



Technical Data Sheet

DOWSIL™ EA-4600 LV HM RTV Translucent

Reactive silicone hot-melt adhesive for PCB systems assembly applications

Features & Benefits

- Instant green strength
- Neutral cure RTV adhesive
- Primerless adhesion to most common substrates including plastics, metals, and silicones
- Long open time and pot life
- Service temperatures from -45°C to 150°C
- Can be used with standard hot-melt dispensing and jetting equipment

Composition

- One-component, neutral (moisture) cure, silicone hot-melt adhesive

Applications

- DOWSIL™ EA-4600 LV HM RTV Translucent adhesive is designed for PCB assembly applications. This product dispenses as a low viscosity material using standard hot-melt dispensers, including those equipped with jet dispensing applicators. It cures in the presence of atmospheric moisture to a strong adhesive.

Typical Properties

Specification Writers: These values are not intended for use in preparing specifications.

Test ¹	Property	Unit	Result
CTM 1134	Viscosity at 100°C	mPa·s	25,000
	at 140°C	mPa·s	6,000
CTM 0839	Nonvolatile Content	percent	≥ 98.5
CTM 0243	Open Time ² or Assembly Time	minutes	15
ISO 4587	Lap Shear Adhesion ³ after 1 day 21 days	MPa	0.14–0.19
		MPa	1.0–1.2
ASTM C661	Durometer – Shore A	points	53
ASTM D412	Tensile Strength	MPa	4
ASTM D412	Ultimate Elongation	percent	560
CTM 0097	Specific Gravity		1.08

1. CTM (Corporate Test Method) corresponds to ASTM (American Society for Testing and Materials) standard tests in many cases. Copies of CTMs are available upon request.
ISO: International Standardization Organization
2. To ensure full adhesion strength.
3. From aluminum, polycarbonate, and stainless steel substrates.

Typical Properties (Cont.)

Test ¹	Property	Unit	Result
CTM 0176	Appearance		Translucent to White
ASTM C711	Service Temperature Range	°C	-45 to 150
CTM 0112	Dielectric Constant at 100 Hz		2.59
	at 100 KHz		2.59
	at 1 MHz		2.58
	UL Certification		HB

Description

DOWSIL™ EA-4600 LV HM RTV Translucent is a moisture-curing silicone hot-melt adhesive designed for PCB systems assembly applications to provide primerless adhesion to various substrates including metals, plastics and silicone elastomers.

Assembled parts made with this product can be handled immediately after application. As a viscoelastic material when cured and exposed to high temperatures, this product will soften but recovers to its typical properties when cooled down.

How to Use

Preparation

Surfaces should be clean and dry before application of the adhesive.

Application

Application temperature is typically from 100°C to 140°C. When the melt temperature is reached, it can be applied with automated or manually-assisted hot-melt dispensers. Once applied, parts should be assembled within 15 minutes, and this product reacts with atmospheric moisture to form a strong-bonded flexible silicone adhesive. The exposure of opened containers to humid air should be minimized.

Handling Precautions

PRODUCT SAFETY INFORMATION REQUIRED FOR SAFE USE IS NOT INCLUDED IN THIS DOCUMENT. BEFORE HANDLING, READ PRODUCT AND SAFETY DATA SHEETS AND CONTAINER LABELS FOR SAFE USE, PHYSICAL AND HEALTH HAZARD INFORMATION. THE SAFETY DATA SHEET IS AVAILABLE ON THE DOW WEBSITE AT CONSUMER.DOW.COM, OR FROM YOUR DOW SALES APPLICATION ENGINEER, OR DISTRIBUTOR, OR BY CALLING DOW CUSTOMER SERVICE.

This product should be applied at temperatures around 100°C to 140°C. Use personal protective equipment to prevent the contact of hot material with skin or eyes.

Usable Life and Storage

In the original unopened 30 g package, this product has a usable life of 6 months when stored at or below 32°C.

Refer to product packaging for "EXP. DATE" for usable life.

Packaging Information

This product is available in 30 g aluminum syringes.

Limitations

DOWSIL™ EA-4600 LV HM RTV Translucent is not intended for use:

- In spaces totally confined from atmospheric moisture during cure
- In continuous water immersion
- On surfaces that might bleed oils, plasticizers, or solvents
- On wet surfaces

This product is neither tested nor represented as suitable for medical or pharmaceutical uses.

Health And Environmental Information

To support customers in their product safety needs, Dow has an extensive Product Stewardship organization and a team of product safety and regulatory compliance specialists available in each area.

For further information, please see our website, consumer.dow.com or consult your local Dow representative.

How Can We Help You Today?

Tell us about your performance, design, and manufacturing challenges. Let us put our silicon-based materials expertise, application knowledge, and processing experience to work for you.

For more information about our materials and capabilities, visit consumer.dow.com.

To discuss how we could work together to meet your specific needs, go to consumer.dow.com for a contact close to your location. Dow has customer service teams, science and technology centers, application support teams, sales offices, and manufacturing sites around the globe.

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Your exclusive remedy for breach of such warranty is limited to refund of purchase price or replacement of any product shown to be other than as warranted.

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