

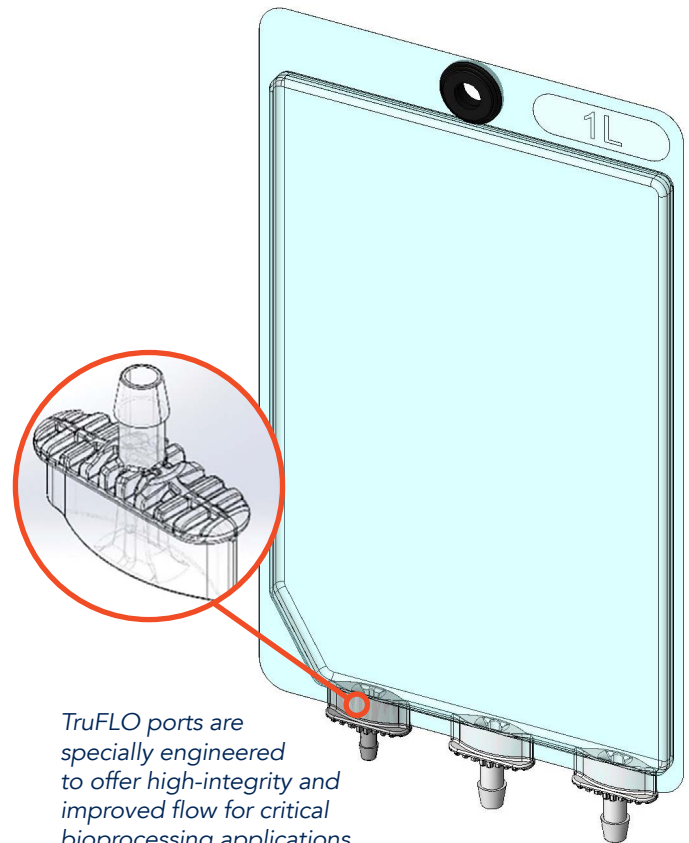
Liquid Single-Use Bags

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, low-profile containers engineered for 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 have standard sizes available 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).

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

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



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 media
- 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* |
|---------|------------|--------------------|-----------------------|----------------------|
| 50 mL | 1/4 in | 6.25 x 6.25 in | 51 in ² | Luer (Body & Insert) |
| 100 mL | 1/4 in | 6.25 x 7.38 in | 64 in ² | Luer (Body & Insert) |
| 250 mL | 1/4 in | 6.25 x 9.25 in | 86 in ² | Luer (Body & Insert) |
| 500 mL | 1/4 in | 7.75 x 9.62 in | 115 in ² | Luer (Body & Insert) |
| 1000 mL | 1/4 in | 7.75 x 12.88 in | 162 in ² | Luer (Body & Insert) |
| 500 mL | 3/8 in | 7.75 x 9.62 in | 115 in ² | MPCs (F&M) |
| 1000 mL | 3/8 in | 7.75 x 12.88 in | 162 in ² | MPCs (F&M) |
| 2 L | 3/8 in | 14.00 x 15.88 in | 320 in ² | MPCs (F&M) |
| 5 L | 3/8 in | 14.00 x 19.12 in | 408 in ² | MPCs (F&M) |
| 10 L | 3/8 in | 16.50 x 23.62 in | 610 in ² | MPCs (F&M) |
| 20 L | 3/8 in | 16.50 x 31.88 in | 874 in ² | MPCs (F&M) |



3-Port Configurations

| Size | Port Sizes | Dimensions (W x L) | Internal Surface Area | Connections* |
|---------|---------------------|--------------------|-----------------------|---------------------------|
| 500 mL | 3/8 in (2) & 1/4 in | 7.75 x 9.62 in | 115 in ² | MPCs (F&M), Injection Cap |
| 1000 mL | 3/8 in (2) & 1/4 in | 7.75 x 12.88 in | 162 in ² | MPCs (F&M), Injection Cap |
| 2 L | 3/8 in (2) & 1/4 in | 14.00 x 15.88 in | 320 in ² | MPCs (F&M), Injection Cap |
| 5 L | 3/8 in (2) & 1/4 in | 14.00 x 19.12 in | 408 in ² | MPCs (F&M), Injection Cap |
| 10 L | 3/8 in (2) & 1/4 in | 16.50 x 23.62 in | 610 in ² | MPCs (F&M), Injection Cap |
| 20 L | 3/8 in (2) & 1/4 in | 16.50 x 31.88 in | 874 in ² | MPCs (F&M), Injection Cap |

* via 12-inch TPE tubing

Medical-Grade Renolit 9101 PE Film



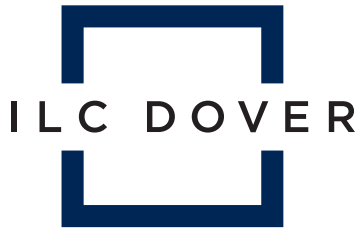
All liquid single-use bags are manufactured with industry-proven, medical-grade Renolit 9101 film, a multilayer film composed of a high-purity biocompatible polyethylene (PE) contact layer with internal ethylene vinyl alcohol (EVOH) oxygen-barrier.

| Physical Properties | | Quality, Regulatory, and Biocompatibility Properties | |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------|------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Property | Typical Value* | Category | Property/Test* |
| Film Thickness | 0.325 mm | Composition | <ul style="list-style-type: none">• High-purity polyethylene (PE) and ethylene vinyl alcohol (EVOH)• Animal-Derived Ingredient (ADI) Free |
| Clarity | 97% (ASTM D-1003) | | |
| Tensile Strength at Break | 13MPa (ASTM D-882) | | |
| Elongation at Break | 350% (ASTM D-882) | Biocompatibility | <ul style="list-style-type: none">• ISO 10993-4, Hemolysis• ISO 10993-5, Cytotoxicity• ISO 10993-6, Implantation• ISO 10993-10, Irritation and Sensitization• ISO 10993-11, Acute System Toxicity• USP <85>, Bacterial Endotoxins – LAL test• USP <87>, Biological Reactivity in vitro• USP <88>, Biological Reactivity in vivo, Class VI |
| Break at Cold Temperature | < -45°C (ISO 8570) | | |
| Water Vapor Transmission [†] | 0.32 g/m ² /day (ASTM F-1249) | | |
| O ₂ Permeability [‡] | <0.05 cm ³ /m ² /day/bar (ASTM D-3985) | | |
| CO ₂ Permeability [‡] | <0.2 cm ³ /m ² /day/bar (ASTM F-2476) | | |
| <p>* 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.</p> | | Extractables/Leachables | <ul style="list-style-type: none">• USP <661.1>, Polyethylene Physicochemical Tests, Extractable Metals, Plastic Additives• Ph. Eur. 3.1.5, Polyethylene with additives for containers for parenteral preparations and for ophthalmic preparations |
| | | | |

* Pharmacopoeia and Biocompatibility compliance test reports available upon request

Questions or Inquiries?

More information is available at www.ilcdover.com, or by contacting us at customer_service@ilcdover.com or simply by reaching out to your dedicated ILC Dover sales representative.



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