

PORON® Urethanes

CHEMICAL RESISTANCE DATA SHEET

PORON® Urethane materials provide design solutions for applications in Transportation, Communication, and Industrial markets. The following chemical resistance information, when used with the typical physical properties for each material, is provided to assist in assessing suitability for each application.

	Tensile	Tensile Strength & Dimensional Stability (% Change)				Compression Set (% Actual)														
	1: 0-2	20 2	: 20-40	3: 40-	60 4	60-80	5: 80-	-100	1:	0-10	2: 10-20	0 3: 2	20-30	4: 30-4	0 5: 4	40-50				
		_	_			_			_	_	_			_	_	_	_	_		
		TENSILE STRENGTH				DIMENSIONAL STABILITY							COMPRESSION SET							
		WET DRY				WET DRY						DRY								
SOLVENT MEDIUM	30	40	50	60	30	40	50	60	30	40	50	60	30	40	50	60	30	40	50	60
Acids and Bases																				
10% Ammonia Water	1	2	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2
10% Acetic Acid	2	3	3	3	1	1	1	3	1	1	1	1	1	1	1	1	1	1	1	3
10% Citric Acid	1	2	2	5	1	1	2	5	1	1	1	1	1	1	1	1	1	1	1	3
10% Hydrochloric Acid	1	2	2	3	1	2	1	3	1	1	1	1	1	1	1	1	1	1	2	4
10% Nitric Acid	4	3	4	5	5	4	4	5	1	1	1	1	5	1	1	1	5	5	5	5
10% Phosphoric Acid	1	1	1	5	2	1	1	5	1	1	1	1	1	1	1	1	3	1	1	3
10% Potassium Hydroxide	2	1	1	2	5	1	1	1	1	1	1	1	5	1	1	1	5	2	1	2
10% Sodium Bicarbonate	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
10% Sodium Hydroxide	1	1	1	1	5	1	1	1	1	1	1	1	5	1	1	1	5	1	1	1
10% Sulfuric Acid	2	1	1	5	1	1	1	5	1	5	1	1	1	1	1	1	3	1	1	3
Organic Fluids																				
Acetone	5	5	5	5	1	1	1	1	2	2	2	2	1	1	1	1	1	1	1	1
Carbon Tetrachloride	4	4	4	4	1	1	1	1	2	2	2	1	1	1	1	1	1	1	1	1
Diethyl Amine	3	4		3	1	1	1	3	2	1	1	1	1	1	1	1	1	1	1	3
Diethyl Ether	4	5	5	5	1	1	1	1	2	2	1	1	1	1	1	1	1	1	1	1
Ethyl Acetate	5	5	5	4	1	2	1	4	3	1	2	2	1	1	1	1	1	1	1	3
Hexane	3	3	3	3	1	1	1	2	1	1	1	1	1	1	1	1	1	1	1	3
Isopropyl Alcohol	4	5	5	5	1	1	1	2	1	1	1	1	1	1	1	1	1	1	1	4
Methanol	4	5	5	5	1	1	1	1	2	1	1	2	1	1	1	1	1	1	1	1
Methyl Ethyl Ketone	4	5	5	5	1	1	1	2	3	3	3	2	1	1	1	1	1	1	1	4
Methylene Chloride	5	5	5	5	1	1	1	2	5	3	3	2	5	1	1	1	5	1	1	3
Tetrahydrofuran	5	5	5	5	5	1	1	5	4	5	3	3	1	5	1	1	1	1	1	3
Toluene	4	5	5	5	1	1	1	2	3	2	2	1	1	1	1	1	1	1	1	4
Trichloroethylene	5	5	5	5	1	1	1	5	3	2	2	2	1	1	1	1	1	1	1	3
Xylene	4	5	5	5	1	1	1	2	2	2	2	1	1	1	1	1	1	1	1	4
Automotive Fluids																				
Brake Fluid	4	5	5	5	4	5	5	5	2	2	2	2	1	2	1	1	1	1	1	1
Coolant (50% Ethylene Glycol)	1	2	3	3	1	2	2	3	1	1	1	1	1	1	1	1	1	1	1	4
Dimethylcarbonate	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2
Gasoline	4	4	4	4	1	2	1	2	1	1	1	1	1	1	1	1	1	1	1	4
Motor Oil	4	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Power Steering Fluid	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Transmission Fluid	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Windshield Washer Fluid	2	2	2	4	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Miscellaneous																				
Bleach	1	2	2	3	2	1	3	4	1	1	1	1	1	1	1	1	3	2	2	2
Distilled Water	1	2	1	3	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2
3% Hydrogen Peroxide	2	2	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Mineral Spirits	2	2	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Naphtha	2	3	3	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Salad Oil	4	1	1	3	1	1	1	4	1	1	1	1	1	1	1	1	1	1	1	2
Sea Water	1	1	1	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
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		THICKNESS						
CHART DESCRIPTION	PORON® URETHANE	inches	mm					
30	4710-30	0.125	3.18					
40	4710-40	0.125	3.18					
50	4710-50	0.125	3.18					
60	4710-60	0.125	3.18					

All listed values are typical. Typical values are a representation of an average value of the property for a given population of the product. For specification values contact Rogers Corporation.

TEST METHOD:

Immersion duration for 168 hours (1 week), at room temperature, followed by 48 hours (2 days) drying. Material properties evaluated were tensile strength, dimensional stability and compression set resistance. Please refer to the Industrial Materials Physical Properties data sheet for specific test methods.

RESULTS:

In general, PORON® Urethane materials show excellent or very good resistance when exposed to dilute acids and bases, organic fluids and petroleum products. When wet, the materials exhibit swelling and a reduction in properties.

For additional product and design recommendations, please contact your Rogers Sales Engineer.

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