



Description

UltraKast 603 is a low viscosity, two-component liquid castable polyurethane elastomer that contains no TDI or MOCA and after 10 minutes is less than 4,000 centipoises. UltraKast 603 is insensitive to typical environmental moisture and exhibits low shrinkage. UltraKast 603 provides the strength and durability of a heat-cured urethane in a simple to use RTV system. It provides you with the ability to cast high strength, flexible urethane parts in urethane or silicone molds. UltraKast 603 can be colored with our RV series pigments. We recommend using black or darker colors to prevent color change or applying a UV resistant coating. This product is reddish/brown in color. Some uses for UltraKast 603 include core box liners, metal forming pads, industrial parts and abrasion resistant pads and bumpers.

Application

Aluminum surface to be bonded should be brushed blasted to achieve a 2 to 3-mill surface profile to remove all surface oxidation and traces of previously bonded polymer. After blasting, etched surface should be thoroughly degreased using M.E.K. (methyl ethyl ketone) solvent wipe. Surface is now ready for priming.

To prevent further surface oxidation, prepared aluminum surface should be immediately primed using Primer 350 acid etching primer and allowed to cure in a dry environment overnight 12 hours (see Primer 350 technical data sheet for full mixing and application instructions). After Primer 350 has cured the surface should be primed with Primer 450 urethane bonding primer. This should be allowed to cure for 1 hour at 72° F before applying UltraKast 603 urethane elastomer (see Primer 450 technical data sheet for full mixing and application instructions).

- **Do not** allow Primer 350 to cure more than 24 hours before applying Primer 450 or surface must be stripped and primed again with more Primer 350 to ensure chemical bonding between primer coats.
- **Do not** allow Primer 450 to cure longer than 3 hours before applying UltraKast 603 urethane elastomer to ensure a total chemical bond in between primer and elastomer coating.
- Maintain at least 72° F during the complete application process. Colder temperatures retard curing times, warmer temperatures reduce curing times.
- All primed surfaces should be kept free of moisture, dust and any grease or oil, which may interfere with polymer bond.

UltraKast 603 should be warmed to 110° F before mixing component A (gallon can) and component B (quart can). Store polymer at 72° F for long-term storage to ensure proper shelf life. Open component A can and remove sealing ring with a hand held can opener. Pour all of component B into component A and begin mixing immediately. Use a 12" Jiffy mixer and electric drill at slow speed to avoid trapping unwanted air into polymer mix. Mix for about 1½ minutes. Service temperature range is -50° F to 200° F.

Mix Ratio

UltraKast 603 should be warmed to 110° F before mixing component A (gallon can) and component B (quart can). Store polymer at 72° F for long-term storage to ensure proper shelf life. Open component A can and remove sealing ring with a hand held can opener. Pour all of component B into component A and begin mixing immediately. Use a 12" Jiffy mixer and electric drill at slow speed to avoid trapping unwanted air into polymer mix. Mix for about 1-½ minutes.

Typical Properties

	Viscosity	Specific Gravity	Weight Per Gallon
Component A	7000 cps	1.03	8.59 lb.
Component B	100 cps	0.997	8.32 lb.
Mixed	2000 cps	1.02	8.53 lb.
Mixing Ratio	By volume By weight		3 parts A to 1 part B 3 parts A to 1 part B
Work life			27 minutes @ 77° F
Demold time			16 – 24 hours @ 77° F, 2 – 4 hours @ 150° F Complete cure 7 days @ 77° F

Set time and Demold depend on temperature and relative humidity

Physical Properties

	Test Method	Value
Hardness	ASTM 2240	40 Shore D
Tensile strength	D-412-68	4900 – Clear, 3734 - Pigmented
Elongation	D-412-68	400 – Clear, 451 Pigmented
Tear Strength	D-624 die C	850 – Clear, 763 Pigmented
Shrinkage (inch)	D-2566	0.0015
Density (A) (lb./gal.)	ASTM D-792-66	8.70
Density (B) (lb./gal.)	ASTM D-792-66	8.50
Density (Mixed) (lb./gal.)	ASTM D-792-66	8.53
Color		Clear

Shelf Life

UltraKast 603 is shipped from the factory in sealed containers. The containers should be stored in a cool dry area that is protected from direct sunlight and moisture. Storage temperatures should not exceed 80° F. The shelf life of factory sealed containers stored under these conditions is six months. Containers that have been opened should be resealed immediately after material has been removed in order to prevent solvent evaporation.

Packaging

UltraKast 603 is available in convenient 1-quart, 1-gallon, 2.9-gallon, 6.3-gallon, 37.7-gallon and 63-gallon kits. UltraKast 603 has a non-hazardous rating for shipping.