

**Introduction**

Tyco Electronics manufactures Raychem adhesives and sealants to accommodate a wide range of applications, materials, and environmental conditions.

Raychem adhesives include both thermosets and thermoplastics.

Thermosets are curable two-part epoxies or crosslinked elastomers.

Thermoplastics are hot-melt adhesives that flow when heated and set when cooled. They reflow when reheated to simplify component repair.

Tyco Electronics also manufactures Raychem products that include a thermoplastic adhesive or a mastic-type sealant for water holdout applications. The sealants adhere to non-oily substrates and can be removed where reentry is necessary.

**Adhesive/Sealant Product Characteristics Table**

Product Type	Precoat Designation	Type	Operating Temperature Range	Product Designation	Available Form/ Packaging
<b>Thermosets</b>					
S-1006	—	Epoxy/polyamide two-part paste	-55°C to 135°C [-67°F to 275°F]	S-1006 Kit 8 S-1006 Kit A	50-ml dual syringe Ten 3-gram packs
S-1009	—	Epoxy/polymercaptan two-part paste	-55°C to 135°C [-67°F to 275°F]	S-1009 Kit A S-1009 Kit 8	Ten 3-gram packs 50-ml dual syringe
S-1255-04	—	One-part epoxy tape adhesive	-55°C to 200°C [-67°F to 392°F]	S-1255-04	Tape [3/4 in. x .020 x 100 ft.]
S-1125	—	Epoxy/polyamide two-part paste	-55°C to 150°C [-67°F to 302°F]	S-1125 Kit 1	Five 10-gram packs
				S-1125 Kit 2	Two 10-gram packs
				S-1125 Kit 3	One 100-gram pack
				S-1125 Kit 4	Five 10-gram packs
				S-1125 Kit 5	One 10-gram pack
	/225	Precoated latent-curing epoxy/polyamide	-75°C to 150°C [-103°F to 302°F]	Precoat only on -25 molded parts	—
<b>Thermoplastics</b>					
S-1017	/42	Hot-melt/polyamide	-20°C to 60°C*** [-4°F to 140°F]	S-1017	Tape [1 in. x .010 in. x 50 ft.]
S-1030	/180	Hot-melt/polyolefin	-80°C to 80°C [-112°F to 176°F]	S-1030	Tape [3/4 in. x .010 in. x 33 ft.]
S-1048	/86	Hot-melt, high performance	-55°C to 120°C [-67°F to 248°F]	S-1048	Tape [1 in. x .026 in. x 100 ft.]
S-1124	/164	Hot-melt/elastomeric polymer	-55°C to 105°C [-67°F to 221°F]	S-1124	Tape [3/4 in. x .018 in. x 100 ft.]
S-1297	/97	Hot-melt/polyamide adhesive	-20°C to 90°C [-4°F to 194°F]	S-1297	Tape [1 in. x .010 in. x 10 ft.]
<b>Sealants</b>					
S-1278	—	Hot-melt grey butyl sealant	-40°C to 90°C [-40°F to 194°F]	S-1278-01 S-1278-02	Tape [1 in. x .062 in. x 25 ft.] Tape [33/4 in. x .125 in. x 10 ft.]
S-1305	—	Hot-melt grey butyl sealant	-40°C to 90°C [-40°F to 194°F]	S-1305-01	Tape [1 in. x .062 in. x 25 ft.]

\* Shelf life from date of manufacture.

\*\* For specific adhesion properties, see product specification sheets.

\*\*\* Passes cold bend at -40°C [-40°F] per RT-4204.

\*\*\*\* Only S-1006 Kit A conforms to MIL-A-46864.

**Selection Guide**

To determine the adhesive or sealant most compatible with a Raychem part, you must know the part's product type.

Use the Adhesive/Sealant Selection Table on page 12-208 to determine a Raychem part's product type and the adhesive/sealant compatible with that type.

Use the Adhesive/Sealant Product Characteristics Table below to be sure the adhesive or sealant has the

product characteristics your application requires.

To use the Selection Table, follow these four steps:

1. Under "Substrate Category," find the product material and product name/part number for the Raychem part.
2. Across the top of the table, find the part's product type and dash number.
3. At the intersection of the substrate category (prod-

uct material/name/part number) and the product type (by designated dash number) you will find the part number for the most compatible adhesive for the Raychem part.

4. See the Adhesive/Sealant Product Characteristics Table to verify the characteristics of the adhesive/sealant you selected.

**Adhesive/Sealant Product Characteristics Table** (Continued)

Pot Life at 23°C [73.4°F]	Curing Conditions	Shelf life* at or below 25°C [77°F]	Specifications**	Review
1 h	96 h at 20°C [68°F] min. or 1 hr at 120°C [248°F]	2 years 1 year Kit 8	RT-1006 RK-6612 A-A-56031	General purpose harnessing adhesive. Not used on fluoroelastomers, silicone or Kynar; 20-minute pot life
20 min.	24 h at 20°C [68°F] min. or 1 hr at 95°C [203°F]	2 years 1 year Kit 8	RT-1009	General purpose harnessing adhesive. Not used on fluoroelastomers or silicone; 20-minute pot life
	45 min at 120°C [248°F] 2 h at 155°C [311°F] min. or 15 min at 240°C [464°F]	1 year	RT-1014	One-part epoxy tape used with fluoroelastomer harness systems. Heat cure required (2 hours at 155°C [311°F])
90 min.	24 h at 20°C min. or 1 hr at 85°C [185°F]	18 months	RT-1011 RK-6619 VG-95343	Good fluid-resistant epoxy used with System 25
	Cure during installation of molded parts	36 months	VG-95343 RK-6630	Precoated epoxy system for System 25
—	120°C [248°F]	Unlimited	RT-1050/1	General purpose harnessing adhesive. Standard precoated adhesive for -3 and -4 molded parts
—	120°C [248°F]	Unlimited	RT-1050/6 RK-6017	Good low-temperature flexibility. Available as a preinstalled tape for molded parts
—	160°C [320°F]	Unlimited	RT-1050/3 RK-6626	Requires high temperature to achieve bonding. Highest service temperature for hot melt
—	135°C [275°F]	Unlimited	RT-1050/13	Requires reflowing in an oven at 150°C [302°F] for 90 minutes. Designed to bond to -51 molded parts.
—	120°C [248°F]	Unlimited	RW-2019	General purpose harnessing adhesive. Standard precoated adhesive in Sigmaform molded parts, CES and CSGA cable entry seals, and SST-FR heat-shrinkable tubing
—	110°C [230°F]	Unlimited	RW-2020	General purpose sealant and cable breakout area filler
—	110°C [230°F]	Unlimited	RW-2020	Halogen-free, flame-retardant sealant and cable breakout area filler

\* Shelf life from date of manufacture.

\*\* For specific adhesion properties, see product specification sheets.

\*\*\* Passes cold bend at -40°C [-40°F] per RT-4204.

\*\*\*\* Only S-1006 Kit A conforms to MIL-A-46864.

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Adhesive/Sealant Selection Table

Substrate Category	Product Name Examples	Molded Part Material Dash Number												
		-3	-4	-6	-8	-12	-25	-50	-51	-55	-71	-100	-125	-130
Polyolefin	RNF-100	S-1006	S-1006	—	—	—	—	—	—	—	S-1006	—	—	S-1006
	Versafit	S-1009	S-1009	—	—	—	—	—	—	—	S-1009	—	—	S-1009
	CRN	S-1017	S-1017	—	—	—	—	—	—	—	S-1017	—	—	S-1017
	BSTS	S-1030	S-1030	—	—	—	—	—	—	—	S-1030	—	—	—
	SST	S-1048	S-1048	—	—	—	—	—	—	—	S-1048	—	—	—
	HR	S-1297	S-1297	—	—	—	—	—	—	—	S-1297	—	—	—
Fluoro-polymer	Kynar	S-1009	S-1009	—	S-1009	—	S-1125	—	—	—	S-1009	—	S-1009	—
		S-1048	S-1048	—	—	—	—	—	—	—	S-1048	—	S-1048	—
		S-1125	S-1125	—	—	—	—	—	—	—	S-1125	—	S-1125	—
	RT555	—	—	—	—	S-1255	—	—	—	S-1255	—	—	S-1255	—
	HCTE	—	—	—	—	S-1255	S-1125	—	—	S-1255	—	—	—	—
CONVOLEX	—	—	—	—	S-1125	—	—	—	S-1125	—	—	—	—	
Vinyl	PVC	S-1006	S-1006	—	—	—	—	—	—	—	S-1006	—	—	—
		S-1009	S-1009	—	—	—	—	—	—	—	S-1009	—	—	—
		S-1017	S-1017	—	—	—	—	—	—	—	S-1017	—	—	—
Elastomer	DR-25	—	—	—	—	—	S-1125	S-1125	S-1125	—	—	—	—	—
		S-1006	S-1006	—	—	—	—	—	S-1124	—	S-1006	—	—	—
		S-1009	S-1009	—	—	—	—	—	—	—	S-1009	—	—	—
	NT	S-1017	S-1017	—	—	—	—	—	—	—	S-1017	—	—	—
		NT-FR	—	—	—	—	—	S-1125	—	S-1124	—	—	—	—
		SFR	—	—	*	—	—	—	—	—	—	—	—	—
	SRFR	—	—	*	—	—	—	—	—	—	—	—	—	
	RW-200	—	—	—	—	S-1255	—	—	—	S-1255	—	—	S-1255	
	VPB	—	—	—	—	—	—	S-1125	—	—	—	—	—	
	—	—	—	—	—	—	S-1255	—	—	—	—	—		
Zerohal	XFFR	—	—	—	—	—	—	—	—	—	—	S-1030	—	
	ZHTM	—	—	—	—	—	—	—	—	—	—	S-1030	—	

\* GE RTV 108 used with SFR SRFR and -6 (silicone) molded parts.

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