fibronectin coated, with lid	No	1	10
4586	96-well half area, glass bottom microplate, Poly-D-Lysine coated, with lid	No	1	10

### Corning 96-well UV Microplates

The Corning 96-well UV microplate has a UV-transparent well bottom and is ideal for determining protein and/or nucleic acid concentrations.

- ▶ RNase-/DNase-free
- ▶ UV-transparent bottom is molded directly to an acrylic base for greater strength and maximum leak resistance.
- ▶ Total well volume: flat bottom – 360 µL; recommended working volume of 75 µL to 200 µL
- ▶ UV half area microplate has well volume of 205 µL; working volume of 25 µL to 125 µL.
- ▶ Allows UV absorbance readings with low background, especially at 260 nm to 280 nm
- ▶ Lids are available separately.

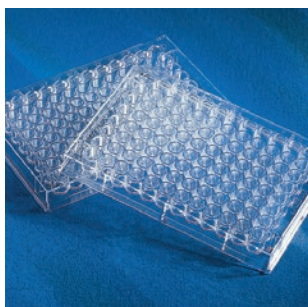
Refer to the Microplate Accessories section for information about microplate accessory products, including sealing tapes and mats.

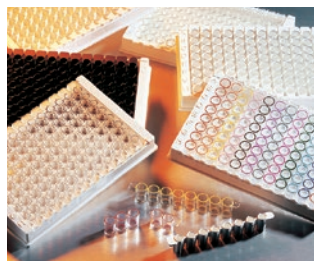
Cat. No.	Format	Well Bottom	Sterile	Qty/Pk	Qty/Cs
3635	Standard	Flat	No	25	50
3679	Half area	Flat	No	25	50

### Corning 96-well Clear Flexible Vinyl (PVC) Microplates

- ▶ Not treated PVC microplates are economical microplates for solution-based assays, serial dilutions, and general storage applications.
- ▶ Well volume of 250 µL (260 µL for V-bottom); working well volume of 50 µL to 150 µL
- ▶ Lids are not available.

Cat. No.	Format	Well Bottom	Sterile	Qty/Pk	Qty/Cs
2797	Standard	Round	No	25	100
2897	Standard	V	No	25	100
2595	Standard	Flat	No	25	100





### Low Volume Stripwell Microplates

Big cost savings!

- ▶ Save 70% or more on antibody costs
- ▶ Save 50% or more on reagent costs

#### Features:

- ▶ Total well volume: 190  $\mu$ L
- ▶ Recommended working volume: 75 to 125  $\mu$ L
- ▶ Same height/path length as a standard strip
- ▶ Standard 96-well center-to-center spacing

### Custom Colors

	White		Dark blue
	Light green		Light blue
	Teal		Dark green
	Yellow		Purple
	Red		Orange
	Pink		Black
	Brown		Grey

## Corning® 96-well Polystyrene Stripwell™ Microplates

Corning Stripwell microplates are designed for *in vitro* diagnostic assays. The flat bottom strips are designed to easily break apart and are pre-assembled in an “egg-crate” style strip holder that allows each individual well to be positioned back into the microplate once broken.

- ▶ Stripwell microplates have 96-well flat bottom polystyrene format.
- ▶ Low volume and standard Stripwell microplates have well volumes of 190  $\mu$ L and 360  $\mu$ L, respectively.
- ▶ 1 x 8 strips are designed to fit only one way into the strip holder, eliminating the chance of misorientation.

Refer to the Microplate Accessories section for information about microplate accessory products, including sealing tapes and mats.

### Low Volume Stripwell Microplates

Cat. No.	Color	Binding Property	Qty/Pk	Qty/Cs
2480	Clear	Medium	25	100
2481	Clear	High	25	100
2482	Black	Medium	25	100
2483	Black	High	25	100
2484	White	Medium	25	100
2485	White	High	25	100

### Standard Stripwell Microplates

Cat. No.	Color	Binding Property	Qty/Pk	Qty/Cs
2592*	Clear	High	25	100
2593*	Clear	Medium	25	100
2580**	Clear	High	200	800
9102***	Clear	TC-treated, sterile	1	50
3913	White	Medium	25	100
3923	White	High	25	100
3914	Black	Medium	25	100
3924	Black	High	25	100

\*Product has a certified medium or high bind surface chemistry.

\*\*Individual 1 x 8 strips without frame, bulk packed.

\*\*\*Microplates individually packaged with lid.

### Surface Modified Stripwell Microplates, Clear

Cat. No.	Description	Surface Chemistry	Well Volume ( $\mu$ L)	Qty/Pk	Qty/Cs
2506	DNA-BIND® surface	N-oxysuccinimide	360	1	50
2508	Carbo-BIND surface	Hydrazide	360	1	50
2510	Sulfhydryl-BIND surface	Maleimide	360	1	50

### Strip Accessories

Cat. No.	Description	Sterile	Qty/Pk	Qty/Cs
2572	Strip holder “egg crate”	No	5	20
2578	96-well strip ejector	No	5	5

### Color Coding

Corning offers customers the ability to color code their Stripwell microplates. Currently there are 14 colors available from which to choose on both our certified high and medium binding Stripwell microplates. In addition to the clear strip, two other colors can be applied to the same microplate. Color-coded Stripwell microplates are made to order and minimum order requirements do apply. If interested, please contact your local Corning Account Manager.





## Corning® 96-well Polypropylene Microplates and Storage Blocks

Corning polypropylene microplates offer both small volume and large volume (blocks) well formats to meet assay and storage requirements.

- ▶ Flat, round, or V-shaped well bottom
- ▶ Features uniform skirt heights for greater robotic gripping surface
- ▶ Solvent resistant polypropylene provides compatibility with many common organic solvents (e.g., DMSO, ethanol, methanol)
- ▶ RNase-/DNase-free
- ▶ Available sterile or nonsterile

Refer to the Microplate Accessories section for information about microplate accessory products, including sealing tapes and mats.

### 96-well Polypropylene Microplate Dimensions and Well Volumes

Format/Well Shape	Total Well Volume (µL)	Well Depth (mm)	Well Diameter (mm)	Plate Dimensions (L x W x H) (mm)
96-well flat bottom	360	10.67	6.86	127.76 x 85.48 x 14.22
96-well round bottom	360	11.3	6.86	127.76 x 85.48 x 14.22
96-well V-bottom	320	11.13	6.86	127.76 x 85.48 x 14.22
96-well V-bottom, expanded volume	450	12.43	8.50	127.76 x 85.48 x 14.35
96-well 0.5 mL block	500	25.3	6.86	127.76 x 85.48 x 27.18
96-well 1 mL block	1000	39.9	6.86	127.76 x 85.09 x 41.66
96-well 2 mL block	2000	42.04	8.13	128.27 x 85.85 x 43.94

### 96-well Polypropylene Microplate

Cat. No.	Format	Color	Well Bottom	Sterile	Qty/Pk	Qty/Cs
3355	Standard	White	Round	No	25	100
3356	Standard	Black	Round	No	25	100
3359	Standard*	Clear	Round	Yes	25	100
3365	Standard*	Clear	Round	No	25	100
3364	Standard	Clear	Flat	No	25	100
3343	Expanded volume	Clear	V	No	10	50
3344	Expanded volume	Clear	V	Yes	10	50
3357	Standard	Clear	V	Yes	25	100
3363	Standard	Clear	V	No	25	100

\*Upgraded features include virgin clear polypropylene, lowered perimeter ridge for improved sealing, and added rigidity and dimensional stability for improved automated handling.

### 96-well Polypropylene Storage Block

Cat. No.	Format	Well Volume (mL)	Well Bottom	Sterile	Qty/Pk	Qty/Cs
3958	1 mL round well block	1	Round	Yes	5	25
3959	1 mL round well block	1	Round	No	5	100
3956	0.5 mL round well block	0.5	V	Yes	10	50
3957	0.5 mL round well block	0.5	V	No	10	100
3960	2 mL square well block	2	V	Yes	5	25
3961	2 mL square well block	2	V	No	5	100

For other surface-treated microplates, see the **Extracellular Matrices, Biologically Coated Surfaces, and Permeable Support Inserts Product Selection Guide** (CLS-DL-AC-012).

## Corning® 384-well Microplates



### Low Volume 384-well Solid Round Bottom Microplates

Unique well design for optimal assay performance:

- ▶ Raised well bottom for higher sensitivity
- ▶ Raised rim for decreased wicking and contamination
- ▶ Round bottom for better Z factor and minimized trapped air
- ▶ Conical well molded in the shape of a light cone for efficiency

Corning offers a variety of 384-well microplates for high throughput assays and storage. Microplates are grouped by application:

- ▶ 384-well assay microplates
  - General assays – Not treated, nonbinding surface, high binding, and UV microplates
  - Cell-based assays – Tissue culture-treated, Corning® CellBIND® surface, Ultra-Low Attachment surface, and Poly-D-Lysine coated polystyrene microplates
- ▶ 384-well polypropylene storage microplates

For information on 384-well microplates for PCR and genomics, see the **Corning Genomics Product Selection Guide (CLS-MP-009)**.

Corning offers a wide variety of assay microplates. They are organized into five groups:

- ▶ Clear polystyrene microplates
- ▶ Solid black and white polystyrene microplates
- ▶ Black and white clear bottom polystyrene microplates
- ▶ UV microplates

For assays performed in reduced volumes, Corning 384-well low volume polystyrene microplates are available in solid round bottom and in black clear bottom formats.

384-well Microplate Types	Well Bottom	Total Well Volume (µL)	Recommended Working Volume (µL)
Standard	Flat	112	20 to 80
Low Volume, solid	Round	35	5 to 20
Low Volume, clear bottom	Flat	50	5 to 40

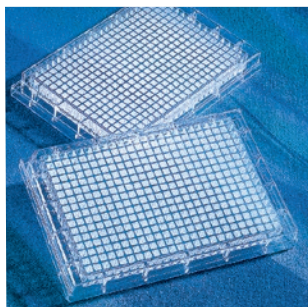
Corning 384-well polystyrene microplates have microplate dimensions (length x width x height) of 127.76 mm x 85.48 mm x 14.22 mm that meet proposed industry standards.

### 384-well Geometry and Dimensions



Corning 384-well microplates for cell culture include tissue culture-treated, Corning CellBIND surface, and Poly-D-Lysine coated microplates. The tissue culture-treated microplates have the same surface treatment used on other Corning cell culture vessels, while the Poly-D-Lysine treatment improves attachment of anchorage-dependent cells. The Corning CellBIND surface treatment can provide improved consistency and even cell attachment.

For microplate selection process and additional information, see the **Corning® and Falcon® Microplates Selection Guide (CLS-C-DL-MP-014)**.



### Corning® 384-well Clear Polystyrene Microplates

- ▶ Total well volume of 112 µL; working well volume of 20 µL to 80 µL
- ▶ Cell culture microplates are sterile and nonpyrogenic.
- ▶ The 384-well Universal Optics nonbinding surface (NBS) microplate is manufactured using an advanced polymer with high clarity and improved chemical resistant properties.
- ▶ Lids available as indicated. (Information on lids and other microplate accessories can be found beginning on page K19).

Cat. No.	Format	Well Bottom	Surface Treatment	Sterile	Qty/ Pk	Qty/ Cs
3640	Standard	Flat	Nonbinding	No	25	100
3640BC	Standard, with bar code labels	Flat	Nonbinding	No	25	100
3844	Standard, with lid	Flat	Poly-D-Lysine	Yes*	20	100
3847	Standard, with lid	Flat	Fibronectin	No	20	100
3680	Standard, with lid	Flat	Not treated	Yes	20	100
3700	Standard	Flat	High Bind	No	25	100
3701	Standard, with lid	Flat	TC-treated	Yes	20	100
3702	Standard	Flat	Not treated	No	25	100
3702BC	Standard, with bar code labels	Flat	Not treated	No	25	100
3723	Universal Optics (standard)	Flat	Nonbinding	No	25	100

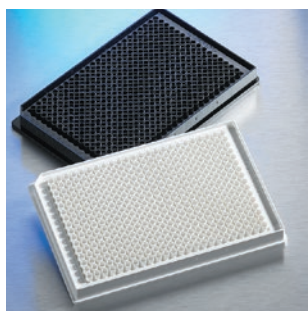
\*Aseptically manufactured.

### Corning 384-well Solid Black and White Polystyrene Microplates

Designed to reduce well-to-well cross-talk during fluorescent and luminescent assays.



384-well solid low flange microplates



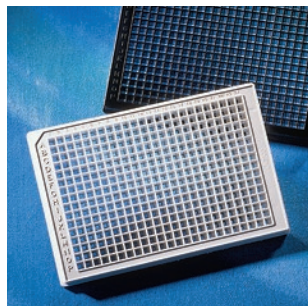
384-well low volume solid microplates

Cat. No.	Format	Color	Well Bottom	Surface Treatment	Sterile	Qty/ Pk	Qty/ Cs
3570	Solid white, with lid	White	Flat	TC-treated	Yes	10	50
3571	Solid black, with lid	Black	Flat	TC-treated	Yes	10	50
3572	Standard, low flange	White	Flat	Not treated	No	10	50
3573	Standard, low flange	Black	Flat	Not treated	No	10	50
3574	Standard, low flange	White	Flat	Nonbinding	No	10	50
3574BC	Standard, low flange, with bar code labels	White	Flat	Nonbinding	No	10	50
3575	Standard, low flange	Black	Flat	Nonbinding	No	10	50
3575BC	Standard, low flange, with bar code labels	Black	Flat	Nonbinding	No	10	50
3820	Low volume	Black	Flat	Nonbinding	No	10	50
3821	Low volume	Black	Flat	Not treated	No	10	50
3821BC	Low volume, with bar code labels	Black	Flat	Not treated	No	10	50
3822	Low volume, with lid	Black	Flat	TC-treated	Yes	10	50
3824	Low volume	White	Flat	Nonbinding	No	10	50
3824BC	Low volume, with bar code labels	White	Flat	Nonbinding	No	10	50
3826	Low volume, with lid	White	Flat	TC-treated	Yes	10	50
3826BC	Low volume, with lid, bar code labels	White	Flat	TC-treated	Yes	10	50

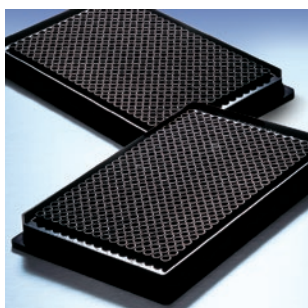


## Corning® 384-well Clear Bottom Black and White Polystyrene Microplates

Suited for fluorescent and luminescent assays using either top or bottom detection microplate readers.



384-well clear bottom black and white microplates



384-well low volume black clear bottom microplates

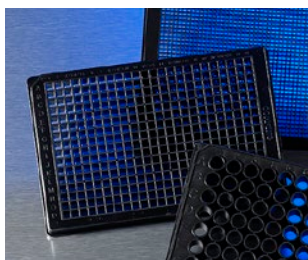
Cat. No.	Format	Color	Well Bottom	Surface Treatment	Sterile	Qty/ Pk	Qty/ Cs
3540	Low volume	Black	Flat	Not treated	No	10	50
3542	Low volume, clear bottom, with lid	Black	Flat	TC-treated	Yes	10	50
3544	Low volume	Black	Flat	Nonbinding	No	10	50
3643	Low volume	Black	Flat	Poly-D-Lysine	Yes	10	50
3653	Standard	White	Flat	Nonbinding	No	25	100
3846	Clear bottom, with lid	White	Flat	Poly-D-Lysine	Yes*	20	100
3845	Clear bottom, with lid	Black,	Flat	Poly-D-Lysine	Yes*	20	100
3655	Standard	Black	Flat	Nonbinding	No	25	100
3683	Clear bottom, with lid	Black	Flat	Corning CellBIND®	Yes	10	50
3706	Standard	White	Flat	Not treated	No	25	100
3707	Clear bottom, with lid	White	Flat	TC-treated	Yes	20	100
3711	Standard	Black	Flat	Not treated	No	25	100
3712	Clear bottom, with lid	Black	Flat	TC-treated	Yes	20	100
3827	Clear bottom, with lid	Black	Flat	Ultra-Low Attachment	Yes	20	100
3848	Clear bottom, with lid	Black	Flat	Fibronectin	No	20	100
3819	Clear bottom, with lid	Black	Flat	Collagen	No	20	100
3985	Optical Imaging, with clear bottom and lid	Black	Flat	TC-treated	Yes	20	100
3985BC	Optical Imaging, clear bottom, with lid and bar code labels	Black	Flat	TC-treated	Yes	20	100

\*Aseptically manufactured.

## Corning 384-well Multi-coated Microplates

- ▶ Corning 384-well multi-coated microplate allows you access to six different surface treatments on a single plate.
- ▶ Useful when determining the correct surface for your assay requirements
- ▶ Single surface microplates can then be used for the full screen or experiment.
- ▶ Surfaces include Poly-D-Lysine, collagen type I, gelatin, fibronectin, and tissue culture-treated.

Cat. No.	Description	Lid	Qty/Cs
3828	384-well, black with clear bottom, multi-coated microplate	Yes	10



For other surface-treated microplates, see the **Extracellular Matrices, Biologically Coated Surfaces, and Permeable Support Inserts Product Selection Guide (CLS-DL-AC-012)**.



### Corning® 384-well Spheroid Microplates

With their novel and proprietary design, these microplates are ideal for generating and analyzing 3D multicellular spheroids in the same microplate. The Ultra-Low Attachment surface enables uniform and reproducible 3D multicellular spheroid formation. The black opaque microplate body shields each optically clear, round bottom well from well-to-well cross-talk.

- ▶ Optically clear round bottom with black opaque microplate body
- ▶ Covalent attachment of Ultra-Low Attachment surface to reduce cellular adhesion to well surface
- ▶ Novel well geometry aids in the generation of uniform, single spheroids across all wells, which enables automated visualization.
- ▶ Unique design shields each well to minimize well-to-well cross-talk.
- ▶ You can culture and assay spheroids in the same microplate without the need for transfer to a new microplate.

Cat. No.	Description	Qty/Pk	Qty/Cs
3830	Spheroid microplate, black with clear bottom, round, Ultra-Low Attachment surface, sterile	10	50
4516	Spheroid microplate, black with clear bottom, round, Ultra-Low Attachment surface, sterile	5	5

### Corning 384-well High Content Screening Microplates with Film Bottom

With an ultra-clear film, a 127 µm film thickness, and an unprecedented flatness (whole plate and intra-well), these microplates are ideal for high resolution cellular imaging applications. The microplate and film are manufactured from cyclic olefin copolymer (COC), which has excellent optical properties, chemical resistance, and mechanical stability.

- ▶ COC material allows for broad chemical resistance (including DMSO) and high mechanical stability.
- ▶ Ultra-clear film with 127 µm thickness is well suited for imaging microscopy.
- ▶ Inter- and intra-well film bottom flatness within 50 µm and 10 µm, respectively, optimized for high content applications
- ▶ Low auto-fluorescence and birefringence

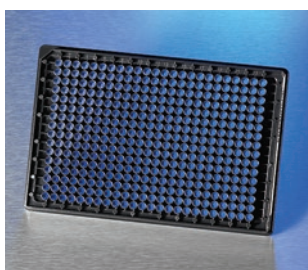
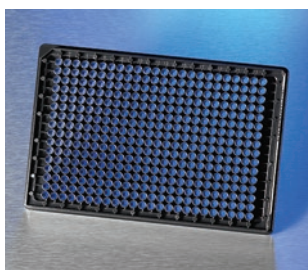
Cat. No.	Description	Qty/Pk	Qty/Cs
4681	Film bottom, with lid, black with clear bottom, flat, TC-treated, sterile	10	20

### Corning 384-well High Content Screening Microplates with Glass Bottom

High optical quality, glass bottom black microplates are ideal for performing high-content cell-based assays using imaging systems. The glass bottom provides a flat and optically clear surface that reduces autofocus time, increases throughput, and is ideal for cell growth.

- ▶ High optical quality and scratch resistant glass
- ▶ Glass bottom thickness of 200 µm is well suited for imaging microscopy.
- ▶ Bottom flatness <50 µm to ensure planarity for imaging devices
- ▶ Low background fluorescence and minimal cross-talk provide the highest possible optical quality for cell-based assays.

Cat. No.	Description	Sterile	Qty/Pk	Qty/Cs
4581	384-well glass bottom microplate, uncoated, with lid	Yes	1	10
4583	384-well glass bottom microplate, Collagen coated, with lid	No	1	10
4585	384-well glass bottom microplate, Fibronectin coated, with lid	No	1	10
4587	384-well glass bottom microplate, Poly-D-Lysine coated, with lid	No	1	10



### Corning® 384-well Polypropylene Storage Microplates



Corning polypropylene microplates offer both small volume and large volume (blocks) well formats to meet assay and storage requirements.

Well bottom	Total Well Volume (µL)	Well Depth (mm)	Well Diameter (mm)	Plate Dimensions (L x W x H) (mm)
Round bottom	95	11.56	3.63	127.76 x 85.48 x 14.22
Round bottom block	180	25.11	3.63	127.76 x 85.48 x 27.81
V-bottom block	240	22.31	3.30*	127.76 x 85.48 x 24.73

\*Width of square well.

- ▶ Resistant to many common organic solvents (e.g., DMSO, ethanol, methanol)
- ▶ Black polypropylene microplate (Cat. No. 3658) is ideal for fluorescent assays requiring solvent resistance
- ▶ RNase-/DNase-free

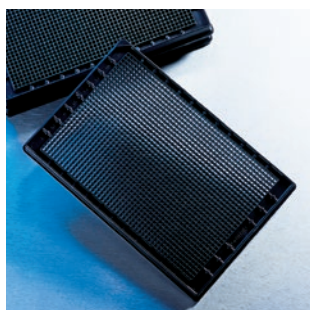
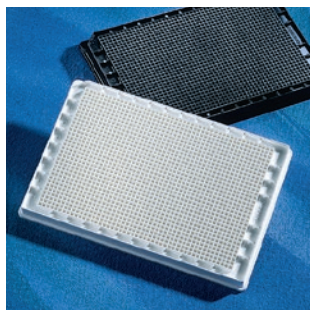
Refer to the Microplate Accessories section for information about microplate accessory products, including sealing tapes and mats.

Cat. No.	Format	Well Bottom	Well Volume (µL)	Sterile	Qty/Pk	Qty/Cs
3656	Standard, clear	Round	95	Yes	25	100
3657	Standard, clear	Round	95	No	25	100
3658	Standard, black	Round	95	No	25	100
3964	384-well block, clear	Round	180	Yes	5	25
3965	384-well block, clear	Round	180	No	5	100
3342	384-well block, clear	V	240	Yes	5	50
3347	384-well block, clear	V	240	No	5	50



## Corning® 1536-well Microplates

Corning 1536-well microplates are our highest density microplates available for high throughput screening. The microplates conform to standard microplate footprint and dimensions. These microplates are offered in solid black and white polystyrene, with round or flat bottoms, and in black clear bottom formats.



### Corning 1536-well Standard Polystyrene Microplates

- ▶ Total well volume of 10  $\mu$ L for round well microplates and 12.8  $\mu$ L for flat bottom microplates
- ▶ Recommended working volume up to 8  $\mu$ L
- ▶ Round well bottom for reduced air entrapment and improved CV values and Z factor
- ▶ Raised well bottom for higher sensitivity
- ▶ Flood reservoir on four sides to reduce instrument contamination
- ▶ Lids are available separately. Corning lid (Cat. No. 3098) is compatible with these microplates.

Refer to the Microplate Accessories section for information about microplate accessory products, including sealing tapes and mats.

### 1536-well Polystyrene Microplates

Cat. No.	Format	Color	Well Bottom	Surface Treatment	Sterile	Qty/Pk	Qty/Cs
3936	Standard	Black	Round	Not treated	No	10	50
3937	Standard	White	Round	Not treated	No	10	50
3724	Standard	Black	Flat	Not treated	No	10	50
3724BC	Standard, with bar code labels	Black	Flat	Not treated	No	10	50
3725	Standard	White	Flat	Not treated	No	10	50
3725BC	Standard, with bar code labels	White	Flat	Not treated	No	10	50
3726	Standard, with lid	Black	Flat	TC-treated	Yes	10	50
3726BC	Standard, with lid, bar code labels	Black	Flat	TC-treated	Yes	10	50
3727	Standard, with lid	White	Flat	TC-treated	Yes	10	50
3727BC	Standard, with lid, bar code labels	White	Flat	TC-treated	Yes	10	50
3728	Standard	Black	Flat	Nonbinding	No	10	50
3728BC	Standard, with lid, bar code labels	Black	Flat	Nonbinding	No	10	50
3729	Standard	White	Flat	Nonbinding	No	10	50
3729BC	Standard, with bar code labels	White	Flat	Nonbinding	No	10	50
3731	Standard	White	Flat	Corning CellBIND®	Yes	10	50
3731BC	Standard, with bar code labels	White	Flat	Corning CellBIND	Yes	10	50
3549	Standard, with lid	White	Flat	Collagen	No	10	50
7246	High base, solid, without logo or lettering	Black	Flat	Not treated	No	10	50
7247	High base, solid, without logo or lettering	White	Flat	Not treated	No	10	50
7248	High base, solid, without logo or lettering	Black	Flat	TC-treated	Yes	10	50
7249	High base, solid, without logo or lettering	White	Flat	TC-treated	Yes	10	50
3891	Clear bottom	Black	Flat	Not treated	No	10	50

*Continued on next page*

For microplate selection process, see the **Corning® and Falcon® Microplates Selection Guide** (CLS-C-DL-MP-014).

**1536-well Polystyrene Microplates (Continued)**

Cat. No.	Format	Color	Well Bottom	Surface Treatment	Sterile	Qty/Pk	Qty/Cs
3891BC	Clear bottom, with bar code labels	Black	Flat	Not treated	No	10	50
3893	Clear bottom, with lid	Black	Flat	TC-treated	Yes	10	50
3893BC	Clear bottom, with lid, bar code labels	Black	Flat	TC-treated	Yes	10	50
3895	Clear bottom	Black	Flat	Nonbinding	No	10	50

**1536-well Low Base Polystyrene Microplates**

Cat. No.	Format	Color	Well Bottom	Surface Treatment	Sterile	Qty/Pk	Qty/Cs
3835	Low base, clear bottom, without logo or lettering	Black	Flat	Not treated	No	20	100
3836	Low base, clear bottom, without logo or lettering	Black	Flat	TC-treated	Yes	20	100
3833	Low base, clear bottom, without logo or lettering	Black	Flat	Corning® CellBIND®	Yes	20	100
3831	Low base, clear bottom	Black	Flat	Not treated	No	10	50
3838	Low base, clear bottom	Black	Flat	TC-treated	Yes	10	50
3838BC	Low base, clear bottom, with lid, bar code labels	Black	Flat	TC-treated	Yes	10	50
3832	Low base, clear bottom	Black	Flat	Corning CellBIND	Yes	10	50
3832BC	Low base, clear bottom, with lid, bar code labels	Black	Flat	Corning CellBIND	Yes	10	50

**Corning 1536-well Echo™ Qualified Microplate**

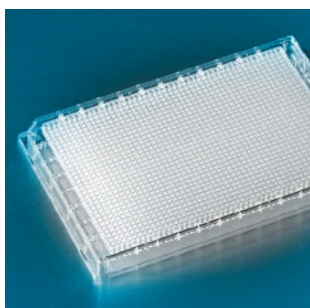
- ▶ Corning Labcyte joint development delivers optimal acoustic performance on the Labcyte Echo 550 Compound Reformatter.
- ▶ Microplates are lot tested to meet performance specifications.
- ▶ Enhanced flatness provides low intra- and inter-plate CV values.
- ▶ Low flange base is designed for bar code customization and robotic handling.

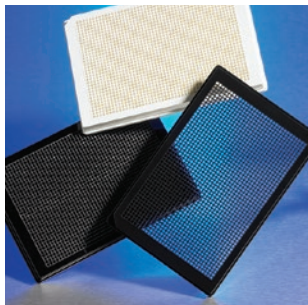
**Corning 1536-well Echo Qualified Microplates**

Cat No.	Description	Well Bottom	Surface Treatment	Sterile	Qty/Pk	Qty/Cs
3730	1536-well Clear COC	Flat	Not treated	No	10	50

COC = Cyclic olefin copolymer.

For other surface-treated microplates, see the **Extracellular Matrices, Biologically Coated Surfaces, and Permeable Support Inserts Product Selection Guide** (CLS-DL-AC-012).





### Corning® 1536-well Cyclic Olefin Copolymer (COC) Microplates

- ▶ Cyclic Olefin Copolymer material
- ▶ 127 µm film thickness
- ▶ 1536-well low base, clear bottom microplates (black or white with clear bottom)
- ▶ Bar coded
- ▶ Custom bar codes available for compatibility with the Kalypsys system and with UHTS systems
- ▶ Low auto-fluorescence
- ▶ Broad chemical resistance including DMSO and alcohol
- ▶ High mechanical stability
- ▶ Optimized for flatness and uniformity
- ▶ Low birefringence
- ▶ Coated in a highly controlled, aseptic manufacturing environment to ensure lot-to-lot consistency, assay reproducibility, and contamination control

Cat. No.	Description	Surface Treatment	Sterile	Qty/Pk	Qty/Cs
4560	Black with clear bottom	Not treated	No	20	100
4561	Black with clear bottom	TC-treated	Yes	20	100
4562	Black with clear bottom	Nonbinding	No	20	100
4563	Black with clear bottom	Corning CellBIND®	Yes	20	100
4564	Black with clear bottom	Poly-D-Lysine	No	20	100
4565	Solid black	Not treated	No	10	50
4566	Solid black	TC-treated	Yes	10	50
4567	Solid black	Nonbinding	No	10	50
4570	Solid white	Not treated	No	10	50
4571	Solid white	TC-treated	Yes	10	50
4572	Solid white	Nonbinding	No	10	50

### Corning 1536-well Multi-coated Microplates

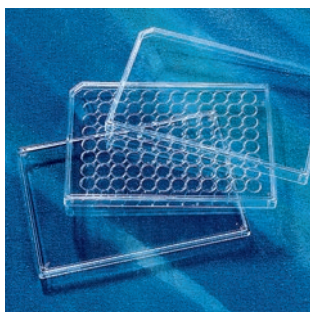
- ▶ Corning 1536-well multi-coated microplate allows you access to six different surface treatments on a single plate.
- ▶ Useful when determining the correct surface for your assay requirements
- ▶ Single surface microplates can then be used for the full screen or experiment
- ▶ Surfaces include Poly-D-Lysine, collagen type I, gelatin, fibronectin, and tissue culture-treated



Cat. No.	Description	Lid	Qty/Cs
3829	1536-well, black with clear bottom, multi-coated microplate	Yes	10

For other surface-treated microplates, see the **Extracellular Matrices, Biologically Coated Surfaces, and Permeable Support Inserts Product Selection Guide** (CLS-DL-AC-012).

## Microplate Accessories



### Microplate Lids

- ▶ All lids are made of rigid polystyrene except where indicated.
- ▶ All lids have a corner notch on the A1 corner (except where indicated) to correspond to the corner notches found on all Corning® microplates.
- ▶ The universal lid without a corner notch (Cat. No. 3098) does not need to be oriented in any particular direction to be placed on Corning microplates. The lid also has a shorter skirt than standard lids.
- ▶ The black universal lid (Cat. No. 3935) is suitable for fluorescent and other light-sensitive assays.
- ▶ The DMSO-resistant cyclic olefin copolymer (COC) lid (Cat. No. 3085) is tinted amber in color for light-sensitive assays and is 100% DMSO-resistant.

### Optimizing Sealing Conditions on Corning Polypropylene Microplates

Corning offers an application note (Corning Literature No. ALSP-AN-011) describing effective sealing with the ABgene® ALPS-100 automated microplate sealer.

Cat. No.	Description	Plate Compatibility	Sterile	Qty/Pk	Qty/Cs
3930	Low evaporation lid with corner notch and condensation rings	96-well microplates only (not 2 mL block)	Yes	1	100
3931	Low evaporation lid with corner notch and condensation rings	96-well microplates only (not 2 mL block)	Yes	25	50
3098	Universal lid without corner notch	All microplates	Yes	25	100
3099	Universal lid with corner notch	All microplates	Yes	25	50
3935	Black universal lid with corner notch	All microplates	Yes	25	50
3085	DMSO-resistant COC lid without corner notch	All microplates	No	25	50

### Storage Mats and Accessories

- ▶ Multiple formats are offered for specific and precise fit on 96-well and 384-well microplates and blocks.
- ▶ Storage mats (Cat. Nos. 3080 and 3083) are manufactured from DMSO-resistant EVA (ethyl vinyl acetate) polymer.
- ▶ RNase-/DNase-free
- ▶ Can be applied manually or with storage mat applicator (Cat. No. 3081)



Cat. No.	Description	Sterile	Qty/Pk	Qty/Cs
3080	Round well storage mat for 96-well microplates and blocks	No	25	100
3083	Square well storage mat for 2 mL square blocks	No	1	50
3346	Storage mat for expanded volume 96-well microplates	No	10	50
3341	Storage mat for 384-well V-bottom blocks	No	10	50
3081	Storage mat applicator	N/A	1	1



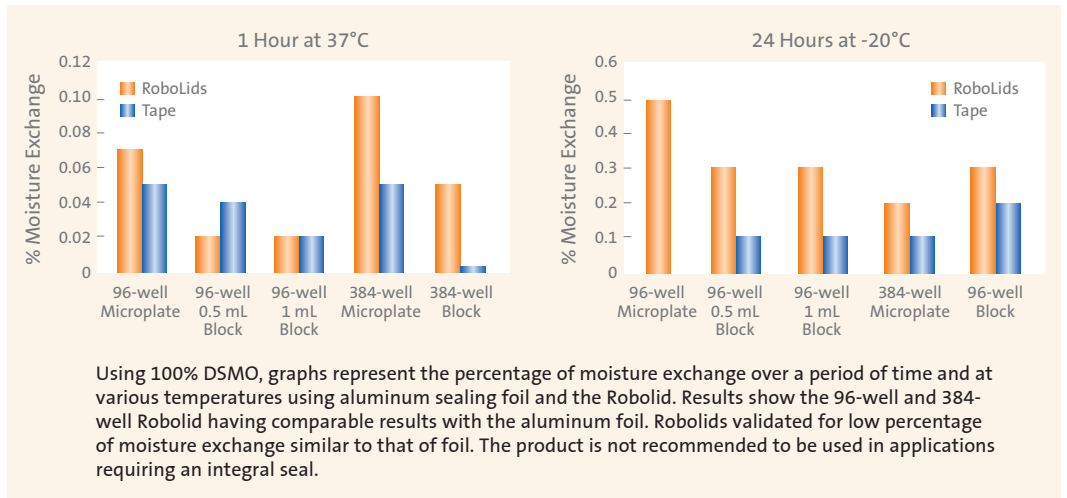


### Corning® Robolids

- ▶ Combines the sealing ability of a storage mat with the rigidity of a plastic lid
- ▶ Designed for repeated application and removal by automation and for preventing short-term evaporation
- ▶ Silicone sealing plugs for organic solvent resistance and low extractables
- ▶ Can be used manually or with automation

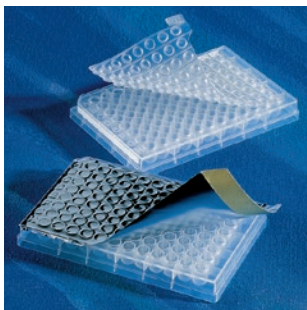
Cat. No.	Description	Sterile	Qty/Pk	Qty/Cs
3090	96-well Robolid with corner notch	No	25	50
3089	384-well Robolid with corner notch	No	25	50

### Moisture Exchange with Corning Robolids



### Sealing Tapes

- ▶ Easy application and removal for short- and long-term storage
- ▶ Provides tight seal to minimize evaporation and condensation
- ▶ Aluminum sealing tape (Cat. Nos. 6569 and 6570) is suitable for use between -80°C and 150°C, is not transparent, and is pierceable.
- ▶ Breathable sealing tape (Cat. No. 3345) allows gas exchange across the surface.
- ▶ Universal Optical sealing tape (Cat. No. 6575) is suitable for use between -70°C and 100°C, and is transparent.



### Sealing Tapes

Cat. No.	Description	Sterile	Qty/Pk	Qty/Cs
6524	Polyethylene sealing tape	No	100	100
6570	Aluminum sealing tape for 96-well microplates	No	100	100
6569	Aluminum sealing tape for 384-well microplates	No	100	100
3345	Breathable sealing tape	Yes	50	500
6575	Universal optical sealing tape	No	100	100

## Bar Code Customization



Generic bar code microplate

### Generic Bar Codes

Corning now offers a line of generic bar coded microplates to better meet the demands of your screening needs.

- ▶ No lead time: microplates are in stock and ready to ship
- ▶ Surface identification: The surface treatment of the microplate is identified in the human readable portion of the bar code:
  - NT = Not treated
  - TC = Tissue culture-treated
  - CB = Corning® CellBIND® surface
  - NBS = Nonbinding surface
- ▶ Labels applied to all 4 sides of the microplate ensure usability regardless of scanner location
- ▶ Each microplate is specially treated to reduce the impact of static build-up
- ▶ Code 128 bar code format ensures compatibility with most bar code scanning and software systems

### Custom Designed Bar Codes

Bar codes have been quality tested for optimal readability, chemical resistance, and temperature durability.

- ▶ Fast delivery
- ▶ Bulk-packaged microplates for ease of use in automated systems
- ▶ Flexible bar code symbologies, such as CODE 128, Code 3 of 9, and ITF 2 of 5
- ▶ Flexible bar code positioning so that labels can be left-aligned, center-aligned, or right-aligned
- ▶ Non-repeatable bar code sequence prevents label duplication
- ▶ Solvent resistance to methanol, DMSO, methylene chloride, and ethyl acetate
- ▶ Ability to withstand prolonged exposure to temperatures ranging from -80°C to 121°C
- ▶ Sample bar coded plates are provided in order to test compatibility with automated equipment.

### Dependable Durability

Bar codes have been quality tested for optimal readability, chemical resistance, and temperature variation.

### Expert Advice

Most Corning microplates are suitable for bar code customization. Contact Corning Life Sciences or your local Corning Account Manager for more information.

# Technical Appendix

## Surface Properties and Applications

Corning® Surface	Applications	Binding Interaction	Sample Properties	Performance Criteria
<b>FOR BIOCHEMICAL ASSAYS</b>				
Nonbinding (NBS) coated polystyrene	<ul style="list-style-type: none"> <li>SPA assays</li> <li>Homogeneous assays</li> </ul>	None – Inhibits hydrophobic and ionic interactions	Significantly reduces (<2 ng/cm <sup>2</sup> ) protein and nucleic acid binding	95% reduction of nonspecific binding of protein compared to untreated polystyrene
Medium binding (Not treated) modified polystyrene	<ul style="list-style-type: none"> <li>Homogeneous (HO) and heterogeneous (HT) assays</li> </ul>	Hydrophobic	Large biomolecules >20kD with large or abundant hydrophobic regions	96-well clear: Well-to-well CV ≤5% 96-well black: Well-to-well CV ≤15% (HT) Well-to-well CV ≤3% (HO) 96-well white: Well-to-well CV ≤8% (HT) Well-to-well CV ≤5% (HO) 384-well clear: Well-to-well CV ≤10% (HT) 384-well black and white: Well-to-well CV ≤15% (HT) Well-to-well CV ≤5% (HO)
High binding modified polystyrene	<ul style="list-style-type: none"> <li>ELISA* and other heterogeneous assays</li> </ul>	Hydrophobic and ionic interactions (negatively charged)	Improves binding of medium to large biomolecules (>10kD) that are positively charged with or without hydrophobic regions	96-well clear: Well-to-well CV ≤3% 96-well black: Well-to-well CV ≤8% 96-well white: Well-to-well CV ≤10% 384-well clear: Well-to-well CV ≤10% 384-well black and white: Well-to-well CV ≤15%
Sulfhydryl-BIND™ modified polystyrene	<ul style="list-style-type: none"> <li>Assays requiring site-directed orientation of a particular biomolecule, especially antibodies</li> </ul>	Allows covalent immobilization via SH moieties on maleimide groups	Biomolecules possessing an accessible sulfhydryl group or reducible disulfide bond	CV ≤15% Activated/non-activated ≥ 2.0 Activated = reduced disulfide bonds
Carbo-BIND modified polystyrene	<ul style="list-style-type: none"> <li>Assays requiring site-directed orientation of a particular biomolecule (oxidized antibodies, carbohydrates, and glycosylated proteins) while maintaining enzymatic or immunological activity</li> </ul>	Allows covalent immobilization via binding to hydroxide groups	Biomolecules possessing carbohydrate moieties available for periodate activation	CV ≤15% Activated/non-activated ≥ 3.0 Activated = periodate activation
<b>FOR CELL-BASED ASSAYS</b>				
Standard Tissue Culture-treated	<ul style="list-style-type: none"> <li>Assays using standard attachment-dependent cell lines</li> </ul>	Hydrophilic and ionic interactions (negatively charged)	Allows cell attachment and binding	≥95% confluency (attachment-dependent cell line)
Corning CellBIND®	<ul style="list-style-type: none"> <li>Assays for difficult to attach cells</li> <li>Help cells stay attached during washing steps</li> </ul>	Hydrophilic and ionic interactions (negatively charged)	Enhances cell attachment uniformity and binding to polystyrene	96-well: CV ≤10% 384-well: CV ≤20%
Poly-D-Lysine-coated	<ul style="list-style-type: none"> <li>Assays for difficult to attach cells</li> <li>Help cells stay attached during washing steps</li> </ul>	Hydrophilic and ionic interactions (positively charged)	Enhances cell attachment and binding	96-well: CV ≤15% 384-well: CV ≤20%
Ultra-Low Attachment	<ul style="list-style-type: none"> <li>Assays where preventing cell attachment is required</li> <li>Hybridoma production and clonal isolation by limiting dilution</li> </ul>	Non-ionic hydrogel layer reduces or eliminates ionic and hydrophobic binding	Prevents or reduces cell attachment and binding	≥95% cell attachment inhibition

\*ELISA = Enzyme-linked immunosorbent assay.

### Choose the Corning Surface Treatment

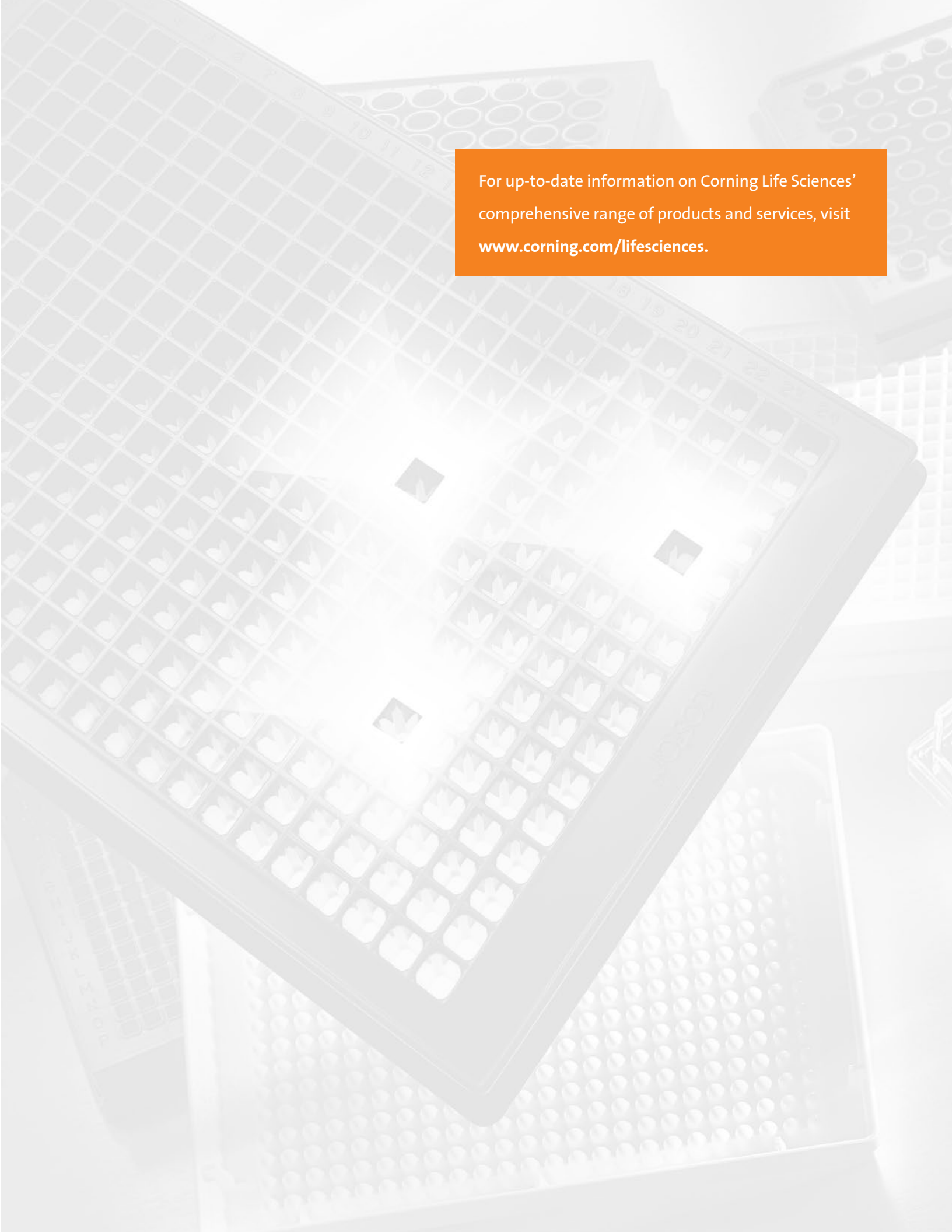
Corning offers polystyrene microplates with a variety of modified surfaces. These surfaces can support binding or covalent immobilization of cells, proteins, nucleic acids, and other biomolecules.

Surface Treatment	Microplate Format					
	96-well	96-well Stripwell™	Half Area 96-well	384-well	Low Volume 384-well	1536-well
<b>For General Assay</b>						
Not treated (medium binding)	■	■	■	■	■	■
High binding	■	■	■	■	■	
Nonbinding	■		■	■	■	■
Sulfhydryl (Sulfhydryl-BIND) binding	■	■				
Carbohydrate (Carbo-BIND) binding	■	■				
<b>For Cell Culture</b>						
Tissue Culture (TC)-treated	■	■	■	■	■	■
Ultra-Low Attachment surface	■			■		
Corning CellBIND surface	■			■		■
Poly-D-Lysine	■			■		



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