TECHNICAL DATA SHEET

UR3010 Clear

Revision date: 5/5/2025

N109 W13300 ELLSWORTH DRIVE GERMANTOWN, WI 53022
262-253-5900 FAX 262-253-5919

DESCRIPTION:

Resinlab® UR3010 Clear is a, two-component, room temperature curing polyurethane potting system. It is designed to cure completely at room temperature. *UR3010 Clear* provides excellent environmental protection giving very good resistance to water, salt spray, inorganic acids and bases, and most organic solvents, while maintaining adhesion to various metals, plastics and other common assembly materials.

UR3010 Clear can sustain brief exposures to temperatures as high as 150 °C. Continuous operating temperature range is listed in the table below.

This product was formulated to a convenient mixing ratio of 1 to 1 by volume. It is well suited to automated meter mix operations. *UR3010 Clear* is a DOT non-hazardous material and contains no TDI, MOCA, or other reportable substances. Part B is moisture sensitive and must be kept away from atmospheric moisture during storage. After opening a sealed container, thoroughly purge the remaining air space with dry nitrogen (or equivalent) before closing the container.

TYPICAL PROPERTIES:

All properties given are at 25 °C unless otherwise noted.

Property:	*Value:*	*Test Method or Source:*
Color	Clear	Visual
Mix Ratio	Part A to Part B	Calculated
Mix Ratio by weight	0.91 to 1	
Mix Ratio by volume	1 to 1	
Cure Schedule	24 hrs @ 25 °C 1 hr @ 85 °C	
Viscosity - Part A	1,200 cP	TA HR20 Rheometer 25mm parallel plate @ 1/s DCV6100723
Viscosity - Part B	250 cP	
Viscosity - Mixed	500 cP	
Specific Gravity - Part A	0.97	Calculated
Specific Gravity - Part B	1.06	
Specific Gravity - Mixed	1.01	
Pot Life defined as the time it takes for initial mixed viscosity to double	5 – 10 minutes	TA HR20 Rheometer parallel plate 25mm @ 1/s DCV6100723
Gel Time 100cc Sample	75 minutes	455300005339/Gardco Gel Timer
Peak Exotherm	33 °C after 24 minutes for 40 mL sample	455300005593 by Type K thermocouple
Hardness	45 Shore A	455300006287/ASTM D2240
Glass Transition Temperature/Tg	-39 °C	453560822409 by DSC
Water Absorption	0.13 %	24 hr immersion 457561824543/ASTM D570

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Property:	*Value:*	*Test Method or Source:*
Tensile Properties:		4535601224470/ASTM D638
Elongation	40 %	
Flame Resistance **Tested at ResinLab, not UL Certified**	Passes with HB Rating @ 6.0 mm	45376013225560/UL94HB
Electrical Resistivity:		455300006612/ASTM D257 @ 21 °C @ 52 %RH
Volume	3 x 10^{13} ohm-cm	
Surface	3.18 x 10^{14} ohm/sq	
Coefficient of Thermal Expansion by TMA:		455300005340/ASTM E831 TMA, 5 °C/min
above Tg	263 ppm/°C	
Operating Temperature Range	-40 to 125 °C**	
Relative Thermal Index (RTI)	50 °C	UL746B, Table 7.1 Generic Value Based on Composition

* Asterisk denotes values considered typical to associated resin systems or extrapolated from other test results.
** Operating Temperature Range is based on average design requirements and is not intended as a guarantee of suitability for all applications operating at that temperature.
*** This TDS contains values that have been updated. The values reported in this technical data sheet are typical values of the product, and are highly dependent on test conditions and methodology. We actively seek the most precise and accurate ways to measure and interpret performance of our products, and to update estimated values with measured values. The formula has not been revised or changed in any way. Although the values on paper have changed, you can expect the same performance of the product.

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INSTRUCTIONS:

1. Bring to room temperature prior to use.
2. Cartridge format: Mixer should be attached keeping the cartridge vertical and any air pocket purged this way. After the mixer contains material, the mixer tip can be dropped to dispense pre-bleed amount. Attach a new static mixer with each cartridge, then pre-bleed the first 3 inches of dispensed material or until a uniform color is obtained. Maintain adequate velocity during dispensing to ensure complete mixing.
3. Bulk format: stir until homogeneous. Weigh and mix parts A and B accurately and thoroughly, scraping sides of container often. Do not pour from mixing container, transfer to a new container as residual unmixed material may cause a tacky spot on the surface of the casting. Maintain adequate velocity during dispensing to ensure complete mixing.
4. Allow to cure undisturbed until product is fully gelled or tack-free to the touch.
5. Clean up uncured resin with suitable organic solvent such as MEK or acetone.

SHELF LIFE AND STORAGE:

6 months at 25 °C Bulk.
12 months at 25 °C in cartridges that are foil bagged and desiccant packed.
Specialty packaging may be less.

Isocyanates are sensitive to moisture and should be kept in their original container or in a volume tank under dry nitrogen blanketing. Many isocyanates are prone to dimerization, the formation of a white precipitate. Products with minor amounts of this precipitate normally cure to full properties. Storage at 20 - 30 °C (68 °F to 86 °F) is recommended to ensure full shelf life.