

Lord Adhesives Thermoset,ç UR312 / UR324 Urethane Encapsulating Gel

Category : Polymer , Adhesive , Thermoset , Polyurethane, TS , Thermoset Polyurethane, Adhesive

Material Notes:

UR312 A/B and UR324 A/B are the same components used at different mix ratios, therefore, giving different properties. LORD UR312 and UR324 are two-component, room temperature curing urethane gels. The cured elastomer is soft, flexible and has a very low modulus at temperatures down to -80°C. Cured UR312 and UR324 also have excellent thermal shock resistance, electrical properties, and adhesion to a variety of materials. The hydrophobic nature of this resin system imparts exceptional hydrolytic stability to the cured resin. LORD UR312 and UR324 are soft, jelly-like, but non-flowable, materials that have tenacious, pressure-sensitive adhesion to most substances. The low modulus over a wide temperature range makes UR312 and UR324 ideal materials for encapsulating fragile, pressure sensitive, microelectronic components which would be damaged by more rigid encapsulants during cure or later thermal cycling. LORD UR312 and UR324 are generally suitable in applications exposed up to 130°C. Lord microelectronic grade silicones are suggested for encapsulating delicate components that operate at higher temperatures. Either cures very well at room temperature, or the cure may be accelerated by using moderately elevated temperatures. All information provided by Lord.

Order this product through the following link:

http://www.lookpolymers.com/polymer_Lord-Adhesives-Thermoset-UR312-UR324-Urethane-Encapsulating-Gel.php

Physical Properties	Metric	English	Comments
Specific Gravity	0.937 g/cc	0.937 g/cc	UR312; STM 2
	0.950 g/cc	0.950 g/cc	UR324; STM 2
Water Absorption	0.29 %	0.29 %	UR312; ASTM D570
	@Temperature 25.0 Å°C, Time 605000 sec	@Temperature 77.0 Å°F, Time 168 hour	
	0.30 %	0.30 %	UR324; ASTM D570
	@Temperature 25.0 Å°C, Time 605000 sec	@Temperature 77.0 Å°F, Time 168 hour	
Loss On Ignition	0.24 %	0.24 %	UR324
	@Temperature 100 Å°C, Time 86400 sec	@Temperature 212 Å°F, Time 24.0 hour	
	0.56 %	0.56 %	UR312
	@Temperature 130 Å°C, Time 605000 sec	@Temperature 266 Å°F, Time 168 hour	
Viscosity	75 cP	75 cP	UR312; Hardener; STM 1
	@Temperature 25.0 Å°C	@Temperature 77.0 Å°F	
	75 cP	75 cP	UR324; Hardener; STM 1
	@Temperature 25.0	@Temperature 77.0 Å°F	

Physical Properties	Metric	English	Comments
	750 cP @Temperature 25.0 Å°C	750 cP @Temperature 77.0 Å°F	UR324; Mixed; STM 1
	1500 cP @Temperature 25.0 Å°C	1500 cP @Temperature 77.0 Å°F	UR312; Mixed; STM 1
	3750 cP @Temperature 25.0 Å°C	3750 cP @Temperature 77.0 Å°F	UR324; Resin; STM 1
	3750 cP @Temperature 25.0 Å°C	3750 cP @Temperature 77.0 Å°F	UR312; Resin; STM 1

Mechanical Properties	Metric	English	Comments
Hardness, Shore A	20	20	UR324
Hardness, Shore OO	50	50	UR312
Tensile Strength, Yield	0.345 MPa	50.0 psi	UR312; ASTM D638
	0.689 MPa	100 psi	UR324; ASTM D638
Elongation at Yield	250 %	250 %	UR312; ASTM D638
	250 %	250 %	UR324; ASTM D638

Electrical Properties	Metric	English	Comments
Volume Resistivity	1.15e+16 ohm-cm @Temperature 25.0 Å°C	1.15e+16 ohm-cm @Temperature 77.0 Å°F	UR312; ASTM D257
	2.00e+16 ohm-cm @Temperature 25.0 Å°C	2.00e+16 ohm-cm @Temperature 77.0 Å°F	UR324; ASTM D257
Dielectric Constant	3.18 @Frequency 1.00e+6 Hz, Temperature -40.0 Å°C	3.18 @Frequency 1.00e+6 Hz, Temperature -40.0 Å°F	UR312; ASTM D150
	3.5 @Frequency 1.00e+6 Hz, Temperature 140 Å°C	3.5 @Frequency 1.00e+6 Hz, Temperature 284 Å°F	UR312; ASTM D150

Electrical Properties	Metric	English	Comments
	@Frequency 1.00e+6 Hz, Temperature 25.0 Å°C	@Frequency 1.00e+6 Hz, Temperature 77.0 Å°F	UR324; ASTM D150
	3.58	3.58	
	@Frequency 1.00e+6 Hz, Temperature 25.0 Å°C	@Frequency 1.00e+6 Hz, Temperature 77.0 Å°F	UR312; ASTM D150
Dissipation Factor	0.0050	0.0050	
	@Frequency 1.00e+6 Hz, Temperature 140 Å°C	@Frequency 1.00e+6 Hz, Temperature 284 Å°F	UR312; ASTM D150
	0.020	0.020	
	@Frequency 1.00e+6 Hz, Temperature 25.0 Å°C	@Frequency 1.00e+6 Hz, Temperature 77.0 Å°F	UR324; ASTM D150
	0.032	0.032	
	@Frequency 1.00e+6 Hz, Temperature 25.0 Å°C	@Frequency 1.00e+6 Hz, Temperature 77.0 Å°F	UR312; ASTM D150
	0.070	0.070	
	@Frequency 1.00e+6 Hz, Temperature -40.0 Å°C	@Frequency 1.00e+6 Hz, Temperature -40.0 Å°F	UR312; ASTM D150

Processing Properties	Metric	English	Comments
Cure Time	10100 min	168 hour	
	@Temperature 25.0 Å°C	@Temperature 77.0 Å°F	UR312
	10100 min	168 hour	
	@Temperature 25.0 Å°C	@Temperature 77.0 Å°F	UR324
	20200 min	336 hour	
	@Temperature 85.0 Å°C	@Temperature 185 Å°F	UR312
	20200 min	336 hour	
	@Temperature 85.0 Å°C	@Temperature 185 Å°F	UR324
Pot Life	20 min	20 min	
	@Temperature 25.0 Å°C	@Temperature 77.0 Å°F	UR312

Processing Properties	Metric	English	Comments
	@Temperature 25.0 Â°C	@Temperature 77.0 Â°F	UR324
Shelf Life	6.00 Month @Temperature 25.0 Â°C	6.00 Month @Temperature 77.0 Â°F	

Descriptive Properties	Value	Comments
Appearance	Clear	UR312
	Clear	UR324
Mix Ratio	1:1	UR324, by volume
	100:108	UR324, by weight
	100:50	UR312, by volume
	100:55	UR312, by weight
Thermal Shock	Excellent	UR312
	Excellent	UR324

Contact Songhan Plastic Technology Co.,Ltd.

Website : www.lookpolymers.com

Email : sales@lookpolymers.com

Tel : +86 021-51131842

Mobile : +86 13061808058

Skype : lookpolymers

Address : United North Road 215,Fengxian District, Shanghai City,China