

Technical Library

Food Contact Applications Silicone Rubber Compounds

A number of our silicone rubber adhesive sealants and silicones rubber compounds may be used in food contact applications where FDA, USDA and NSF regulations apply.

- [FDA Status](#)
- [USDA Status](#)
- [NSF Status](#)

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FDA Status

One-Part RTV Sealants

The following RTV silicone rubber adhesive sealants may be used in repeated contact with foods under FDA regulation 21CFR177.2600 "Rubber Articles Intended for Repeated Use" (and, by reference, 21CFR175.300 "Resins and Polymeric Coatings").

RTV102	RTV109	IS802	IS800.09
RTV103	RTV112	IS803	RTV19.01
RTV106	RTV116	IS806	RTV159
RTV108	RTV118	IS808	

Use of these sealants is subject to the following conditions:

- The sealant must be applied in accordance with Good Manufacturing Practices at a thickness not to exceed 6mm (1/4") from an exposed edge, as a continuous film between joints acting as a functional barrier between the food and the substrate (the area underneath the joint.)
- The sealant must be cured for a minimum of 14 days at 25C (77F) and 50% RH.
- The sealant must be thoroughly cleansed before the first use.
- The sealant, when properly cured, must comply with the extractives limitations at temperatures up to and including reflux applications. The user should verify compliance with extractives limitations at higher temperatures.
- Compliance with 21CFR177.2600 does not authorize use of these sealants for the manufacture of baby bottle nipples.

All previously mentioned sealants must be evaluated to determine bond strength for each specific application. If greater adhesion is required, the evaluation of primer SS4044 (clear) is recommended. SS4044 may be used in repeated contact with food under 21CFR175.105 "Adhesives", and used in conjunction with the RTV products covered under 21CFR177.2600.

Two-Part RTV Sealants

The following two-component RTV silicone rubber compounds may be used in repeated contact with foods under FDA regulation 21CFR177.2600, "Rubber Articles Intended for Repeated Use"

RTV11	LIM2500
RTV41	LIM2600
RTV615	LIM2700
RTV664	SLE5500
RTF762	SLE5600

Use of these compounds is subject to the following conditions:

- The compound must be applied in accordance with Good Manufacturing Practices.
- The compound must be thoroughly cleansed before the first use.
- Compliance with 21CFR177.2600 does not authorize use of the compound for the manufacture of baby bottle nipples.

RTV11 and RTV41 must be formulated with a catalyst which complies with 21CFR175.300 or 177.2600. These catalysts are Dibutyl Tin Dilaurate (DBT) and RTV9950. RTV11, RTV41 and SLE5500 compounds should not be used in contact with acid foods.

As with the sealants, primers may be desired. If so, the evaluation of primers SS4044 or SS4120 is recommended. These are covered under FDA regulation 21CFR175.105 "Adhesives", and can be used in conjunction with the silicone compounds mentioned above covered under 21CFR177.2600.

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USDA Status

GE Silicones has on file approval letters from the USDA which states that RTV102, RTV103, RTV106, RTV108, RTV109, RTV112, RTV116, RTV118, IS802, IS803, IS806, IS800.09, and IS808 sealants, are chemically acceptable for use as sealants on equipment which may contact edible products in official establishments operating under the federal meat and poultry products inspection program. The areas sealed should be thoroughly rinsed with potable water after the sealant has properly cured. The compound must be used in a manner which prevents direct or indirect contamination of edible products.

If greater adhesion is required, the evaluation of primer SS4044 (clear) is recommended. SS4044 is listed with the USDA.

The final granting of authorization for the proposed use of such sealants is the responsibility of the inspector in charge of the official plant. Technical assistance will be provided by the Product Safety Branch of USDA upon request. These sealants are found in the "List of Proprietary Substances and Nonfood Compounds" issued by USDA. A copy of the approval letter may be required by the USDA inspector. A copy of the approval letter may be obtained from the GE Silicone Product Regulatory Compliance Operation.

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NSF Status

The National Sanitation Foundation lists RTV102, RTV103, RTV106, RTV108, RTV109, IS800.09, RTV159, RTV19.01, RTV112, RTV116, RTV118, IS802, IS803, IS806 and IS808 sealants under NSF Standard No. 51 "Plastic Materials and Components for Use in Food Equipment" as satisfactory for use on food contact surfaces. If greater adhesion is required, the evaluation of SS4044 primer is recommended. SS4044, is also listed under NSF Standard No. 51.

CDS4319 (9/93)

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