# **TANK LINERS**

The tank liners feature an open-bag, flat bottom design to enhance mixing while minimizing wrinkles or pleat fold over. The flexible liners offer cost-effective, single-use, biopharmaceutical and diagnostic reagent processing using a rigid plastic tank. Contour liners reduce cleaning validation and sterilizing of traditional containers. Most importantly, because they are single use, the potential of cross contamination between different products is reduced. Our sterile polyethylene tank liners are manufactured in a class 7 clean room.

We offer tank liners in two (2) different configurations; 3-D formed fitted with flat bottom and 2-D tank liners (similar to pillow bags except for top feed). The form fitted, 3-D tank liners with flat bottoms eliminate wrinkles and assist in creating a more uniform mixture when processing with 3-D liners.



Photo - 50Liter Tank Liners

The following tests were performed on samples of Flex Polyethylene Film.

Property	<b>Test Protocol</b>	Value
USP Class VI	USP <88>	Pass
Cytotoxicity	USP <87>	Pass
Bacterial Endotoxin	USP <85>	<0.030 EU/ml
Heavy Metals	USP <661>	<1 ppm
Buffering Capacity	USP <661>	<1 ml
Non-Volatile Residue	USP <661>	<1 mg
Residue on Ignition	USP <661>	<1 mg

In conclusion, the Flex Polyethylene film meets or exceeds United States Pharmacopoeia requirements for plastic containers. The Flex Polyethylene film is suitable plastic film for the inner layer of bioSolution Containment Systems.

# 3-D FORM FITTED TANK LINERS - NON-IRRADIATED

Catalog Number	Tank Volum e	Case Qty	Description
FSA00491.01	50 L	20	50L Tank Liner, Single Polyethylene Ply (Flex 100), 4 mil, Top Feed, 3-D.Flat Bottom, non-irradiated for Nalgene Containers
FSA00491.02	100 L	20	100L Tank Liner, Single Polyethylene Ply (Flex 100), 4 mil, Top Feed, 3-D, Flat Bottom, non-irradiated for Nalgene Containers
FSA00491.03	200 L	20	200L Tank Liner, Single Polyethylene Ply (Flex 100), 4 mil, Top Feed, 3-D, Flat Bottom, non-irradiated for Nalgene Containers
FSA00491.04	300 L	20	300L Tank Liner, Single Polyethylene Ply (Flex 100), 4 mil, Top Feed, 3-D, Flat Bottom, non-irradiated for Nalgene Containers
FSA00491.04	400 L	20	400L Tank Liner, Single Polyethylene Ply (Flex 100), 4 mil, Top Feed, 3-D, Flat Bottom, non-irradiated for Nalgene Containers
FSA00491.04	600 L	10	600L Tank Liner, Single Polyethylene Ply (Flex 100), 4 mil, Top Feed, 3-D, Flat Bottom, non-irradiated for Nalgene Containers
FSA00491.04	800 L	10	800L Tank Liner, Single Polyethylene Ply (Flex 100), 4 mil, Top Feed, 3-D, Flat Bottom, non-irradiated for Nalgene Containers





### 3-D FORM FITTED TANK LINERS – GAMMA IRRADIATED

	Tank	Case	
Catalog	Volum	Qty	Description
Number	e		
FSA00491.01-	50 L	20	50L Tank Liner, Single Polyethylene Ply (Flex 100), 4 mil,
R			Top Feed, 3-D, Flat Bottom, Gamma irradiated for Nalgene
			Containers
FSA00491.02-	100 L	20	100L Tank Liner, Single Polyethylene Ply (Flex 100), 4 mil,
R			Top Feed, 3-D, Flat Bottom, Gamma irradiated for Nalgene
			Containers
FSA00491.03-	200 L	20	200L Tank Liner, Single Polyethylene Ply (Flex 100), 4 mil,
R			Top Feed, 3-D, Flat Bottom, Gamma irradiated for Nalgene
			Containers
FSA00491.04-	300 L	20	300L Tank Liner, Single Polyethylene Ply (Flex 100), 4 mil,
R			Top Feed, 3-D, Flat Bottom, Gamma irradiated for Nalgene
			Containers
FSA00491.04-	400 L	20	400L Tank Liner, Single Polyethylene Ply (Flex 100), 4 mil,
R			Top Feed, 3-D, Flat Bottom, Gamma irradiated for Nalgene
			Containers
FSA00491.04-	600 L	10	600L Tank Liner, Single Polyethylene Ply (Flex 100), 4 mil,
R			Top Feed, 3-D, Flat Bottom, Gamma irradiated for Nalgene
			Containers
FSA00491.04-	800 L	10	800L Tank Liner, Single Polyethylene Ply (Flex 100), 4 mil,
R			Top Feed, 3-D, Flat Bottom, Gamma irradiated for Nalgene
			Containers

#### 2-D FORM FITTED TANK LINERS - NON-IRRADIATED

	Tank	Case	
Catalog	Volum	Qty	Description
Number	e		
FSA02034.01	50 L	20	50L Tank Liner, Single Polyethylene Ply (Flex 100), 4 mil,
			Top Feed, 2-D. non-irradiated for Nalgene Containers
FSA02034.02	100 L	20	100L Tank Liner, Single Polyethylene Ply (Flex 100), 4 mil,
			Top Feed, 2-D, non-irradiated for Nalgene Containers
FSA02034.03	200 L	20	200L Tank Liner, Single Polyethylene Ply (Flex 100), 4 mil,
			Top Feed, 2-D, non-irradiated for Nalgene Containers
FSA02034.04	300 L	20	300L Tank Liner, Single Polyethylene Ply (Flex 100), 4 mil,
			Top Feed, 2-D, non-irradiated for Nalgene Containers
FSA02034.05	400 L	20	400L Tank Liner, Single Polyethylene Ply (Flex 100), 4 mil,
			Top Feed, 2-D, non-irradiated for Nalgene Containers
FSA02034.06	600 L	10	600L Tank Liner, Single Polyethylene Ply (Flex 100), 4 mil,
			Top Feed, 2-D, non-irradiated for Nalgene Containers
FSA02034.07	800 L	10	800L Tank Liner, Single Polyethylene Ply (Flex 100), 4 mil,
			Top Feed, 2-D, non-irradiated for Nalgene Containers

### 2-D FORM FITTED TANK LINERS – GAMMA IRRADIATED

	Tank	Case	
Catalog	Volum	Qty	Description
Number	e		
FSA02034.01-	50 L	20	50L Tank Liner, Single Polyethylene Ply (Flex 100), 4 mil,
R			Top Feed, 2-D, Gamma irradiated for Nalgene Containers
FSA02034.02-	100 L	20	100L Tank Liner, Single Polyethylene Ply (Flex 100), 4 mil,
R			Top Feed, 2-D, Gamma irradiated for Nalgene Containers
FSA02034.03-	200 L	20	200L Tank Liner, Single Polyethylene Ply (Flex 100), 4 mil,
R			Top Feed, 2-D, Gamma irradiated for Nalgene Containers
FSA02034.04-	300 L	20	300L Tank Liner, Single Polyethylene Ply (Flex 100), 4 mil,
R			Top Feed, 2-D, Flat Bottom, Gamma irradiated for Nalgene
			Containers
FSA02034.05-	400 L	20	400L Tank Liner, Single Polyethylene Ply (Flex 100), 4 mil,
R			Top Feed, 2-D, Gamma irradiated for Nalgene Containers
FSA02034.06-	600 L	10	600L Tank Liner, Single Polyethylene Ply (Flex 100), 4 mil,
R			Top Feed, 2-D, Gamma irradiated for Nalgene Containers
FSA02034.07-	800 L	10	800L Tank Liner, Single Polyethylene Ply (Flex 100), 4 mil,
R			Top Feed, 2-D, Gamma irradiated for Nalgene Containers



Note: The above tank liners volumes are our standard sizes, custom sizes are available upon request. Thicker Tank Liner material is available as well as other materials. The Tank Liners are individually packaged and gamma irradiated 25 – 40 kGy.