

## RCS Rapid Cure Sealant

Electrolube RCS is a single component, solvent-free, low odour RTV which cures upon exposure to atmospheric moisture. The product offers high bond strength when applied to a variety of surfaces and exhibits rapid tack-free times. It is suitable for applications where there is the need to mechanically support components in order to overcome vibration failures commonly experienced in the automotive industry.

- High viscosity, non-slump paste with good electrical insulation characteristics
- High bond strength and excellent adhesion to a wide variety of substrates
- Modified polymer with silyl functional group; no low molecular weight cyclosiloxanes during cure
- Remains flexible and elastic over a wide temperature range

| <b>Approvals</b>    | <b>RoHS Compliant (2015/863/EU):</b>                                                           | <b>Yes</b>                                               |
|---------------------|------------------------------------------------------------------------------------------------|----------------------------------------------------------|
| Typical Properties: | Colour<br>Main Component                                                                       | White<br>Modified Polymer<br>with Silyl Functional Group |
|                     | Viscosity (Pa s)                                                                               | 100                                                      |
|                     | Consistency                                                                                    | Non-Slump Paste                                          |
|                     | Density (g/ml)                                                                                 | 1.6                                                      |
|                     | Skin forming rate*                                                                             | 6-10 minutes                                             |
|                     | Cure time (Hours @ 20°C) *                                                                     | 24                                                       |
|                     | Shelf Life                                                                                     | 12 Months                                                |
|                     | *Curing rate and skin forming is dependent upon ambient conditions of temperature and humidity |                                                          |
| Cured Properties:   | Temperature Range (°C)                                                                         | -40 to +130                                              |
|                     | Glass Transition Temperature (°C)                                                              | -45                                                      |
|                     | Shore Hardness                                                                                 | A40-45                                                   |
|                     | Shore Hardness after 7 days                                                                    | A80                                                      |
|                     | Tensile Strength (MPa)                                                                         | 5                                                        |
|                     | Elongation at Break (%)                                                                        | 250                                                      |
|                     | Surface Resistivity (Ω)                                                                        | 1 x 10 <sup>12</sup>                                     |
|                     | Volume Resistivity (Ω.cm)                                                                      | 10 x 10 <sup>12</sup>                                    |
|                     | Dielectric Constant (@ 50Hz)                                                                   | 4.3                                                      |
|                     | Heat Aging – Weight Loss (7 days at 130°C / %)                                                 | <3                                                       |
|                     | Moisture Resistance (96 hours at 95% RH, 40°C / Ω)                                             | 5 x 10 <sup>9</sup>                                      |

## Adhesive Properties

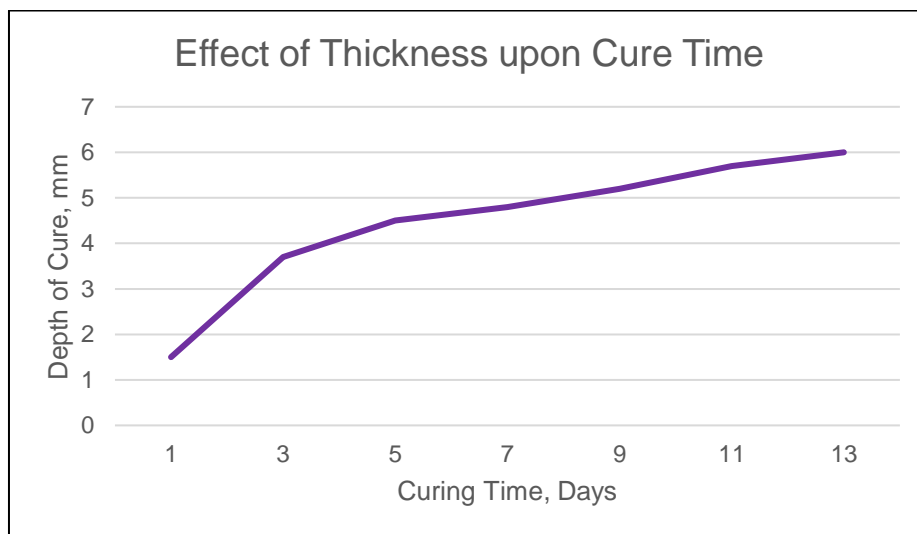
### Adhesion to different substrates:

Cured for 7 days at 23°C, 50%RH and an open time of 5 minutes

| Substrate       | Shear Strength (MPa) | Comments         |
|-----------------|----------------------|------------------|
| Aluminium       | 6.8                  | Cohesion Failure |
| Stainless Steel | 5.1                  | Cohesion Failure |
| Polycarbonate   | 5.4                  | Cohesion Failure |
| Nylon           | 5.1                  | Cohesion Failure |
| Glass           | 6.3                  | Cohesion Failure |

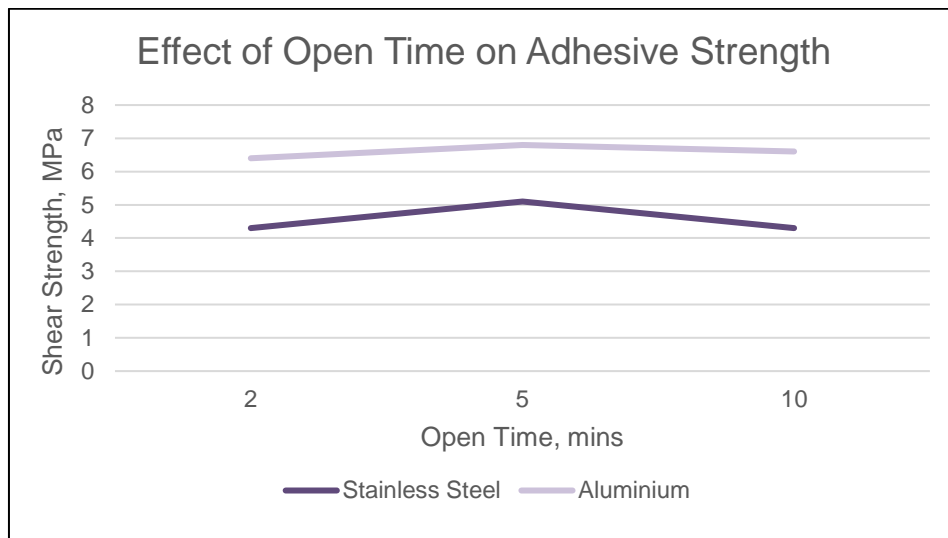
### Cure thicknesses:

Cured at 23°C, 50%RH and an open time of 5 minutes



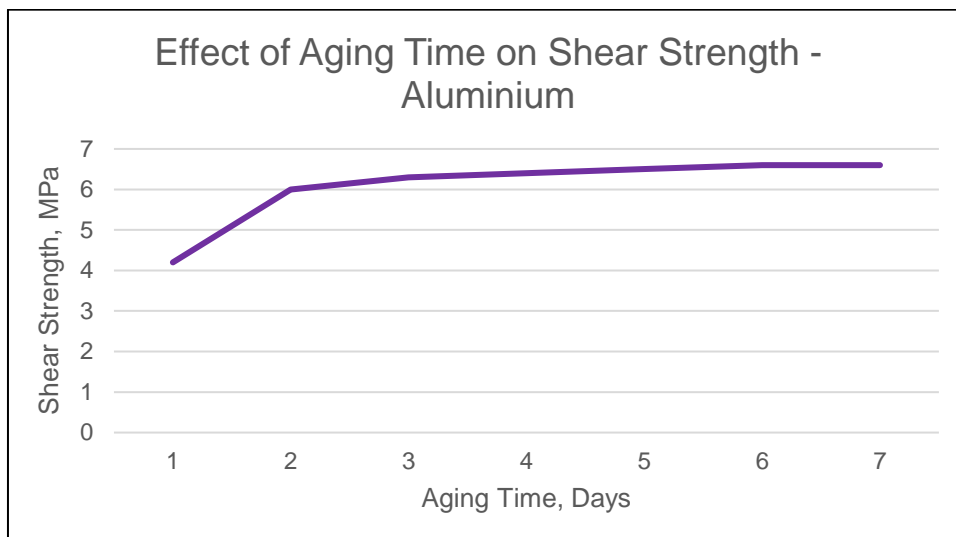
**Open time:**

Cured at 23°C, 50%RH for 7 days



**Full cure properties:**

Cured at 23°C, 50%RH and an open time of 5 minutes



## **Directions for Use**

Surfaces must be clean, dry and free from grease, dust and contaminants; Electrolube offer a range of cleaning products, including Ultrasolve (ULS), for such applications. Ensure that all solvents have completely evaporated prior to application.

RCS is a moisture curing system. Relative humidity of 50% or above is preferred for curing. Apply a thin layer of product onto each bonding surface; the thickness of the layer will affect the rate of initial cure – the higher the thickness applied, the longer it will take to reach the required strength. Final strength is obtained after ~24hours.

## **Bulk Packaging Specifications**

| <b>Package Size</b> | <b>Diameter (mm)</b> | <b>Height (mm)</b>              |
|---------------------|----------------------|---------------------------------|
| 310 ml cartridge    | 45.9 (inside)        | 215.5 (without threaded nipple) |
| 17 kg tin           | 285 (internal)       | 280 (internal)                  |

Revision 7: Jan 2019