

DIAFIX™

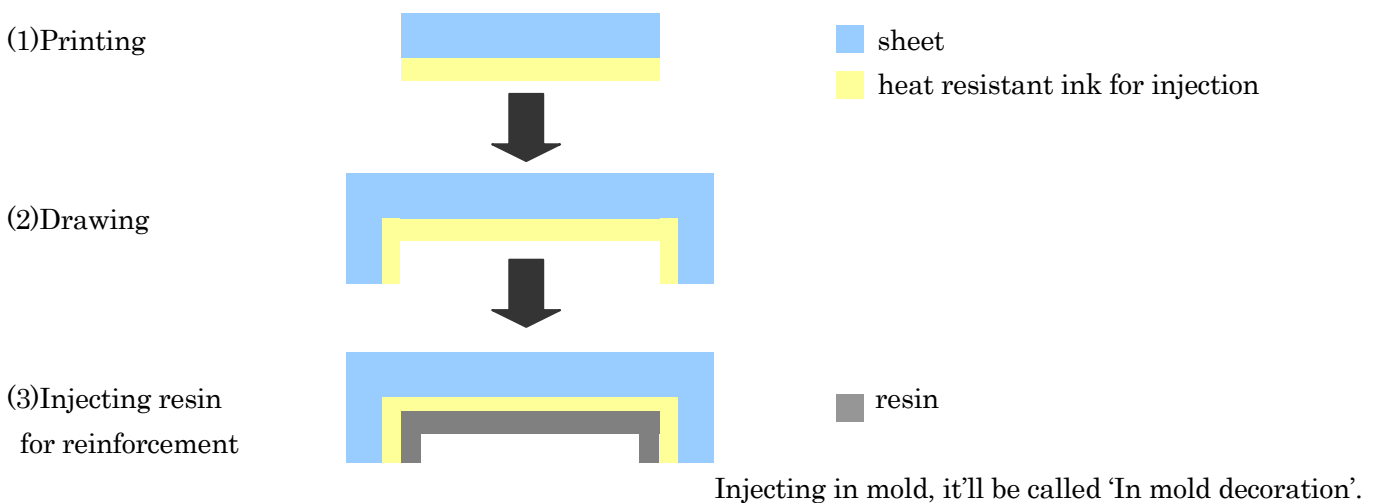
■ Characteristics

1. Has good processability nearly equal to that of PVC so various secondary fabrication is possible and also has an excellent heat seal characteristic which APET sheet does not have.
2. Good printability
3. The gas generated from burning is also clean.
4. By means of multilayer technology, the material design which is impossible for PETG alone (such as heat resistance, chemical resistance and strength) is possible which enables wider applications in comparison to PVC sheet.

■ Applications

1. Plastic cards
 - Magnetic Stripe cards
 - Smart cards
 - Contactless smart cards
2. IMD (In-mold Decoration) molding
 - Switches for mobile phone
 - Heater control panels for automobile
 - Sheets to sterilize with Gamma rays

■ IMD molding



- Various patents are being applied for by many companies about IMD molding and in the execution
- of IMD molding, please note it enough.

■ Specifications

Thickness	Both side Glossy finish	0.2~0.6mm
	Matt finish (one or both sides)	0.05~0.6mm
Width	Single-layer	280~1400mm
	Multilayer	240~1300mm
Color	Clear,white,etc.	

* Slit (roll), Cut (sheet) are also available.

■ Physical properties

Impact resistance (PETG)

Items	Unit	Test method	Over coat (clear)		Core (white)	
			PG-CHI (FG)	PG-C Anti-bacteria	PG-WHI (FG)	PG-WEB
Gravity	—	JIS K 7112	1.27	1.27	1.35	1.45
Tensile strength	N/mm ²	JIS K 6734	44	40	41	42
Elongation at break	%	JIS K 6734	320	320	320	285
Flexural modulus	N/mm ²	JIS K 7203	2000	2000	2100	2700
Softening temperature	°C	JIS K 6734	60	62	62	63
Vicat softening point	°C	JIS K 7206 (A)	77	77	78	78
Thermal expansion (MD)	%	JIS K 6734 (100°C × 10min.)(*1)	-4	-4	-2	-2
Thermal expansion (TD)			-2	-1	-1	-1
Charpy impact test	KJ/m ²	JIS K 7110	10	10	10	15
Brittleness temperature	°C	ASTM D 1790	-22	-22	-33	—
Coefficient of liner thermal expansion	—	JIS K 7197	7.0×10^{-5}	7.0×10^{-5}	7.8×10^{-5}	5.0×10^{-5}
Light transmission	—	MPI method(*2)	—	—	1.7	2.1
Rz (face)	μm	JIS B 0601	7	7	10	10
Rz (reverse)			15	15	20	20
Oxygen index	%	JIS K 7201	21.1	21.1	20.8	—
Recommended press temperature	°C	—	110~120	110~120	110~120	110~120

(*1) Thickness of specimen: Over coat, 0.1mm Core, 0.28 mm (*2) Thickness of specimen: 0.28 mm

◆ Above figures are typical determined value but not guarantee figures.

Heat resistance (PC alloy and multi-layer)

Items	Unit	Test method	Over coat (clear)		Core (white)	
			PG-MCT	PA-C	PG-WHT (ASHC)	PG-WET
Gravity	—	JIS K 7112	1.24	1.23	1.45	1.40
Tensile strength	N/mm ²	JIS K 6734	45	57	42	52
Elongation at break	%	JIS K 6734	175	180	120	60
Flexural modulus	N/mm ²	JIS K 7203	2300	2650	2200	3000
Softening temperature	°C	JIS K 6734	71	110	72	80
Vicat softening point	°C	JIS K 7206 (A)	(*3)	150	110	125
Thermal expansion (MD)	%	JIS K 6734 (100°C × 10min.)(*1)	0	0	-1	0
Thermal expansion (TD)			0	0	-1	0
Charpy impact test	KJ/m ²	JIS K 7110	12	20	NB	23
Brittleness temperature	°C	ASTM D 1790	-53	-55 \geq	—	-51
Coefficient of liner thermal expansion	—	JIS K 7197	6.2×10^{-5}	7.0×10^{-5}	7.0×10^{-5}	4.3×10^{-5}
Light transmission concentration	—	MPI method(*2)	—	—	2.2	1.4
Rz (surface)	μm	JIS B 0601	10	7	7	7
Rz (reverse)			20	15	15	15
Oxygen figure	%	JIS K 7201	—	—	—	—
Recommended press temperature	°C	—	110~120	140~145	130	135~140

(*1) Thickness of specimen : Over coat, 0.1mm Core, 0.28mm (*2) Thickness of specimen : 0.28mm

(*3) Not determined because of multi-layer sheet consisting of various kinds of materials.

◆ Above figures are typical determined value but not guarantee figures.

■ Important Safeguards

Directions for safe use are prepared for the purpose of maintaining the safety of customers, your clients and property. For the products carry warning and caution, please read the following details.



If this product is mishandled defiance of this sign, you may have a risk of death or serious injury.

- Absolutely do not implant, insert in the body.
- Never use for any applications for which the material will be left in the body.
- In case of using for medical devices, foodstuff, other special purpose applications, please test and make certain that you can do so safely.



Mishandled this product in defiance of this sign, you may have a risk of serious injury and property damage.

- During forming and carrying, wear proper protective equipment to prevent possible injury to hands and fingers.
- Gases generated from decomposed and low molecular substances or residual solvent will be formed upon melting so the installation of effective local ventilation facility is recommended.
- Prior to disposal, conform to the law about waste-disposal and cleaning work. When you dispose of the material, entrust authorized industrial waste-disposal service or city's Sanitation Bureau.
- The burning of waste need a refuse incinerator and conform to the law about anti-pollution.