FORMULATED RESINS

CONATHANE® TU-801

DESCRIPTION

CONATHANE® TU-801 is a two-component, liquid casting system - free from MbOCA, TDI, MDA, and Hg catalyst- that produces flexible elastomers of exceptional toughness, high elongation, high tensile and tear strength. CONATHANE® TU-701 has excellent abrasion resistance and other outstanding features include:

- UV stabilized, providing superior outdoor performance
- Room or elevated temperature processing and curing
- Low moisture sensitivity during handling and processing
- Good chemical and solvent resistance
- Convenient mix ratio
- Low viscosity
- No crystallization
- Adequate pot life

CONATHANE® TU-801 has an initial viscosity of only 3,500 cps at 25ºC (77ºF) and an effective pot life of 20-30 minutes at 25ºC (77ºF), thus making it pourable into almost any configuration.

Applications and uses include:

- Industrial wheels
- Vibration, shock, and sound dampening pads
- Metal forming pads
- Flexible molds
- Washers
- Gaskets
- Bushings and diaphragms

CHARACTERISTICS AND PROPERTIES

Table 1 | **Product Description**

Property	CONATHANE® TU-401 Part A	CONATHANE® TU-801 Part B	Test Method
Color	Clear, Light Amber	Clear Amber	Visual
Viscosity @ 25ºC (77ºF), cps	8,200	500	ASTM D2393
Specific Gravity @ 25°C (77°F)	1.04	1.01	ASTM D792

Table 2 | **Processing Parameters**

Property	Value
Mix Ratio by Weight, Prepolymer/Curative	100/51
Mix Ratio by Volume, Prepolymer/Curative	100/53
Initial Mixed Viscosity @ 25°C (77°F), cps	3,500
Pot Life @ 25°C (77°F), minutes	20-30
Demold Time, hours:	
@ Room Temperature	24
@ 80°C (176°F)	2
Recommended Cure @ 80°C (176°F), hours	16
Alternate Cure @ 25°C (77°F), days	7-21

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Table 3 | Cured Properties

Property	Value	Test Method
Color	Clear, Light Amber	Visual
Hardness, Shore A	80	ASTM D412
Tensile Strength, psi	3,500	ASTM D412
100% Modulus, psi	500	ASTM D412
200% Modulus, psi	600	ASTM D412
300% Modulus, psi	800	ASTM D412
Ultimate Elongation, %	700	ASTM D412
Tear Strength (Graves), pli	360	ASTM D624
Linear Shrinkage:		
@ Room Temperature, %	Undetectable	Cytec Solvay Group
@ 80°C (176°F), %	0.93	Cytec Solvay Group
Volume Resistivity, ohm-cm	1.2×10^{12}	ASTM D257
Surface Resistivity, ohms	6.2×10^{13}	ASTM D257
Flammability Rating (1/8" thick)	UL94 V-2	UL94
Dielectric Constant @ 25°C (77°F):		
@ 100 Hz	5.31	ATM D150
@ 1 KHz	5.13	ATM D150
@ 1 MHz	4.18	ATM D150
Dissipation Factor @ 25°C (77°F):		
@ 100 Hz	0.074	ATM D150
@ 1 KHz	0.027	ATM D150
@ 1 MHz	0.078	ATM D150
Arc Resistance, sec	>120	MIL-M-24041
Dielectric Strength (vpm)	519	ASTM D149
UV Resistance, Hrs in Weatherometer without visual degradation	8,000	ASTM G-53

HANDLING AND STORAGE INSTRUCTIONS

CONATHANE® TU-401 Part A and CONATHANE® TU-701 Part B components are moisture sensitive. Containers should be flushed with dry nitrogen (CONAP® Dri-Purge) each time they are opened unless the contents are used within one day.

CONATHANE® TU-401 Part A and CONATHANE® TU-701 Part B components have a shelf life of 18 months from date of manufacture when stored in the original un-opened containers at 20°C-30°C (68°F-86°F).

For detailed safety data, please request the Material Safety Data Sheets from Cytec Industries Inc.

AVAILABILITY

Standard units are available in gallon, 5-gallon, and 55-gallon containers. Each unit consists of CONATHANE® TU-401 Part A and CONATHANE® TU-801 Part B components packaged in separate containers.

Evaluation kits are available at a nominal fee.

CAUTION: Responsible handling of Cytec Industries Inc. products requires a thorough review of safety, health, and environmental issues prior to use. Review the Material Safety Data Sheets(s) for the specific Cytec Industries Inc. product(s) and container label information before opening containers. Ensure that employee exposure issues are understood, communicated to all workers, and controls are in place to prevent exposures above Permissible Exposure Limits (PELs). Review safety and environmental issues to be certain controls are in place to prevent injury.

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COLORING

CONATHANE® TU-801 Part B is supplied in a clear amber color. For those customers who wish to color CONATHANE® TU-801 Part B, there are offered color concentrates (CONAP® DS-1830 Series).

PRIMERS

When curing CONATHANE® TU-801 Part B at 80°C (176°F) or above, the recommended primer is CONAP® AD-1147 or CONAP® AD-1147-C. It is important that all dirt, grease, and oil be removed from surfaces prior to applying the primer.

RECOMMENDED PROCESSING PROCEDURES

CONATHANE® TU-801 can be processed by batch mixing or by the use of automatic metering, mixing, and dispensing equipment. Specific recommendations can be made to customers. The following procedure is recommended for batch processing:

1. Containers and mixers used for weighing or mixing should be metal, glass, or plastic. Avoid paper containers and wooden sticks!
2. Use a separate container for mixing with enough space (usually 2 to 3 times the volume of material being mixed) to allow for expansion during degassing. If void free castings are not necessary, the degassing step may be eliminated.
3. Weigh the correct proportions of the two components together. MIX THOROUGHLY, and degas, if desired, at 28-29 inches of mercury vacuum to remove air entrapped during mixing.
4. Pour mixed material into molds or fixtures in a manner to avoid trapping air bubbles or packets, and cure as recommended. Porous molds shold be properly sealed prior to using.
5. If part are to be demolded, a quality CONAP® mold release should be applied prior to pouring.
6. Equipment may be cleaned wtih methyl ethyl ketone or other hydrocarbon solvents.

CONTACT INFORMATION

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