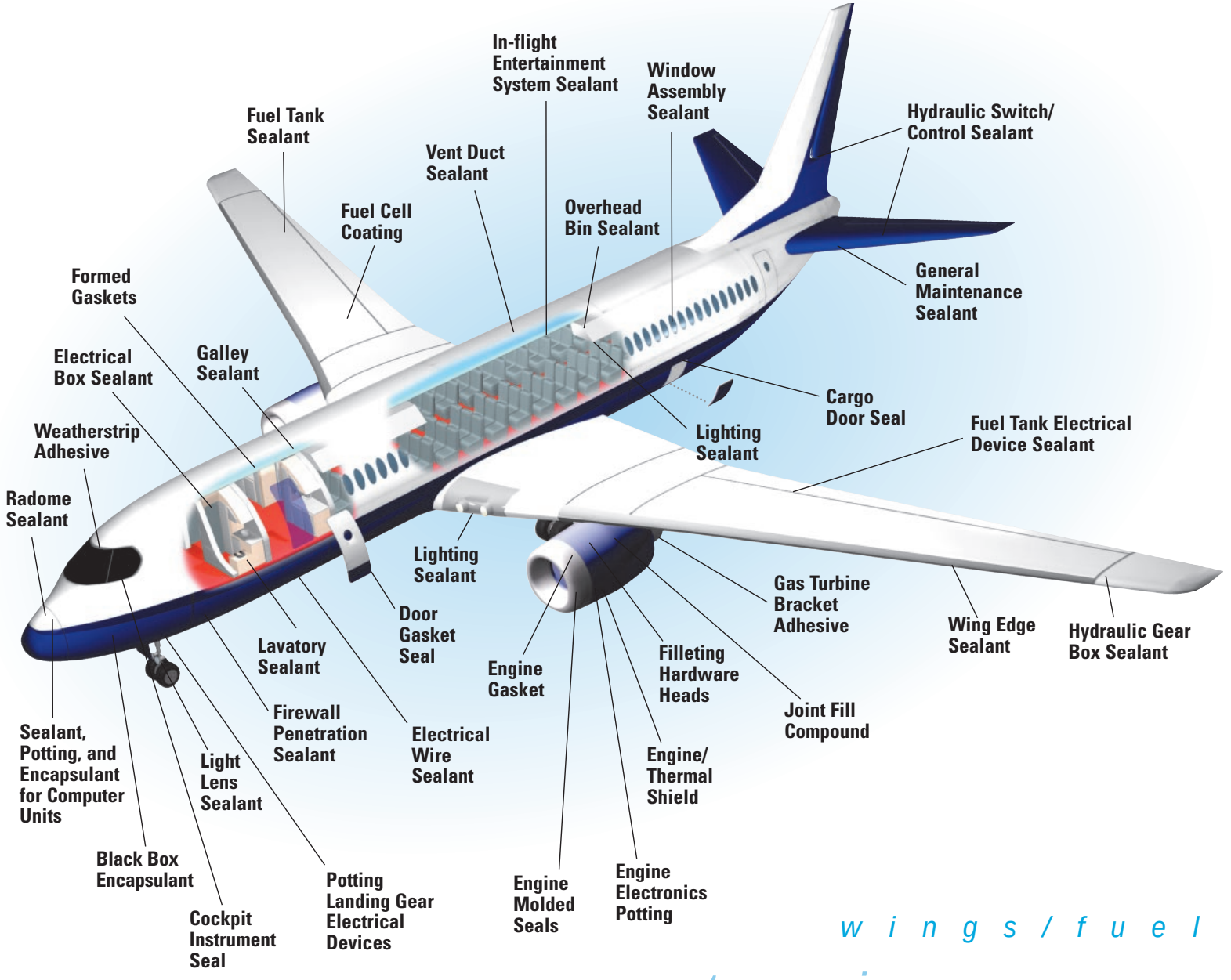
GE Silicones

Silicones In Aviation

Materials & Applications

Commercial Aircraft Solutions At Work

These reliable aviation products find application in a multitude of aspects of aircraft assembly and maintenance, from adhesion for wings and fuel tanks to electrical wire and everything in between.



wings/fuel

exterior

aviation

electronics

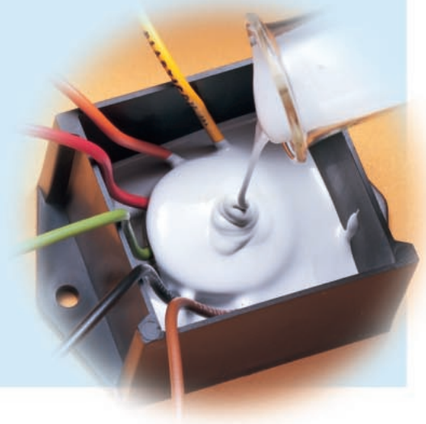
interior

engine

A Global Leader in Silicones

The strengths of GE Silicones are deeply rooted in the long and prestigious history of GE technology, innovation, technical service, and application engineering. Milestones include the discovery of new chemistries and the birth of breakthrough products. It's also a story about commitment to successful business relationships, about global reach, and about value-added process innovations that can help our customers reduce costs, improve quality, and realize their business objectives.

For 50 years, GE Silicones has pioneered developments in silicone technology for the world's most prominent industries, including chemical manufacturing and processing, aviation, automotive, personal care, building and construction, consumer hardware, food processing, electronics and business equipment, appliances, and OEM assembly and maintenance.



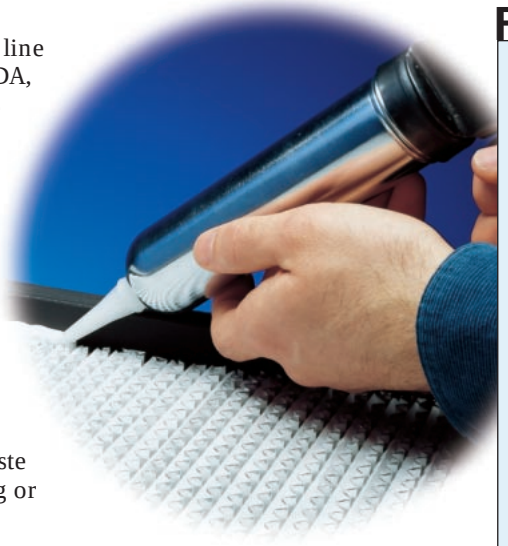
Aviation Product / Application Selector Guide

	APPLICATIONS	ONE-COMPONENT								TWO-COMPONENT						
		RTV100 series	RTV106	RTV116	RTV133	RTV142	RTV157 RTV159	RTV160 or TSE390 series	FRV1106	RTV11 RTV21 RTV41	RTV60	RTV88	RTV560 RTV566	RTV577	RTV6100 series	RTV8000 series
EXTERIOR	Cargo Door Seals						●							●		
	Door Gasket Sealant						●							●		
	Lighting Sealant						●				●	●		●		
	Filleting Hardware Heads						●							●		
	Joint Fill Compound	●	●				●							●		
	Potting Landing Gear Electrical Devices													●		
	Sealant for Smooth Exterior Edge of Aircraft Wing						●									
	Weather Strip Adhesive						●							●		
	Radome Sealing					●		●			●	●	●	●		●
ELECTRONICS	Circuit and Terminal Protection					●		●			●	●	●	●		●
	Cockpit Instrument Sealant					●		●			●	●	●	●		●
	Electrical Wire Sealant		●	●				●								
	Sealing, Potting and Encapsulating Computer Units					●		●			●	●	●	●		●
	Electronics Power Equipment Encapsulant									●						
ENGINE	Gasketing		●	●	●	●	●		●		●		●			
	Heat Insulator/Thermal Blanket		●	●	●	●	●				●		●			
	Heat Shielding		●	●	●	●	●				●		●			
	Molded Seals		●	●	●	●	●				●		●			
	Electronics Potting		●	●	●	●	●				●		●			
	Gas Turbine Bracket Adhesive		●													
GENERAL	Extreme High Temperature Potting and Encapsulating										●	●	●			
	Firewall Penetration Sealant				●											
	Light Lens Sealant and Adherent						●									
	Shock Absorber Between Metal Aircraft Parts									●					●	
	General Aircraft Maintenance Sealant	●					●									
WINGS/FUEL	Electrical Devices Within Fuel Tank								●							
	Fuel Cell Coating								●							
	Fuel Tank Sealant								●							
	Sealing Hydraulic Gear Boxes								●							
	Sealing Hydraulic Switches and Controls								●							
INTERIOR	Electrical Box Sealant							●								
	Pre-Formed Gaskets	●					●									
	Galley Sealant	●														
	In-Flight Entertainment Systems Sealant	●														
	Lavatory Sealant	●														
	Lighting Sealant			●												
	Ventilation Duct Sealant	●	●		●											
	Window Assembly Sealant	●		●	●	●							*			
MISCELLANEOUS	Battery Sealant							●			●	●	●	●		●
	Black Box Gel Encapsulant														●	
	Charger Sealant							●			●	●	●	●		●
	Heating and Cooling Tube Sealant								●							
	Landing Gear Sealant								●							
	Thrust Reversers Heat Shielding										●	●	●			
	Thrust Reversers Insulator					●					●	●	●			
	Thrust Reversers Vibration Dampening					●					●	●	●		●	

*Only RTV566.

Superior Products For Aviation

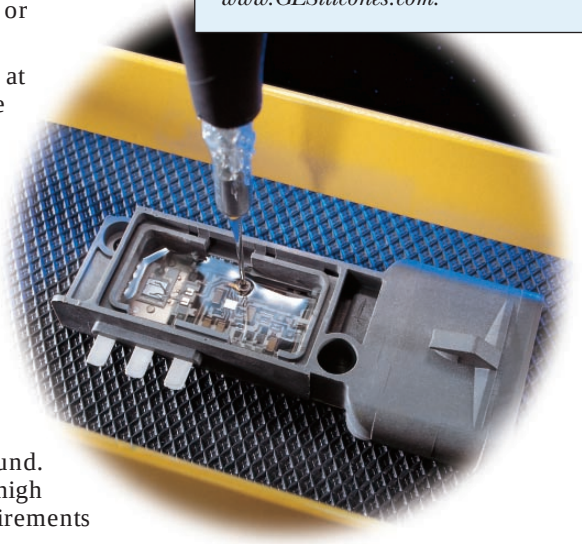
One-Component



- **The RTV100 series** is GE Silicones' premier line of high strength acetoxy-cure sealants with FDA, UL, NSF, and USDA recognition, and meets MIL-A-46106 specifications. This high performance line, in both paste and flowable grades, offers primerless adhesion to many substrates. Both **RTV106** and **RTV116** are standard high temperature sealants.
- **RTV133** is a black, one-component adhesive sealant recommended where resistance to burning of the finished product is a design consideration. It offers high strength, primerless adhesion with an alkoxy cure. It has UL recognition.
- **RTV142** is a non-corrosive, low-outgassing paste adhesive sealant ideal for electronic gasketing or vertical/overhead applications.
- **RTV157** and **RTV159** are high strength, paste adhesive sealants with an acetoxy cure. They offer high temperature and high strength performance.
- **The RTV160** series are non-corrosive to sensitive metals found in electronics. This series offers products of varying consistencies, and all products in this series are UL recognized component materials. **RTV162** and **RTV167** comply with MIL-A-46146. **RTV167** is a high strength paste.
- **The TSE390 series** incorporates a newly developed crosslinking chemistry and are non-corrosive to metallic substrates. They are excellent choices for electrical/electronics applications. This series offers products of differing consistencies and it meets the corrosion resistant requirement of MIL-A-46146A.
- The adhesive sealant **FRV1106** is a paste consistency, fluid resistant product designed for use in fuel, solvent and chemical environments. This acetoxy-cure sealant offers primerless adhesion, room temperature cure, and ozone resistance.

Two-Component

- **RTV11, RTV21** and **RTV41** are three of GE Silicones' general purpose two-part silicones that are excellent choices for the aviation environment. They offer superior adhesion with primers and room temperature cure.
- **RTV60** and **RTV88**, part of GE Silicones' high temperature two-part silicone materials, differ primarily in viscosity in the uncured state. RTV60 is excellent for potting and encapsulating applications, while RTV88 is ideal for vertical or overhead surfaces.
- **RTV560/566** and **RTV577** provide outstanding adhesion with a primer at low temperatures. All cure at room temperature and provide variable cure rates by adjusting the curing agent. RTV560/566 offers the widest useful temperature range of all GE silicones. RTV566 is an excellent choice for aviation applications requiring low outgassing. RTV577 is highly viscous and an outstanding choice for sealing and insulating on vertical and overhead surfaces.
- **The RTV6100 series**, or silicone dielectric gels, are liquid silicones that cure to form soft, gel-like elastomers. They help preserve dielectric integrity and provide outstanding protection to delicate electronic assemblies in harsh environments. They offer a variety of cure rates and primerless adhesion to most substrates. **RTV6156** provides low temperature performance.
- **The RTV8000 series** is a general purpose two-part silicone rubber compound. It consists of pourable, non-corrosive grades with excellent adhesion and high temperature performance. It conforms to the physical and electrical requirements of MIL-PRF-23586F. (Supersedes MIL-S-23586E.)



Frequently Asked Questions

What is GE Silicones' Quality Assurance?

GE Silicones has outstanding lot traceability. We conduct quality tests on every batch of silicone and can provide a Certificate of Analysis to our customers upon request. This helps our customers avoid redundant testing. Additionally, GE Silicones is an ISO 9001 certified facility.

Does cured silicone rubber outgas?

This depends on the type of silicone you are using. Our general purpose silicones can outgas under the right operating environment, e.g., high temperature and vacuum. Specialty grades of RTV have been formulated to reduce outgassing substantially in these types of environment. Please contact GE Silicones Technical Help for more information.

Do I need to use a primer?

It depends on your application and product. One-component RTV products offer primerless adhesion to most substrates; two-components do not. Please consult our Adhesion & Primer Guide for Industrial RTVs (CDS 5390) available on our web site. GE Silicones recommends that you test the product in your application before using it.

How can I get Technical Product Data Sheets, samples and MSDS for GE Silicones materials?

Product data sheets, samples and MSDS are available on our web site, *www.GESilicones.com.*

www.eleco-produits.fr

ELECO PRODUITS - EFD

ZA des Basses Nolis - 125 avenue Louis Roche
92230 Gennevilliers - FRANCE
T : +33 (0) 1 47 92 41 80
F : +33 (0) 1 47 92 22 72

LIMITED WARRANTY

GE Silicones warrants that its products will conform to GE Silicones' internal specifications at the time of application or use, provided that the product is stored in accordance with GE Silicones' recommendations and used or applied before the earliest of (1) any "Use Before Date" indicated on the product package, (2) one year from date of shipment by GE Silicones, or (3) expiration of such other period or recommended storage time stated in GE Silicones' product literature for such product. If notified in writing of a claim within six months of a product's use or application, GE Silicones will, at its option, replace, or refund the purchase price of, any GE Silicones product which does not satisfy the foregoing warranty.

THE FOREGOING SHALL CONSTITUTE THE SOLE AND EXCLUSIVE REMEDY FOR DEFECTS IN, OR FAILURE OF, ANY PRODUCT, AND THE SOLE AND EXCLUSIVE LIABILITY OF GENERAL ELECTRIC COMPANY THEREFOR. THE WARRANTY STATED ABOVE IS IN LIEU OF ALL OTHER WARRANTIES, WRITTEN OR ORAL, STATUTORY, EXPRESS OR IMPLIED, INCLUDING ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.

LIMITATION OF LIABILITY: GE Silicones shall in no event, whether the claim is based on warranty, contract, tort, strict liability, negligence or otherwise, be liable for incidental or consequential damages, or for any other damages in excess of the amount of the purchase price.

NOTE: For many products, GE Silicones may be able to offer a more extensive, application specific warranty. For further information, contact your GE Silicones field representative.

GE Silicones

CDS 5602 (4/01)