



TCC-6072

Technical Data Sheet
Translucent Casting Urethane
 Extremely tough and durable
 Shore D 72

DESCRIPTION

Fast setting with quick demolding, TCC-6072 is a moisture resistant tough urethane with wear and abrasion resistant properties. Well suited for nesting fixtures, core boxes, gating, sculptures, prototypes models and special effects props.

CHARACTERISTICS

- Fast-setting polyurethane system that is extremely tough and durable
- Can accommodate uneven surfaces without fracture
- Good impact resistance
- Easily pigmentable / accepts variety of colors, including fluorescent colors
- Can be cast into tin catalyzed silicone molds
- Excellent moldability
- Good elongation
- Low viscosity
- Well-balanced combination of physical properties and ease of processing
- Quick demolding time
- Room temperature casting

PHYSICAL PROPERTIES				
Composition		TCC-6072 ISOCYANATE	TCC-6072 POLYOL	MIXED
Mix ratio by weight		100	89	
Mix ratio by volume at 77° (25°C)		100	100	
Aspect		liquid	liquid	liquid
Color		light amber	off-white	Off-white translucent liquid
Viscosity at 77°F (25°C) (cPs)	BROOKFIELD LVT	150	600	350
Specific gravity at 77°F (25°C) g/cc (lb/gal)	ASTM D792	1.17 (9.8)	1.05 (8.8)	1.12 (9.33)
Gel time at 77°F (25°C) on 94 g (min)	ASTM D2471			2 – 2.5
Demolding Time (0.5x2in. Round) (min)				15 – 20*

* Demolding time dependent upon part geometry as well as temperature of liquid components and mold temperature.

MECHANICAL THERMAL PROPERTIES at 74°F (23°C) ⁽¹⁾			
Hardness	ASTM D2240	Shore D	72
Tensile strength	ASTM D638	psi (MPa)	4,000 (28)
Tensile modulus		psi (MPa)	189,100 (1,300)
Elongation		%	38
Flexural strength	ASTM D790	psi (MPa)	7,600 (52)
Flexural modulus		psi (MPa)	185,100 (1,280)
Compressive strength	ASTM D695	psi (MPa)	5,300 (37)
Compressive modulus		psi (MPa)	148,400 (1,020)
Impact Resistance - notched	ASTM D-256-05	Ft.lb.f/in ²	2.55
		KJ/m ²	5.35

⁽¹⁾ Cured 16 hours at 176°F (80°C)



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THERMAL PROPERTIES at 74°F (23°C)

Shrinkage (10 in. x 0.5 in., ½ round cast bar)	ASTM D2566	%	0.96
Tg (8 hours at 176°F (80°C))	ASTM E1545	°F (°C)	120 (49)
CTE Temperature range 50-104°F (10-40°C)	ASTM D1546	10 ⁻⁶ in./in./°F (°C)	102 (184)

PROCESSING CONDITIONS

Before use part B (polyol) must be mixed until both color and aspect are uniform. Both parts (polyol and isocyanate) have to be mixed at a temperature equal or higher than 64°F (18°C) according to the mixing ratio. Before casting, make sure that parts or molds are free of any trace of moisture.

HANDLING PRECAUTIONS

Normal health and safety precautions should be observed when handling these products :
Ensure good ventilation
Wear gloves, safety glasses and protective clothes.
For further information, please consult the product safety data sheet.

STORAGE CONDITIONS

Shelf life is 12 months in a dry place and in original unopened containers at a temperature between 68°F (20°C) and 77°F (25°C). Do not store in oven at elevated temperature, material will discolor. Any open container must be tightly closed under a dry gas blanket, such as Bloxygen (available from SikaAxson).

GUARANTEE

The information contained in this technical data sheet results from research and tests conducted in our laboratories under precise conditions. Seller cannot anticipate all conditions under which seller's products, or the products of other manufacturers in combination with seller's products, may be used. It is the responsibility of the user to determine the suitability of the SikaAxson's products, under their own conditions, before commencing with the proposed application. In no event shall SikaAxson US, Inc. be liable for any direct, indirect, punitive, incidental, special, and/or consequential damages, to property or life, whatsoever arising out of or connected with the use or misuse of our products.

SikaAxson US +1 248 588 2270 axsonmh@axson.com sikaaxson.us	CHINA +86 21 58 68 30 37 marketing.china@axson.com MEXICO +52 55 52 64 49 22 marketing@axson.com.mx	GERMANY +49 (0) 7125 940 492 tooling@de.sika.com	INDIA +91 20 25 56 07 10-11 info.india@axson.com SLOVAKIA +42 1 76 42 25 26 axson.sk@axson.com	ITALY +39 02 96 70 23 36 axson@axson.it SPAIN +34 9 32 25 16 20 spain@axson.com	JAPAN +81 5 64 26 25 91 sales.japan@axson.com U.K. +44 16 38 66 00 62 sales.uk@axson.com	FRANCE Global Headquarters +33 1 34 40 34 60 axson@axson.com axson-technologies.com
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