

# Liquid Single-Use Bags

High-performance fluid storage and transfer bags with optimized reliability, throughput, and quality assurance for critical bioprocessing for a variety of upstream and downstream processes

Liquid single-use bags are low-profile containers engineered to bioprocess fluids. Featuring high-integrity and flow-optimized TruFLO ports, liquid single-use bags offer reliable and high-throughput performance. The industry-proven, medical-grade Renolit 9101 multilayer polyethylene film meets the requirements of ISO and USP biocompatibility tests. The film also meets low-permeability and low-temperature requirements while offering high clarity.

Liquid single-use bags are available in standard sizes from 50 mL to 20 L in 2 and 3-port options, and can be customized up to 50 L with up to 4-ports in larger chamber sizes (2 L to 50 L). Custom face-ported 2D bags are also available in 20 L, 50 L, 100 L and 200 L.

Liquid single-use bags feature a variety of standard and custom configurations

Feature	Configurations
Volume	Standard: 50 mL to 20 L Custom: up to 200 L
Port	Standard Edge: 2- or 3-port (500 mL to 50 L) Custom Edge: 4-port (2 L to 50 L) Custom Face: 3-port (20 L, 50 L, 100 L, 200 L)
Port Size	Edge: 1/8 in, 1/4 in, or 3/8 in Face: 1/4 in, 3/8 in or 1/2 in
Tubing	Standard: Thermoplastic Elastomer (TPE) Custom: Platinum-Cured Silicone (PCS)



*TruFLO ports are specially engineered to offer high-integrity and improved flow for critical bioprocessing applications*

## Benefits

- Unique TruFLO ports design facilitates optimized edge-seal integrity and improved flow rates
- Low-profile design ensures minimal product holdup to maximize product recovery
- Configurable with a wide variety of BPOG-compliant components

## Typical Applications

- Buffer and cell culture media
- Bulk product collections and storage
- Chromatography and filtration buffer
- Fraction collection
- Product sampling and transport

# Standard Configurations

## Liquid single-use bags with TruFLO ports



### 2-Port Configurations

Size	Port Sizes	Dimensions (W x L)	Internal Surface Area	Connections*	Smart Part #
50 mL	1/4 in	5.38 x 4.75 in	25 in <sup>2</sup>	Luer (Body & Insert)	EP050M2PTL-G
100 mL	1/4 in	5.38 x 5.25 in	30 in <sup>2</sup>	Luer (Body & Insert)	EP100M2PTL-G
250 mL	1/4 in	5.38 x 7.00 in	46 in <sup>2</sup>	Luer (Body & Insert)	EP250M2PTL-G
500 mL	1/4 in	7.08 x 7.25 in	66 in <sup>2</sup>	Luer (Body & Insert)	EP500M2PTL-G
1000 mL	1/4 in	7.08 x 10.30 in	105 in <sup>2</sup>	Luer (Body & Insert)	EP001L2PTL-G
500 mL	3/8 in	7.08 x 7.25 in	66 in <sup>2</sup>	MPCs (F&M)	EP500M2PTM-G
1000 mL	3/8 in	7.08 x 10.30 in	105 in <sup>2</sup>	MPCs (F&M)	EP001L2PTM-G
2 L	3/8 in	7.08 x 15.75 in	174 in <sup>2</sup>	MPCs (F&M)	EP002L2PTM-G
5 L	3/8 in	14.25 x 14.91 in	280 in <sup>2</sup>	MPCs (F&M)	EP005L2PTM-G
10 L	3/8 in	16.75 x 18.91 in	441 in <sup>2</sup>	MPCs (F&M)	EP010L2PTM-G
20 L	3/8 in	17.50 x 28.41 in	772 in <sup>2</sup>	MPCs (F&M)	EP020L2PTM-G



### 3-Port Configurations

Size	Port Sizes	Dimensions (W x L)	Internal Surface Area	Connections*	Smart Part #
500 mL	3/8 in (2) & 1/4 in	7.08 x 7.25 in	66 in <sup>2</sup>	MPCs (F&M), Injection Cap	EP500M3PTM-G
1000 mL	3/8 in (2) & 1/4 in	7.08 x 10.30 in	105 in <sup>2</sup>	MPCs (F&M), Injection Cap	EP001L3PTM-G
2 L	3/8 in (2) & 1/4 in	7.08 x 15.75 in	174 in <sup>2</sup>	MPCs (F&M), Injection Cap	EP002L3PTM-G
5 L	3/8 in (2) & 1/4 in	14.25 x 14.91 in	280 in <sup>2</sup>	MPCs (F&M), Injection Cap	EP005L3PTM-G
10 L	3/8 in (2) & 1/4 in	16.75 x 18.91 in	441 in <sup>2</sup>	MPCs (F&M), Injection Cap	EP010L3PTM-G
20 L	3/8 in (2) & 1/4 in	17.50 x 28.41 in	772 in <sup>2</sup>	MPCs (F&M), Injection Cap	EP020L3PTM-G

\* via 12-inch TPE tubing

# Medical-Grade Renolit 9101 PE Film



All liquid single-use bags are manufactured with industry-proven, medical-grade Renolit 9101 film, a multilayer film composed of a high-purity biocompatible polyethylene (PE) contact layer with internal ethylene vinyl alcohol (EVOH) oxygen-barrier.

Physical Properties	
Property	Typical Value*
Film Thickness	0.325 mm
Clarity	97% (ASTM D-1003)
Tensile Strength at Break	13MPa (ASTM D-882)
Elongation at Break	350% (ASTM D-882)
Break at Cold Temperature	< -45°C (ISO 8570)
Water Vapor Transmission†	0.32 g/m <sup>2</sup> /day (ASTM F-1249)
O <sub>2</sub> Permeability‡	<0.05 cm <sup>3</sup> /m <sup>2</sup> /day/bar (ASTM D-3985)
CO <sub>2</sub> Permeability‡	<0.2 cm <sup>3</sup> /m <sup>2</sup> /day/bar (ASTM F-2476)

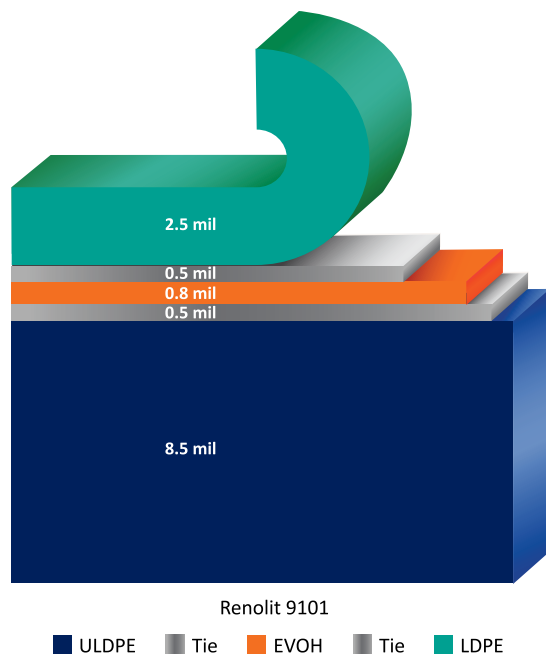
\* Transmission values for film gamma-irradiated with 50 KGy.

Other are for film gamma-irradiated with 25 KGy.

† @ 23 °C, 100% RH.

‡ @ 23 °C, 0% RH.

## Renolit 9101 PE Film Layers



Quality, Regulatory, and Biocompatibility Properties	
Category	Property/Test*
Composition	<ul style="list-style-type: none"><li>• High-purity polyethylene (PE) and ethylene vinyl alcohol (EVOH)</li><li>• Animal-Derived Component Free (ADCF) and TSE/BSE</li></ul>
Biocompatibility	<ul style="list-style-type: none"><li>• ISO 10993-4, Hemolysis</li><li>• ISO 10993-5, Cytotoxicity</li><li>• ISO 10993-6, Implantation</li><li>• ISO 10993-10, Irritation and Sensitization</li><li>• ISO 10993-11, Acute System Toxicity</li><li>• USP &lt;85&gt;, Bacterial Endotoxins – LAL test</li><li>• USP &lt;87&gt;, Biological Reactivity in vitro</li><li>• USP &lt;88&gt;, Biological Reactivity in vivo, Class VI</li></ul>
Extractables/Leachables	<ul style="list-style-type: none"><li>• USP &lt;661.1&gt;, Polyethylene Physiochemical Tests, Extractable Metals, Plastic Additives</li><li>• Ph. Eur. 3.1.5, Polyethylene with additives for containers for parenteral preparations and for ophthalmic preparations</li></ul>

Recommended Sterilization Method      Gamma

\* Pharmacopoeia and Biocompatibility compliance test reports available upon request

## Questions or Inquiries?

More information is available at [www.ilcdover.com](http://www.ilcdover.com), or by contacting us at [customer\\_service@ilcdover.com](mailto:customer_service@ilcdover.com) or simply by reaching out to your dedicated ILC Dover sales representative.



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