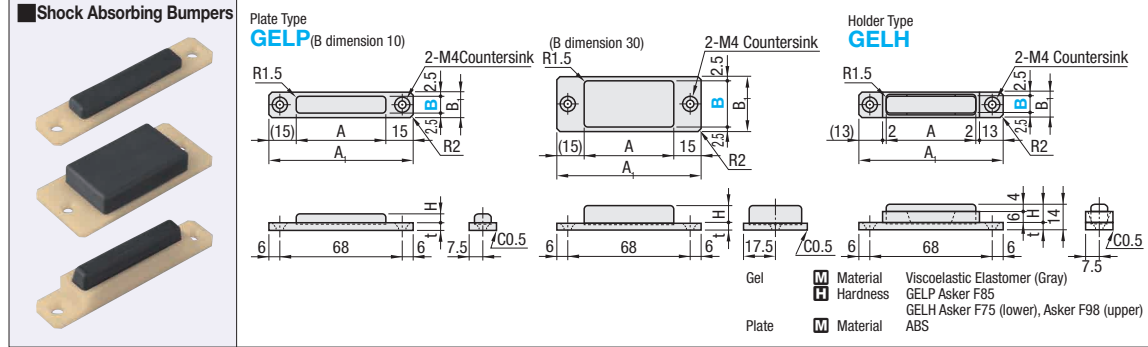# Shock Absorbing Bumpers, Shock Absorbing Foam

Extra Low Hardness Urethane Sheets, Silicone Gel Sheets

■New bumpers provided with shock and sound absorbing effect, made of soft shock-absorbing gel.
■Long and narrow shape with enlarged pressure contact area more than Round Type enhanced shock absorption. See **P.410** for Circular Type.

■Shock Absorbing Bumpers

Plate Type **GELP** (B dimension 10)
(B dimension 30)
Holder Type **GELH**

Gel **M** Material Viscoelastic Elastomer (Gray)
H Hardness GELP Asker F85
GELH Asker F75 (lower), Asker F98 (upper)
Plate **M** Material ABS

Part Number		A	H	A₁	B₁	t	Unit Price
Type	B						
GELP Plate Type	10	50	5	80	15	4	
	30		10		35		
GELH Holder Type	10		10		15		

Ordering Example Part Number **GELP10**

Example GELP
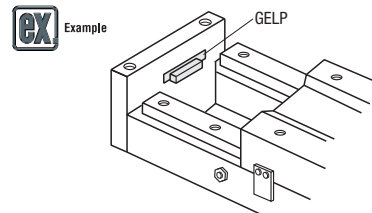
■20% Compressive Load Test Results

Part Number	GELP10	GELP30	GELH10
20% Compression Load Average (kgf)	7.2	29.2	0.9

• Test Conditions
A static compression load measurement test causing the 80% thickness is repeated 3 times. Above are the mean values of three measurement results.
These are not guaranteed values but an example as a set of measured values.

■Precaution for Use
・Do not stick or cut with sharpened objects.
・Do not tear or twist.
・Insert it only from the vertical direction.
・Keep away from fire.
・Do not use detergents for cleaning.
・Replace it when broken.

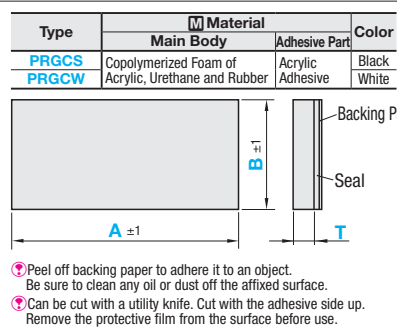### ■Compressive Load Test Result (Plate Type)
Compression Stress
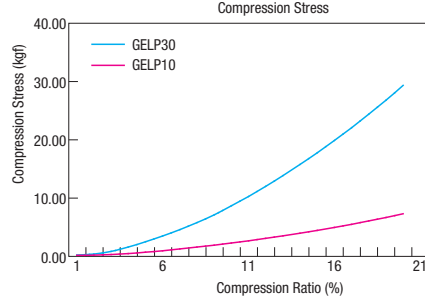
■Compressive Load Test Result (Holder Type)
Compression Stress
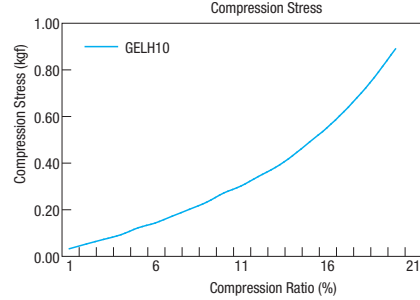
■Copolymerized Acrylic, Urethane, and Rubber for sound and vibration dampening. Best suited for receivers for workpieces.

■Shock Absorbing Foam
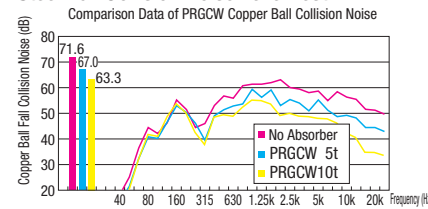

Type	**M** Material		Color
	Main Body	Adhesive Part	
PRGCS	Copolymerized Foam of Acrylic, Urethane and Rubber	Acrylic Adhesive	Black
PRGCW			White

■Properties

Item	PRGCS	PRGCW
Density	0.32g/cm³	
Tensile Strength	4.5kg/cm²	
Elongation	250%	
Impact Resilience Rate	0.1% or Less	

■Features
・Excellent sound dampening and vibration absorbing characteristics.
・Flexible material can be pasted on curved surfaces with ease.
・Lightweight material can be applied on large panel areas.
・Best suited for human body protection. Can be pasted in multi-layers where more protection is needed.
Adhesive Strength (90 Degree Peeling Strength): 19.6N/25mm Width (When affixed to SUS304)
Products of thickness 5T and 10T are laminated.

Peel off backing paper to adhere it to an object. Be sure to clean any oil or dust off the affixed surface.
Can be cut with a utility knife. Cut with the adhesive side up. Remove the protective film from the surface before use.

Part Number		T Dimension Tolerance	A Selection	B Selection	Unit Price				
Type	T				B100	B200	B300	B400	B500
PRGCS PRGCW	3	±1	100/400/800	100					
	5	±1	100/400/800	200/300/400/500					
	10	±2	100/400/800						

Ordering Example Part Number - A - B **PRGCS3 - 100 - 200**

Steel Ball Collision Noise Level Test
Comparison Data of PRGCW Copper Ball Collision Noise

Item	No Absorber	PRGCW5	PRGCW10
Collision Noise (dB)	71.6	67	63.3
Sound Pressure	-	40% Reduced Sound Pressure	60% Reduced Sound Pressure

* A steel ball (Ø20, 36g) is dropped on a wooden base from a 55cm height, and the sound pressure level is measured with a microphone at a distance of 50m, positioned 50cm above the ground.

■With more resistance to permanent compression deformation than conventional urethane, it is more durable. The softness of Shore A15 is about firm gelatin.

■Extra Low Hardness Urethane Sheets

SUTLL (No Adhesive)
SUTLLA (Adhesive)

M Material Extra Low Hardness Urethane (Black)
H Hardness Shore A15 (High Impact Resilience)

■Accuracy Standards
The tolerances are verified at 23°C±2 and 40 ~ 80% humidity.
Edges may remain white after cutting.
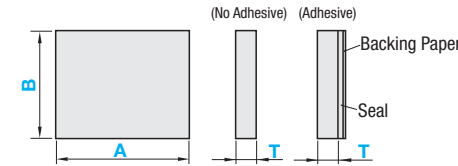
• T Dimension Tolerance

5, 10	15~25	30
±0.4	±0.8	±1.0

• Dimensional Tolerances of A and B

200mm or Less	205~250
+3 / 0	+5 / 0

Part Number	5mm Increment		
Type	T	A	B
No Adhesive **SUTLL**	5 / 10 / 15 / 20 / 25 / 30	10~250	10~250
Adhesive **SUTLLA**			

A≥B≥T

Ordering Example Part Number - A - B **SUTLL5 - 250 - 100**

Part Number		A	Unit Price		
Type	T		B		
			10~100	105~200	205~250
No Adhesive **SUTLL** (x1.0)	5	10~100		-	-
		105~200			-
		205~250			
	10	10~100		-	-
		105~200			-
		205~250			
	15	10~100		-	-
		105~200			-
		205~250			
Adhesive **SUTLLA** (x1.2)	20	10~100		-	-
		105~200			-
		205~250			
( ) Material Multiplier	25	10~100		-	-
		105~200			-
		205~250			
	30	10~100		-	-
		105~200			-
		205~250			

The price of this product is the unit price shown in the table multiplied by material multiplier:
(Ex.) Part Number - A - B **SUTLLA10 - 200 - 150**
(Unit Price) x Material Multiplier) = Unit Price of Standard Type

■Features of Extra Low Hardness Urethane
・High physical strength that cannot be obtained from conventional soft materials.
・MISUMI original material that suppresses self-adhesion, which is the problem of soft material.
・This material has high resistance against impact, and little permanent compression.
・It has the same properties as ether polyurethane.

■Comparison of Characteristics

Properties	Extra Low Hardness Urethane	Nitrile	Ethylene	Silicon	Fluorine
Impact Resilience	◎	○	○	◎	△
Compression Set	◎	◎	○	◎	○
Abrasion Resistance	◎	◎	○	×	◎

◎- Excellent ○- Good △- Acceptable ×- Not Acceptable

■Silicone Gel Sheets
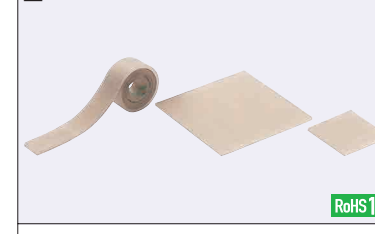
RoHS10

Part Number		**M** Material	**H** Hardness (Penetration)	Color
Type				
Square Type	Band Type			
GELS	**GELT**	Silicone	55	Milky White

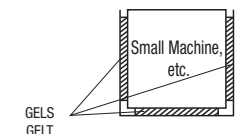Operating Temperature Range: -40 ~ 100°C
The values of hardness are reference values.
Penetration: JIS K2207 See **P.410**.

Square Type

Band Type

Part Number		A Selection	Unit Price			
Type	T		A			
			10	20	50	100
GELS (Square)	1	50	-	-		
	2	100				
	3					
GELT (Band)	1	10			-	-
	2	20				
	3					

Silicone is an artificial compound made from silicone.
It can be cut with adhesive side up with a utility knife, etc.
Gel surface has an antistick treatment applied.
Reference: Adhesive Strength (180 Degree Peeling Strength): 14.5N/25mm Width (when affixed to SUS304)
As pressure sensitive adhesive is used, be sure to apply sufficient pressure so that the joint sections may firmly adhere to each other.
75μm PET film is used as base material.
Oil may ooze out to the backing paper.

Ordering Example Part Number - A **GELS1 - 50**

Example

Can be used as vibration control materials and cushioning materials.

Small Machine, etc.

GELS GELT