

TEDLAR® PVF FILM  
SOUND BARRIER BAG APPLICATION  
FOR HIGH WAY  
BY DUPONT POLYMERS

## DUPONT TEDLAR® PVF FILM FOR SOUND BARRIER BAG

### WEATHERABILITY

DuPont TEDLAR® PVF film withstands the ravages of weather and ultraviolet light that destroy other surfaces and finishes.

### CHEMICAL RESISTANCE

PVF film has excellent resistance to chemicals, solvents and stains. It retains its film form and strength even when boiled in strong acids and bases.

### THERMAL PROPERTIES

PVF film stays tough and flexible from -70 to 150.

### HEAT SEALING

Typical applications for Tedlar® heat sealable film are fabrication of bags for use in gas sampling, encapsulation of sound absorbing coiling tiles and sound barrier bag. Since there are many heat-seal equipment suppliers and models available, heat-seal recommendation is presented as a guideline to enable fabricators to optimize heat-seal bond values on their equipment.

### POLLUTION PROPERTIES

PVF film stays clean from pollution. That is because PVF's low frictional coefficient.

### TGY85SL2 TECHNICAL DATA

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EXAMINATION ITEM	METHOD		DATA	UNIT
THICKNESS			21±4	micron
TENSILE STRENGTH	JIS Z 1702	MD	7.50	kgf/mm <sup>2</sup>
		TD	12.8	kgf/mm <sup>2</sup>
ELONGATION	JIS Z 1702	MD	63.6	%
		TD	33.8	%

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BURSTING STRENGTH	JIS P 8112		2.1	kgf/mm <sup>2</sup>
EQUILIBRIUM MOISTURE RATIO	JIS K 7209		1.2	%
			54	g/m <sup>2</sup> /24h
MOISTURE ABSORPTION	ASTM E 96		0	
UV TRANSMISSION RATIO				
TEAR STRENGTH	ASTM D 1992	MD	9.6	gf
		TD	5.9	gf
TEAR RESISTANCE	ASTM D 1004	MD	370	gf
		TD	370	gf
RANG OF USING TEMPERATURE			-70~150	

## SOUND ABSORPTION COEFFICIENT TEST SPECIFICATION

METHOD: JIS A 1409

SAMPLE: Glasswool with and without TEDLAR® TGY85SL2 PVF film.

### 1. Testing room

Room capacity: 513 m<sup>2</sup>

Surface area: 382 m<sup>2</sup>

Floor area: 72 m<sup>2</sup>

Sound remain time of empty room: 10s(500Hz), 8s(100Hz)

### 2. Examination Sample and Install

Sample area: 10 m<sup>2</sup> install a sample in the middle of the room.

### 3. Measurement Frequency Extent

Using a 1/3 octave band. Central frequency: 100,125, 160, 200, 250, 315, 400, 500, 630, 800, 1000, 1250, 1600, 2000, 2500, 3150 and 4000Hz.

### 4. Calculate Process of Sound Absorption Coefficient

$$\alpha = 55.3V / cS \cdot (1 / T_1 - 1 / T_2)$$

- $\alpha$  : Sound absorption Coefficient
- $V$  : Room capacity ( $m^3$ )
- $S$  : Sample area ( $m^2$ )
- $T_1$  : Sound remain time of install the sample in the room. (s)
- $T_2$  : Sound remain time of empty room. (s)
- $c$  : Sound speed of the air (m/s)
- $c = 331.5 + 0.6t$
- $t$  : Air temperature( )

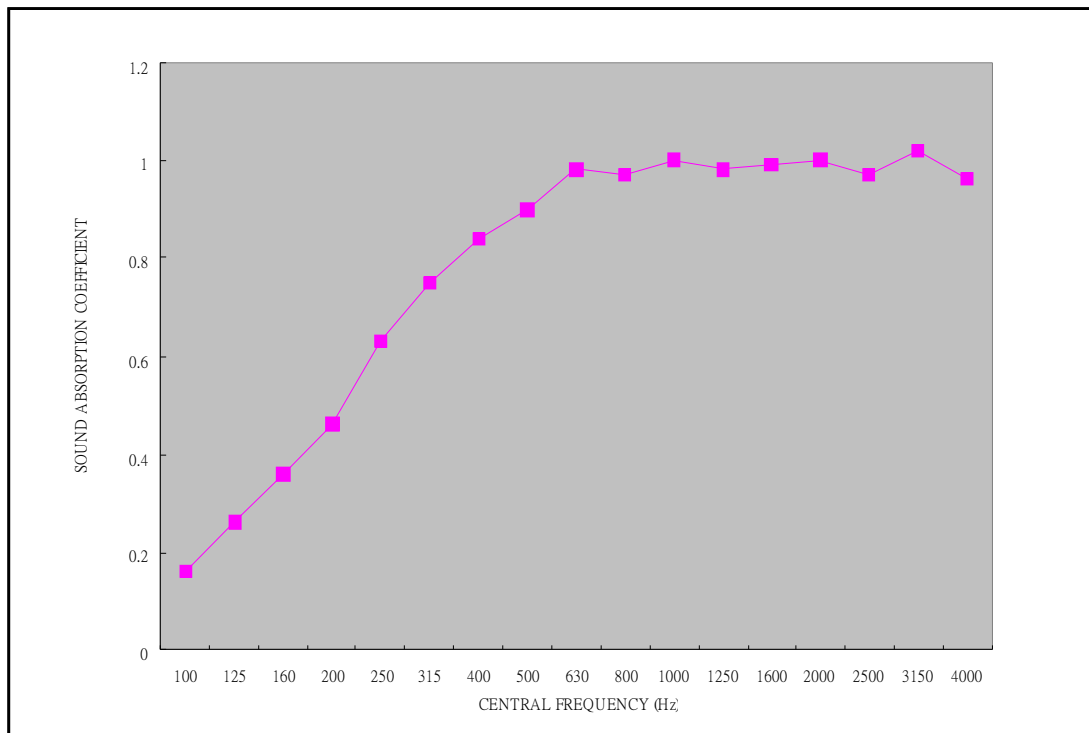
## SOUND ABSORPTION COEFFICIENT TEST DATA GLASSWOOL WITHOUT TEDLAR®

EXAMINATION SAMPLE: Glasswool Sound Absorption Board with covered by TEDLAR® TGY85SL2 PVF film.

SAMPLE SIZE: 500 X 650MM, thickness: 50mm, Density: 32kg/cu.m

MEASUREMENT CONDISTION: Sample area 9.75sq.m(2.5x 3.9m). Stick with the hard wall.

CENTRAL FREQUENCY (Hz)	100	125	160	200	250	315	400	500	630	800	1000	1250	1600	2000	2500	3150	4000
SOUND A.C.	0.16	0.26	0.36	0.46	0.63	0.75	0.84	0.9	0.98	0.97	1	0.98	0.99	1	0.97	1.02	0.96



## SOUND ABSORPTION COEFFICIENT TEST DATA GLASSWOOL WITH TEDLAR®

EXAMINATION SAMPLE: Glasswool Sound Absorption Board with covered by  
TEDLAR® TGY85SL2 PVF film.

SAMPLE SIZE: 500x650mm, Thickness; 50mm, Density:32kg/cu.m

MEASUREMENT CONDISTION: Sample area 9.75 sq.m (2.5x3.9m). Stick with the  
hard wall.

CENTRAL FREQUENCY (Hz)	100	125	160	200	250	315	400	500	630	800	1000	1250	1600	2000	2500	3150	4000
SOUND A.C.	0.15	0.28	0.42	0.48	0.67	0.86	0.97	0.98	1.08	1.04	1.03	0.99	0.87	0.8	0.75	0.68	0.63

