ADVANCED MATERIALS HANDLING

2D and 3D Multilayer Bioprocess Bag Assemblies

Quality bag solutions that provide ultimate customization, quick-turn design, and fast delivery

Bringing the benefits of ultimate customization, fast design, and delivery to cell culture applications, Entegris offers customized 2D and 3D multilayer bioprocess bag assemblies. Applying decades of experience and materials expertise, we provide complete solutions for upstream and downstream applications.

Whether you need 2D or 3D configurations, we can customize clean aseptic bags, mixing bags, purification bags, motion bags, chemical resistant bags, autoclave bags, in-facility transport bags, storage bags, ADC or MAB processing bags, and more.

2D Bioprocess Bag Assemblies

We offer a range of robust, standard 2D pillow bags that are customized for use in biopharmaceutical applications. Available with 1 - 2 port, 2 - 3 port, or 3 + ports, our quickturn 2D bag solutions can be seamlessly combined with our customized tube set solutions and accessories to meet your specific processing needs.

3D Multilayer Bag Assemblies

Our 3D multilayer bag assemblies provide triple barrier containment, ideal for medium to large, single-use biopharmaceutical applications. All 3D bag solutions are also custom tailored to your application and designed with tubing and accessories that meet your specific processing needs and provide a complete large-volume solution.



Standard Features

- 2D and 3D multilayer bioprocess bag assemblies and associated components are sterilized using gamma irradiation between 25 – 40 kGy, unless requested otherwise
- Extractables and leachables (E&L) data available for all contact materials
- Full traceability for all materials
- Certificates of analysis provided for each lot
- Manufactured under a quality system designed to be compliant to 21 CFR Part 820: Quality System Regulation

APPLICATIONS

- Secure storage and transport of sterile liquids
- Chromatography collection
- Containment of products for irradiation
- Easy freeze/thaw solution applications
- Solution transfers to bioreactors

FEATURES & BENEFITS

Customizable system design	Provides design flexibility and allows the system to fit the process rather than the process adapt to the system
Quick-turn customer service	Consistently fast development and delivery minimize the risk of production delays
	Personalized timely and knowledge- able attention ensures the solution meets your unique needs



SPECIFICATIONS

2D Bioprocess Bag Assemblies

Configurations	1 – 2 port, 2 – 3 port, 3-ports
Sizes	50 mL, 100 mL, 1 L, 2 L, 5 L, 10 L, 20 L, 50 L
Ports	Male and female connections from Luer locks to aseptic, injection sites, etc.
Tubing	1/8" to 1/4" inside diameter
	24" standard length
Handling options	Hanging rods or handles
Materials of construction	Robust multilayer, single-ply Flex 200 film
	This design provides strength and low gas permeability, which is well suited for growing mammalian and plant culture cell lines with extended rocking times.
	Total 11 mil thickness
	Inner product contact layer: Flex 100 low density polyethylene (LDPE)
	Outer layer: Flex 150 ethylene vinyl alcohol (EVOH)/nylon
	Non-cholesterol binding, single-ply film
	This design is extremely durable, autoclavable, and has non-cholesterol binding propertie that yield superior results in growing NS0 and other cholesterol-sensitive clones. • 8 mil thickness
	 Single-layer barrier: Flex 400 polyvinylidene fluoride (PVDF) film
	Standard 2-ply film*
	This design provides strength and low gas permeability, which is well suited for growing mammalian and plant culture cell lines.
	Total 9 mil thickness
	Inner product contact barrier: Flex 100 LDPE
	Outer barrier: Flex 150 EVOH/nylon
	Standard 3-ply film**
	Provides strength and low gas permeability with an additional barrier to increase mechanical strength and provide an additional level of security. Ideal for growing mammalian and plant culture cell lines.
	Total 13 mil thickness
	Inner product contact barrier: Flex 100 LDPE
	Middle barrier: Flex 100 LDPE
	Outer barrier: Flex 150 EVOH/nylon

*2-ply is a single inner LDPE barrier plus an outer barrier of LDPE/EVOH/nylon/LDPE, with the inner barrier placed inside the outer to create a 2-ply chamber.

**3-ply includes two inner LDPE barriers plus an outer barrier of LDPE/EVOH/nylon/LDPE, with the inner barriers placed inside the outer to create a 3-ply chamber.

SPECIFICATIONS (CONTINUED)

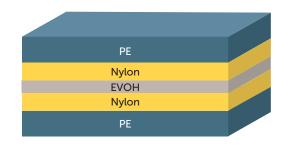
3D Multilayer Bag Assemblies

Configurations	1 to 5 ports
Sizes	50 L, 100 L, 200 L, 500 L, 1000 L
Ports	Male and female Luer locks, quick connect inserts and couplers, bottom drain
Tubing	1/8" to 3/4" inside diameter
	36 – 48" standard length
Diptubes	Available for multiple mixing applications. Contact Entegris with your requirements.
Materials of construction	Standard 3-ply film*
	Provides strength and low gas permeability with an additional barrier to increase mechanical strength and provide an additional level of security. Ideal for growing mammalian and plant culture cell lines.
	Total 13 mil thickness
	Inner product contact barrier: Flex 100 LDPE
	Middle barrier: Flex 100 LDPE
	Outer barrier: Flex 150 EVOH/nylon

* 3-ply includes two inner LDPE barriers plus an outer barrier of LDPE/EVOH/nylon/LDPE, with the inner barriers placed inside the outer to create a 3-ply chamber.

EVOH/Nylon Film

- Provides bag strength and continuity
- Meets all outer barrier film requirements
- Multilayer 5 mil thickness



FOR MORE INFORMATION

Please call your Regional Customer Service Center today to learn what Entegris can do for you. Visit <u>entegris.com</u> and select the <u>Contact Us</u> link to find the customer service center nearest you.

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