



OMI ODOR AIR SERVICE offers the following bags:
Flek-Sampler[®], Tedlar[®] Bag, PVDF Bag, Skypia[®] Bag
Fluoresin Bag, BS Bag, and FM Bag,

Sampling bags are widely used for sampling gases. Selecting the appropriate sampling bag is important when conducting precision analysis.

Please select the appropriate sampling bag in order to obtain reliable results.

Performance Comparison

Gas Barrier Performance Testing

Testing gas barrier property through storage performance of hydrogen molecules.

● Analysis Method

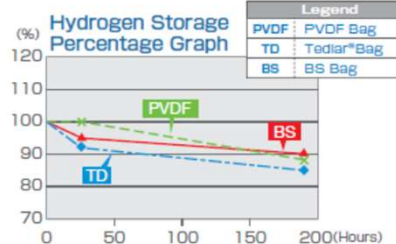
Add hydrogen (Balance Nitrogen) standard gas into different types of 10L bags, then measure the concentration of hydrogen when it is added and after a period of time with a GC-TCD.

Detector : Thermal Conductivity Detector, TCD Current 70mA

Hydrogen Gas Storage Test Results (Unit : ppm)

Bag Type	Beginning	24Hrs	1 Week
PVDF	200	200	177
TD	220	203	187
BS	210	200	190

The numerical values is average of n=3



Storage Performance Testing

Soil Gas

● Analysis Method

Mix Nitrogenous base with gases as initial concentration by injecting 30ml of various gases into 1L of clean air then add 50ml of testing gas before measuring performance of storage by GC/MS.

Storage Performance after 24 Hours (%)					
	Initial Concentration(ppm)	TD	PVDF	Initial Concentration(ppm)	BS
1,1-Dichloroethylene	0.0060	88	92	0.0120	77
Dichloromethane	0.0070	85	85	0.0130	68
Cis-1, 2-Dichloroethylene	0.0052	83	82	0.0093	98
1,1,1-Trichloromethane	0.0044	90	91	0.0097	99
Tetrachloromethane	0.0046	90	91	0.0099	97
1,2-Dichloromethane	0.0049	83	78	0.0100	96
Benzene	0.0077	85	83	0.0090	96
Trichloroethylene	0.0039	86	83	0.0091	97
Cis-1,3-Dichloropropene	0.0040	80	75	0.0089	99
Trans-1, 3-Dichloropropene	0.0032	77	70	0.0092	102
1,1,2-Trichloroethane	0.0036	83	80	0.0093	97
Tetrachloroethylene	0.0033	88	87	0.0096	94

The numerical values is average of n=3

Storage Performance after 48 Hours (%)					
	Initial Concentration(ppm)	TD	PVDF	Initial Concentration(ppm)	BS
1,1-Dichloroethylene	0.0060	80	79	0.0120	74
Dichloromethane	0.0070	75	69	0.0130	65
Cis-1, 2-Dichloroethylene	0.0052	70	66	0.0093	94
1,1,1-Trichloromethane	0.0044	81	79	0.0097	97
Tetrachloromethane	0.0046	81	79	0.0099	94
1,2-Dichloromethane	0.0049	69	61	0.0100	92
Benzene	0.0077	74	67	0.0090	91
Trichloroethylene	0.0039	73	69	0.0091	92
Cis-1,3-Dichloropropene	0.0040	67	59	0.0089	93
Trans-1, 3-Dichloropropene	0.0032	64	56	0.0092	98
1,1,2-Trichloroethane	0.0036	69	65	0.0093	92
Tetrachloroethylene	0.0033	77	73	0.0096	89

The numerical values is average of n=3

Working Environment Measurement (in Japan)

● Analysis Method

The sample of this test is prepared by filling each substance with nitrogen gas in a 30L Tedlar bag to a concentration near the control concentration. This sample can be measured using the gas chromatography method described in the Working Environment Measurement Guidebook (Related to Organic Solvents).

Storage Performance after 24 Hours (%)				
	Control Concentration(ppm)	PVDF	FM	BS
Acetone	500	73	95	85
Isopropyl alcohol	200	92	95	91
Methyl acetate	50	71	88	85
Dichloromethane	200	88	84	83
Methyl ethyl ketone	200	70	91	90
Ethyl acetate	40	76	91	92
Normal hexane	50	96	97	91
Isobutyl alcohol	25	90	93	88
1-Butanol	50	81	85	87
Methylbutyl ketone	150	76	92	87
Isofuryl acetate	20	80	91	82
Toluene	150	78	87	85
Butyl acetate	50	63	88	83
Ethylbenzene	50	69	82	82
o-Xylene	50	62	83	86
m-Xylene	50	68	88	80
p-Xylene	50	66	84	86
Cyclohexanone	20	83	89	81
Butyl cellosolve	25	39	81	77

The numerical values is average of n=3

Storage Performance after 48 Hours (%)				
	Control Concentration(ppm)	PVDF	FM	BS
Acetone	500	63	90	75
Isopropyl alcohol	200	84	89	84
Methyl acetate	50	59	81	78
Dichloromethane	200	76	78	75
Methyl ethyl ketone	200	59	84	79
Ethyl acetate	40	64	82	83
Normal hexane	50	92	91	81
Isobutyl alcohol	25	82	87	78
1-Butanol	50	70	75	76
Methylbutyl ketone	150	65	85	75
Isofuryl acetate	20	68	83	74
Toluene	150	66	78	74
Butyl acetate	50	51	79	69
Ethylbenzene	50	58	73	68
o-Xylene	50	49	73	70
m-Xylene	50	56	77	68
p-Xylene	50	52	74	70
Cyclohexanone	20	69	78	66
Butyl cellosolve	25	30	69	66

The numerical values is average of n=3

※All bags in this catalog are used for sampling.

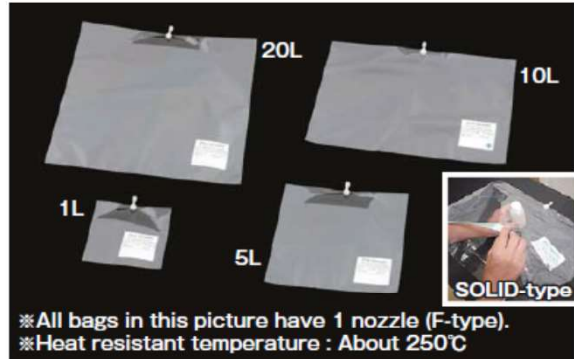
Flek-Sampler[®]

- **FILM** Material : PET (Polyethylene-Terephthalate)
 Thickness : 38 μ m Transparency Film
 25 μ m Aluminum-Coating Film
 50 μ m Aluminum-Coating Film
 Heat Resistant Temperature : 70 $^{\circ}$ C

- **Characteristics** Superior in scentless properties
 Superior in mechanical strength
 Superior in chemical resistance
 Superior in gas barrier properties

- **Applications** Odor Analysis, Working Environment Measurement,
 Analysing Soil-gas, Volatile Organic Compound (VOC) etc.

- **Connector** 8SN (8 ϕ PVDF Sleeve)
 ※Aluminum Coating Type
 - Made of laminated film from PET and Aluminum.
 - Good permeation; resistant to inorganic gas



Flek-Sampler[®] Size Chart (Length×Width mm)

Capacity (Liter)	F-type A-type	DS-type	DF-type	DA-type	DW-type	SOLID-type F/A
1 L	200×200	170×250	170×250	200×200	170×250	200×200
2 L	220×250	220×250	220×250	220×250	220×250	220×250
3 L	300×250	300×250	300×250	300×250	300×250	300×250
5 L	330×330	330×330	330×330	330×330	330×330	330×330
10 L	350×500	350×500	350×500	350×500	350×500	350×500
20 L	500×500	500×500	500×500	500×500	—	500×500
30 L	650×600	650×600	750×500	750×500	—	650×600
50 L	650×850	650×850	750×750	750×750	—	650×850
100 L	1000×1000	1000×1000	1000×1000	1000×1000	—	1000×1000

【 Types of Flek-Sampler 】

- F-type > 38 μ m Transparency Film
- DS-type > 25 μ m Aluminum-coating Film (100L: 38 μ m)
- A-type > 38 μ m Transparency Film (Pressure Resistant)
- DF-type > 50 μ m Aluminum-coating Film
- DA-type > 50 μ m Aluminum-coating Film (Pressure Resistant)
- DW-type > 25 μ m Aluminum-coating Film (Double Film)
- SOLID F-type > 38 μ m Transparency Film (One-sided Open Style)
- SOLID A-type > 38 μ m Transparency Film (Pressure Resistant, One-sided Open Style)

NOTE

The 8SN(8 ϕ PVDF Sleeve) connector on the Flek-Sampler is attached to the center of the upper side.If a different connector is needed, please specify when ordering*Please refer to the [When you order a sampling bag] page for the type of connectors available.

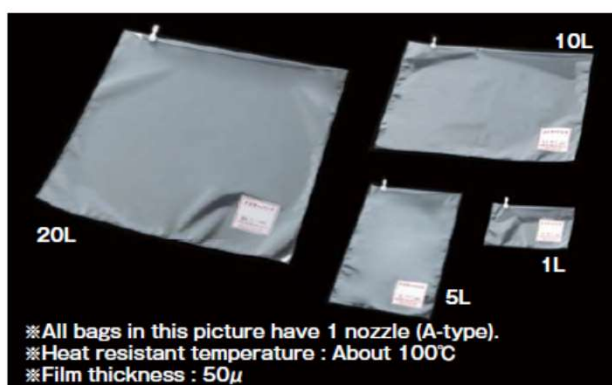


Other sizes can also be manufactured. Inquiries on matters other than the above are also welcome.

Tedlar® Bag

- FILM** Material : PVF (Polyvinyl Fluoride)
 Thickness : 50 μ m
 Heat Resistant Temperature : 100°C
- Characteristics** Superior tolerance to various gases / organic solvents.
- Applications** Automobile interior materials, Automobile emissions,
 Oil ingredient measurements, Organic solvents, Inorganic gas, etc.
- Connector** 6SN or 7C for up to 10L, 8SN for above 10L.
 If you need a different connector, please instruct on the order.
 *Please refer to the [When you order a sampling bag] page
 for the different types of connectors available.

Capacity (Liter)	Size(mm) (Length×Width)
1 L	150×250
2 L	220×250
3 L	300×250
5 L	400×250
10 L	350×500
20 L	500×500
30 L	700×500
50 L	600×750
100 L	1000×1000

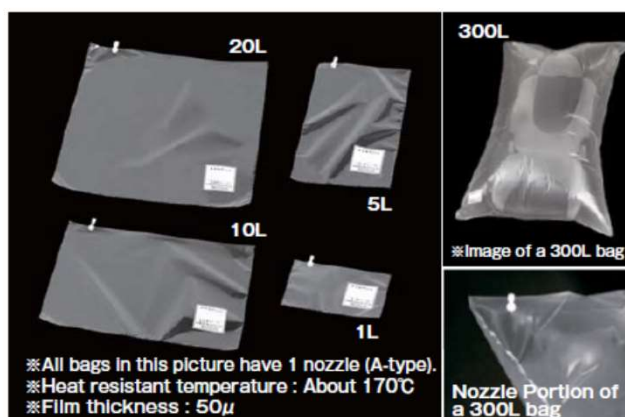


Other sizes can also be manufactured. Inquiries on matters other than the above are also welcome.

PVDF Bag

- FILM** Material : PVDF (Polyvinylidene Fluoride)
 Thickness : 50 μ m
 Heatresistant temperature : 170°C
- Characteristics** Excellent in chemical and heat resistance.
- Applications** Automobile interior materials, Organic solvents, Working
 Environment measurement, etc.
- Connector** 6SN or 7C for up to 10L, 8SN for above 10L.
 If you need a different connector, please instruct on the order.
 *Please refer to the [When you order a sampling bag] page
 for the different types of connectors available.

Capacity (Liter)	Size(mm) (Length×Width)
1 L	150×250
2 L	220×250
3 L	300×250
5 L	400×250
10 L	350×500
20 L	500×500
30 L	700×500
50 L	600×750
100 L	1000×1000



Other sizes can also be manufactured. Inquiries on matters other than the above are also welcome.

Skypia® Bag

- **FILM** Materials : Ethylene-vinyl alcohol copolymer (EVOH)
Thickness : 55 μ m
Melting point : 165°C.
- **Features** Skypia® Bag is made of multilayered (lamine) EVOH-based films. Since the front and back are the target structure, both sides can be welded together. It is excellent in gas barrier properties, is adsorption resistant, heat resistant, and has gas barrier properties.
- **Applications** Automobile Interior Material VOC Emissions Testing
- **Connector** 6SN or 7C for up to 10L, 8SN for above 10L.
If you need a different connector, please instruct on the order.
*Please refer to the I [When you order a sampling bag] page for the different types of connectors available.
- **Size** Other sizes can also be manufactured. Inquiries on matters other than the above are also welcome.

Capacity (Liter)	Size(mm) (Length×Width)
10 L	500×350
50 L	500×900
300 L	1350×1000

※Skypia® is a registered trademark of Daizo Co., Ltd.

Fluororesin Bag

- **FILM** Material : FEP (Fluorinated Ethylene - Propylene Copolymer)
Thickness : 50 μ m
Heat Resistant Temperature : 70°C
- **Characteristics** Excellent in chemical and heat resistance.
- **Applications** Organic solvents
- **Connector** PVDF

Capacity (Liter)	Size(mm) (Length×Width)
1 L	175×250
2 L	220×250
3 L	300×250
5 L	330×330
10 L	350×500
20 L	500×500



BS Bag

- **FILM** Material : Vinyl Alcohol Series Polymer Film
Thickness : 53 μ m
Heat Resistant Temperature : 120°C
- **Characteristics** Low background. Superior solvents resistance, heat and permeation resistance.
- **Applications** Diffusion gas from materials, Deodorization usability test, Inorganic gas, etc.
- **Connector** Please choose 6ST or 7ST or 8ST or 6K or 8K
*Please refer to the 「When you order a sampling bag」 page for the different types of connectors available.

Capacity (Liter)	Size(mm) (Length×Width)
1 L	150×250
2 L	220×250
3 L	300×250
5 L	400×250
10 L	350×500
20 L	500×500
30 L	700×500
50 L	600×750



Other sizes can also be manufactured. Inquiries on matters other than the above are also welcome.

FM Bag

- **FILM** Material : PET-based Multi-layer Structure Film
Thickness : 57 μ m
Heatresistant temperature : 90°C
- **Characteristics** Low background. Superior solvents resistance
- **Applications** Diffusion gas from materials, Deodorization usability test, Inorganic gas, etc.
- **Connector** Please choose 6ST or 7ST or 8ST or 6K or 8K
*Please refer to the 「When you order a sampling bag」 page for the different types of connectors available.

Capacity (Liter)	Size(mm) (Length×Width)
1 L	150×250
2 L	220×250
3 L	300×250
5 L	400×250
10 L	350×500
20 L	500×500
30 L	700×500
50 L	600×750




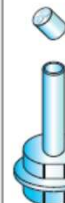
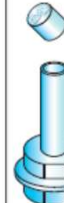






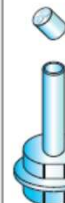
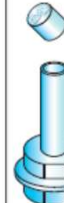





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When you order a sampling bag

Please specify the following:

Example > ① Tedlar® Bag — ② 10L — ③ A — ④ 6SN

① Material	Flek-Sampler® / Tedlar® Bag / PVDF Bag / Skypia® Bag / Fluororesin Bag / BS Bag / FM Bag																																				
② Capacity (Liter)	1L, 2L,3L,5L,10L,20L,30L,50L,100L, Odor size(0.1 ~ 500L)can also be manufactured upon request.																																				
③ Connector Type	<div style="display: flex; justify-content: space-around; align-items: center;"> <div style="border: 1px solid black; padding: 5px; text-align: center;">A Type</div> <div style="border: 1px solid black; padding: 5px; text-align: center;">B Type</div> <div style="border: 1px solid black; padding: 5px; text-align: center;">C Type</div> <div style="border: 1px solid black; padding: 5px; text-align: center;">D Type</div> </div> <p>The price varies depending on the type,quantity and the location of the connectors. Please contact us before ordering If there is a request on where the connector should be installed, please specify on the order.</p>																																				
④ Connector 6SN or 7C for up to 10L, 8SN for above 10L (excluding Flek-Sampler, BS Bag, FM Bag)	<table border="1" style="width: 100%; text-align: center;"> <thead> <tr> <th>Mark</th> <th>6SN</th> <th>8SN</th> <th>7C</th> <th>6ST</th> <th>7ST</th> <th>8ST</th> <th>6K</th> <th>8K</th> </tr> </thead> <tbody> <tr> <td>Name</td> <td colspan="2">Sleeve</td> <td>Connector</td> <td colspan="3">Sleeve</td> <td colspan="2">Cock</td> </tr> <tr> <td>Material</td> <td colspan="3">PVDF</td> <td colspan="5">PTFE</td> </tr> <tr> <td>Type</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table>	Mark	6SN	8SN	7C	6ST	7ST	8ST	6K	8K	Name	Sleeve		Connector	Sleeve			Cock		Material	PVDF			PTFE					Type								
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