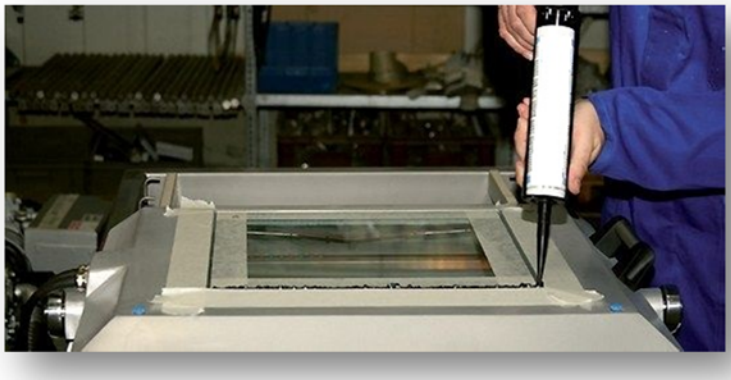
SAN DIEGO SEAL, INC.

INDUSTRIAL & MARINE SEALING DEVICES

Technical Data Sheet



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.), 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

Product	Features	Potential Applications	UL	Food Contact
RTV102 (White) RTV103 (Black) RTV108 (Translucent) RTV109 (Aluminum)	General purpose pastes	General purpose bonding, sealing, electrical insulation, formed-in-place gaskets. Can be applied to vertical or overhead surfaces.	File 36952	FDA 21 CFR 177.2600, USDA, NSF International Std. No. 51
RTV106 (Red)	High temperature paste	Sealing heating elements, gasketing, electrical insulation, and other critical bonding and sealing applications where parts must perform at high temperatures. Can be applied to vertical or overhead surfaces.	File 36952	FDA 21 CFR177.2600, USDA, NSF International Std. No. 51
RTV116 (Red)	High temperature	Thin section potting, filling small surface voids, self leveling protective coating, electrical insulation where high temperature performance is required.	File 36952	FDA 21 CFR 177.2600, USDA, NSF International Std. No. 51
RTV112 (White) RTV118 (Translucent)	General purpose	Electrical insulation, thin section potting, self leveling protective coatings. Will flow into small crevices and hard to reach places.	File 36952	FDA 21 CFR 177.2600, USDA, NSF International Std. No. 51

Specifications

FDA STATUS

RTV102, RTV103, RTV106, RTV108, RTV109, RTV112, RTV116 and RTV118 sealants are compositionally compliant with the requirements of 21 CFR 177.2600 – Rubber articles intended for repeated use and have been found, through testing of a representative sample, to meet the extractives limitations in 21 CFR 177.2600(e) and/

Note: It is the responsibility of the user to determine that the final product complies with the extractive limitations and other requirements of 21 CFR 177.2600 under their specific manufacturing procedures.

BIOCOMPATABILITY STATUS

- A representative sample of RTV 108 has passed USP Class VI (United States Pharmacopoeia USP 23, National Formulary 18, 1995).
- A representative sample of RTV 118 has passed USP Class VI (United States Pharmacopoeia USP 23, National Formulary 18, 1995).

USDA STATUS

RTV102, RTV103, RTV106, RTV108, RTV109, RTV112, RTV116 and RTV118 sealants may be used on equipment which may contact edible products in official establishments operating under the Federal meat and poultry products inspection program. See USDA letter of Authorization.

NSF INTERNATIONAL STATUS

NSF International lists RTV102, RTV103, RTV106, RTV108, RTV109, RTV112, RTV116 and RTV118 sealants under NSF International Standard No. 51 (Plastic Materials and Components for Use in Food Equipment), as satisfactory for use on food contact surfaces.

UL STATUS

RTV102, RTV103, RTV106, RTV108, RTV109, RTV112, RTV116 and RTV118 silicone rubber adhesive sealants are recognized by Underwriters Laboratories, Inc., under their Component Recognition Program (UL File No. E-36952).

MILITARY SPECIFICATION

MIL-A-46106

Group I	Type I	General Purpose Paste: RTV102, RTV103, RTV108,
	Type II	General Purpose Flowable: RTV112, RTV118
Group III	Type I	High Temperature Paste: RTV106
	Type II	High Temperature Flowable: RTV116