

RTV100 Series

RTV102, RTV103, RTV106, RTV108, RTV109, RTV112, RTV116, RTV118 Adhesive Sealants

Description

RTV102, RTV103, RTV106, RTV108, RTV109, RTV112, RTV116 and RTV118 one-component, ready-to-use adhesive sealants are extremely versatile. They cure to a tough, durable, resilient silicone rubber on exposure to atmospheric moisture at room temperature. Acetic acid vapors are released from the sealant surface as a by-product of cure.

RTV102, RTV103, RTV108 and RTV109 sealants are standard strength paste consistency products which can be applied to vertical and overhead surfaces where pourable/self-leveling sealants are not practical.

RTV112 and RTV118 sealants are self-leveling products which are preferable to paste-consistency sealants when flow into small crevices and hard-to-reach places is desired.

RTV106 sealant is paste-consistency sealant. RTV116 sealant is a self-leveling sealant. Both RTV106 and RTV116 sealants are standard strength high-temperature sealants.

Since all these sealants utilize a moisture cure system, they must not be used in thicknesses of greater than 6mm (1/4 in.).

Where section depths exceed 6mm (1/4 in.), Momentive Performance Materials one component, addition cure or two-component silicone rubber compounds are recommended.

Key Features and Benefits

- One-component products
- Capability to cure at room temperature and ambient humidity
- Self adhesion properties
- Low temperature flexibility
- High temperature performance
- Excellent weatherability and ozone and chemical resistance
- Excellent electrical insulation properties

Typical Physical Properties

Uncured Properties	RTV102 RTV103 RTV108 RTV109	RTV106	RTV116	RTV112 RTV118
Consistency	Paste	Paste	Self leveling	Self leveling
Color	RTV102: White RTV103: Black RTV108: Translucent RTV109: Aluminum	Red	Red	RTV112: White RTV118: Translucent
Viscosity, poises	–	–	250	200
Application Rate, (g/min)	400	400	–	–
Specific Gravity	1.05	1.07	1.09	1.05
Tack-Free Time, minutes	20	20	30	20
Cured Properties⁽¹⁾	RTV102 RTV103 RTV108 RTV109	RTV106	RTV116	RTV112 RTV118
Mechanical:				
Tensile Strength, kg/cm ² (lb/in ²)	28 (400)	26 (375)	25 (350)	23 (325)
Elongation, %	450	400	350	325
Hardness, Shore A	30	30	20	25
Tear Strength, kg/cm (lb/in)	8 (45)	7 (40)	–	–
Shear Strength, kg/cm ² (lb/in ²) ⁽²⁾	14 (200)	14 (200)	7 (125)	7 (100)
Peel Strength, kg/cm (lb/in) ⁽³⁾	7 (40)	7 (40)	3 (25)	3 (15)
Electrical:				
Dielectric Strength, kv/mm (v/mil)	20 (500)	20 (500)	16 (400)	16 (400)
Dielectric Constant @ 60 Hz	2.8	2.8	2.8	2.8
Dissipation Factor @ 60 Hz	0.001	0.001	0.001	0.001
Volume Resistivity, ohm-cm	3x10 ¹⁵	3x10 ¹⁴	2x10 ¹⁴	6x10 ¹⁴
Thermal:⁽⁴⁾				

Brittle Point, °C (°F)	-60 (-75)	-60 (-75)	-60 (-75)	-60 (-75)
Maximum continuous operating temperature, °C (°F)	204 (400)	260 (500)	260 (500)	204 (400)
Maximum intermittent operating temperature, °C (°F)	260 (500)	315 (600)	315 (600)	260 (500)
Additional Information: ⁽⁴⁾				
Linear Shrinkage, %	1.0	1.0	1.0	1.0
Thermal Conductivity, cal/sec/cm ² , °C/cm	0.0005	0.0005	0.0005	0.0005
(Btu/hr/ft ² , °F/ft)	(0.12)	(0.12)	(0.12)	(0.12)
Coefficient of Expansion cm/cm, °C	27x10 ⁻⁵	27x10 ⁻⁵	27x10 ⁻⁵	27x10 ⁻⁵
(in/in, °F)	(15x10 ⁻⁵)	(15x ⁻⁵)	(15x ⁻⁵)	(15x ⁻⁵)

- (1) Cure time 3 days at 25°C (77°F) / 50% relative humidity.
- (2) At 100% cohesive failure.
- (3) At 100% cohesive failure using 1 in. x 8 in. stainless steel screen at 180° pull angle.
- (4) Information is provided for customer convenience only. These properties are not tested on a routine basis.

Potential Applications