

Ceramic Urethane Sheets

These MISUMI original urethane sheets are unique mixture of ceramic particles. Excel in abrasion resistance against wire, and smooth in their machined surfaces though they are low in hardness.

Type	Type		Material	Hardness	Color	Accuracy Standards
	No Adhesive	Adhesive				
Mold Surface Type	UTSCS	UTSCSA	Ceramic Urethane (Ether Polyurethane)	Shore A95	Natural Color	T Dimension Tolerance
	UTSCH	UTSCHA				
	UTSCM	UTSCMA				
Machined Surface Type	UTSCHK	UTSCHKA	Ceramic Urethane (Ether Polyurethane)	Shore A95	(Gray)	A, B Tolerance
	UTSCMK	UTSCMKA				
	UTSCLK	UTSCLKA				

T Dimension Tolerance		
T	Mold Surface Type	Machined Surface Type
2-4	±0.3	±0.5
5-10	±0.4	

A, B Tolerance	
A, B	Tolerance
200 or Less	±0.5
201-300	±1.0
301-400	±1.2
401-500	±1.5

Properties P389
 Mold Surface Type has glossy smooth surface but not slippery. Machined Surface Type has ground surface on one side improving sliding property.

Standard

(Mold Surface)

No Adhesive Adhesive

(Machined Surface)

No Adhesive Adhesive

Hole Machining Details

Hole Type

1-Hole 1H

2-Hole 2H

3-Hole 3H

4-Hole 4H

6-Hole 6H

For Adhesive Type T4 or more, the adhesive tape may tear from the body. Please use it as temporary fixing, or in combination with bolt fixing.
 Temperature limit for seals is 80°C.

Standard Type, Mold Surface

Part Number		T	1mm Increment	
Type			A	B
No Adhesive	Adhesive	2	10-500	10-500
UTSCS	UTSCSA (Shore A95)	3		
UTSCH	UTSCHA (Shore A90)	4		
UTSCM	UTSCMA (Shore A70)	5		
UTSCL	UTSCLA (Shore A50)	6		
		8		
		10		

Standard Type, Machined Surface

Part Number		T	1mm Increment	
Type			A	B
No Adhesive	Adhesive	3	10-200	10-200
UTSCSK	UTSCSKA (Shore A95)	4		
UTSCHK	UTSCHKA (Shore A90)	5		
UTSCMK	UTSCMKA (Shore A70)	6		
UTSCLK	UTSCLKA (Shore A50)	8		
		10		

Hole Type, Mold Surface

Part Number		1mm Increment (A≥B≥T)		0.5mm Increment		Screw Nominal Dia. Selection	
Type	Nominal	T	A	B	F	G	N (Through Hole) Z (Counterbored Hole)
Mold Surface Type	1H	2	25-500	25-500	5-495 (1H)	5-495 (1H, 2H, 3H)	3
No Adhesive	2H	3					
Adhesive	2H	4					
UTSCS	3H	5					
UTSCSA	4H	6					
UTSCH	6H	10					
UTSCHA							4

Hole Type, Machined Surface

Part Number		1mm Increment (A≥B≥T)		0.5mm Increment		Screw Nominal Dia. Selection	
Type	Nominal	T	A	B	F	G	N (Through Hole) Z (Counterbored Hole)
Machined Surface Type	1H	3	25-200	25-200	5-195 (1H)	5-195 (1H, 2H, 3H)	3
No Adhesive	2H	4					
Adhesive	2H	5					
UTSCSK	3H	6					
UTSCSKA	4H	8					
UTSCHK	6H	10					
UTSCHKA							4

Standard
 Part Number - A - B
 UTSCLK5 - 100 - 30

Hole Type
 Part Number - A - B - F - G - Screw Nominal Dia.
 UTSCMK2H5 - 100 - 50 - F80 - G25 - N3

Adhesive Charge: Adhesive Type Price = Unit Price + Adhesive Charge

Adhesive Charge	Unit Price						
	A	10-50	51-100	101-200	201-300	301-400	401-500
10-50							
51-100							
101-200							
201-300							
301-400							
401-500							

Mold Surface Type

Part Number	Type	T	Unit Price													
			A	10-50	51-100	101-200	201-300	301-400	401-500							
No Adhesive	UTSCS	2	10-50													
Shore A95 (x1.0)	UTSCH	4	10-50													
Adhesive	UTSCHK	5	10-50													
Price in the Table + Adhesive Charge	UTSCSKA	6	10-50													
	UTSCHKA	8	10-50													
() Material Multiplier	UTSCMKA	10	10-50													

Hole Machining Charge (Ex.)

Part Number - A - B - F - G - Screw Nominal Dia. >>>
 UTSCMK2H5 - 100 - 50 - F80 - G25 - N3 >>>
 (Machined Surface Type Unit Price) + (Hole Machining Charge) = (Hole Type Unit Price)

(Ex.)
 Part Number - A - B >>>
 UTSCLKA5 - 100 - 100 >>>
 (Machined Surface Type Unit Price) + (Adhesive Charge) = (Adhesive Type Unit Price)

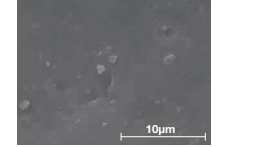
Part Number	Type	T	Unit Price													
			A	10-50	51-100	101-200	201-300	301-400	401-500							
No Adhesive	UTSCM	2	10-50													
Shore A70 (x1.0)	UTSCHL	4	10-50													
Adhesive	UTSCHLKA	5	10-50													
Price in the Table + Adhesive Charge	UTSCMKA	6	10-50													
() Material Multiplier	UTSCLKA	8	10-50													
	UTSCLKA	10	10-50													

Machined Surface Type

Part Number	Type	T	Unit Price				
			A	10-50	51-100	101-150	151-200
No Adhesive	UTSCSK	3	10-50				
Shore A95 (x1.0)	UTSCHK	4	10-50				
Adhesive	UTSCSKA	5	10-50				
Price in the Table + Adhesive Charge	UTSCHKA	6	10-50				
() Material Multiplier	UTSCMKA	8	10-50				
	UTSCLKA	10	10-50				

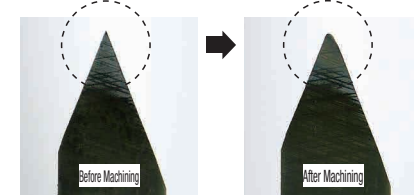
Part Number	Type	T	Unit Price				
			A	10-50	51-100	101-150	151-200
No Adhesive	UTSCMK	3	10-50				
Shore A70 (x1.0)	UTSCLK	4	10-50				
Adhesive	UTSCMKA	5	10-50				
Price in the Table + Adhesive Charge	UTSCLKA	6	10-50				
() Material Multiplier	UTSCLKA	8	10-50				
	UTSCLKA	10	10-50				

Enlarged Photo (x5,000)



Please be advised that white section seen on the photo is ceramic powder particles occurring during the manufacturing process. These micro-particles are very fine not to cause any surface roughness even when they fall off.

Change after Ceramic Urethane is Machined



Change after ceramic urethane round bar is machined (Lathe: 600rev/min.) for 2 minutes

Taber Abrasion Test Results

Test	Material	Standard Urethane	Super Abrasion Resistant Urethane	Abrasion Resistant Urethane	Ceramic Urethane
Abrasion Test (Taber Method)		197.3	33.9	73.8	101
Abrasion Volume (mm ³)					

Abrasive wheels are applied to the sample using a fixed weight for a specified number of cycles. From the weight loss of the sample it is possible to measure the abrasion resistance of a material. The above values are measured examples, not guaranteed ones.

Testing Method
 JIS K 7204: 1999 "Plastics - Determination of Resistance to Wear by Abrasive Wheels"
 Abrasive Wheel: H-22
 Load: 9.8N
 Number of Strokes: 1,000
 Test Parameter: 1

The values are not guaranteed but measured ones.