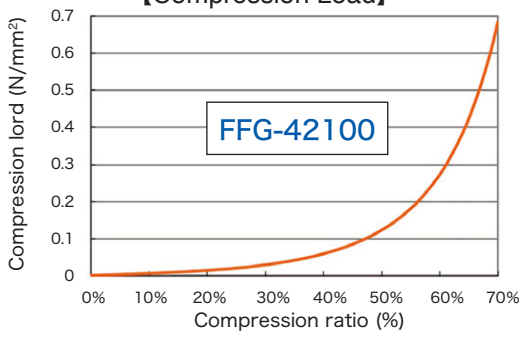
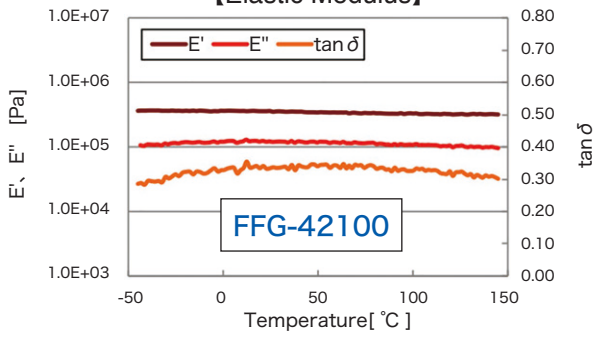
Pantel GEL

Features : Low Compressibility, Wide Range of Temperature

【Compression Load】



【Elastic Modulus】



Features of Pantel GEL : Waterproof

【Evaluation Detail】

Test Method 《Equivalent to IPX7》	Specimens were soaked at a depth of 2m. Evaluating by color change of water ingress detector shown in the yellow dot circles on the right side.
Material	FFG-43060
Specimen Dimensional Detail※	Dimension-1：W1.14mm×H0.98mm Dimension-2：W2.55mm×H1.27mm

※ Specimen Dimension：50×50mm Dispensed on ABS board(1mmt)

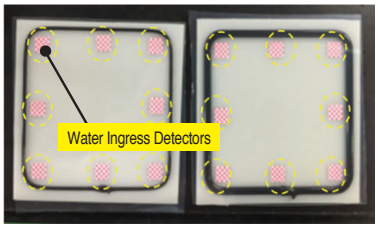


Fig1. Dimension-1(Left), Dimension-2(Right)

【Result】

Specimen Dimension	Compression Ratio				
	10%	20%	30%	40%	50%
Dimension-1	Pass	Pass	Pass	Pass	Pass
Dimension-2	Pass	Pass	Pass	Pass	Pass

Waterproof is equivalent to IPX7 at more than 10% of compression ratio

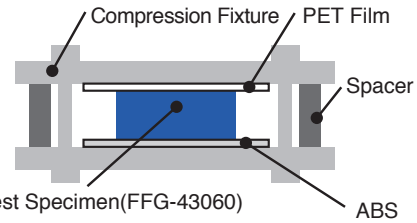


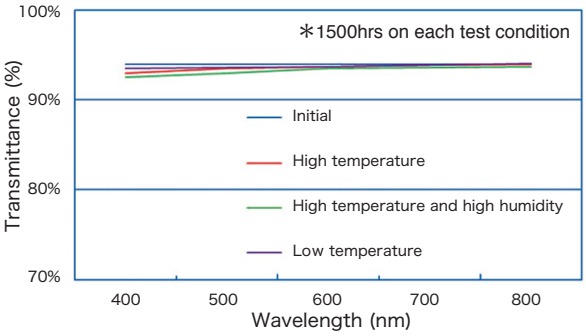
Fig2. Test Setup(under compression)

Features of Pantel GEL : Shock Absorbing Property of a Thin Film

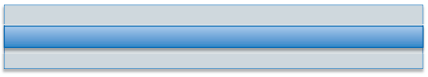
【Transparency(Transmittance)】

High transmittance in visible light range

Wavelength (nm)	Initial	High Temp 85°C	High Humidity/Temp 65°C/95%	Low Temp -40°C
400	94%	93%	93%	94%
800	94%	94%	94%	94%

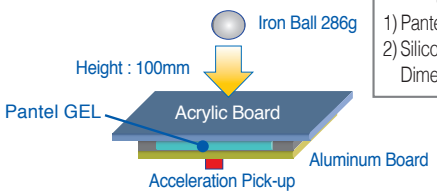


Basic Structure(The Thinnest Thickness : 0.1mm)



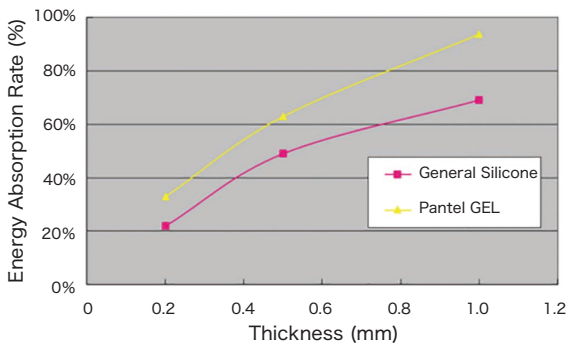
Separator Film 50μm
Pantel GEL 100μm
Separator Film 50μm

【Shock Absorbing Property】



Test Specimens
1) Pantel GEL 0.2t, 0.5t ,1t
2) Silicone rubber with the above thickness
Dimension : 45mm×35mm

Energy absorption rate = 1-(Impact acceleration with a shock absorbing sheet ÷ Impact acceleration without a shock absorbing sheet)×100



SEKISUI POLYMATECH CO., LTD.

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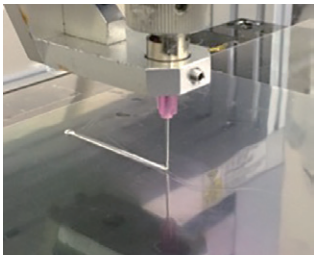
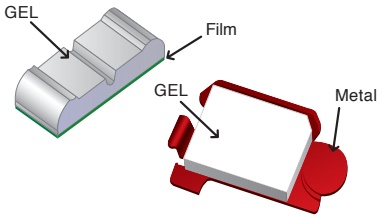
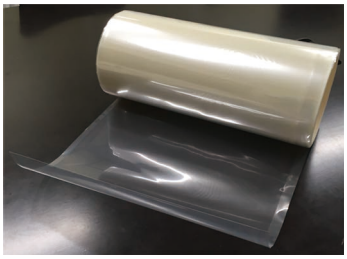
Product Lineup of Pantel GEL

	Dispensable Type (Raw Material Only)	Moldable Type (Molded Parts)	Sheet Type (Available in Roll Format or Sheet Format)
Geometry			
	• Heat cure type : 80°C/10mins • Room temperature cure type : 25°C/24h	• Over-molded with films, resins and metals. • No molding tool required for a thin / thick sheet.	• Comes with PET liner on either side. • Integrable with PET stiffener for adhering.
Advantages	• Can be dispensed at any area. • Fills in narrow and fine areas.	• One-side 3D shapes can be molded. • Can add double-face tapes on the film. • Reduced the tact time by removing the post assembly process.	• Thin film thickness lineup between 100 and 500 μm. • High transparency. • Can be fixed in location with PSA.
Use Examples	• Works well in contour and complex geometries. • Need assembly with lower loads.	• Works well in contour and complex geometries. • Need assembly with lower loads.	• When simple assembly required. • When there is a limited gap.

Characteristics of Pantel GEL

	Dispensable Type		Filling Type	Moldable Type・Sheet Type	
Product Grade	FFG-43060 Heat Curing	FFG-44060 Room Temperature Curing	FFG-46140 Super Low Viscosity	FFG-42100 Flexible	FFG-47060 Printable・High Mechanical Properties
Before Cure					
Viscosity Pa・s	1000	1000	0.5	—	—
After Cure					
Hardness (Penetration)	60	60	80※	100	60
Tensile Strength MPa	0.7	0.6	—	0.1	1.7
Elongation %	790	250	—	740	700
Compression Set (25% of compression 70°C)	＜10	＜10	—	＜5	＜10
Compression vs Load (50% of compression)	0.4	0.4	—	0.1	0.4

※ Used 1/4-cone for measuring penetration.