

TECHNICAL DATA SHEET



R1531

June 2013

Flowable silicone adhesive

R1531 is one component, ready to use black flowable adhesive/sealants, which cure to a tough, durable resilient silicone rubber on exposure to atmospheric moisture at room temperature. R1531 is suggested for use in applications requiring neutral cure, fast cure and excellent adhesion. Because of the benzamide cure system R1531 offers an essential odourless cure with no unpleasant smell or pungent cure byproducts. When cured and heated above 80° C the product shows sublimation.

Main Features and benefits:

- Neutral cure, non corrosive
- Non slump paste or flowable
- Excellent primerless adhesion to plastics and metals
- High temperature resistance. Will be flexible from -60° to +200° C
- Continuous operation and to 260° C for short periods
- Fast room temperature curing
- Excellent weatherability remains flexible, will not harden or crack good ozone resistance

Typical Physical Properties:

Typical uncured properties:

Colour:	Black
Consistency:	Flowable
Skin over time:	8min
Viscosity :	55 Pa.s
Density:	1.12

Typical Cured Properties

Properties were obtained on 2 mm thick slabs cured for 7 days at 23° C and 50% RH.

Hardness (Shore A) :	30
Tensile Strength:	1.3 MPa
Modulus @ 100 %	0.7 MPa
Elongation :	250 %

Potential applications :

The fast neutral cure characteristics of R1531 make this product ideally suited for industrial plastic sealing and bonding applications, electrical insulation, encapsulating, protective or conformal coating and thin section potting of electrical components.

Product Safety, Handling and Storage :

The shelf life from the material will be indicated by the "use before date" on the associated documents with a minimum of 4 months when stored in the unopened containers at 27° C or less. Customers should review the latest Material Safety Data Sheet (MSDS) and label for product safety information, safe handling instructions, personal protective equipment if necessary, and any special storage conditions required for safety.

Processing recommendations:

Surface Preparation:

R1531 adhesive sealant will bond to many clean surfaces. These surfaces typically include many metals, glass, ceramic and many plastics. An evaluation should be made to determine bond strength for each application. For difficult to bond substrates use of a primer is suggested. For optimum adhesion, surfaces should be thoroughly cleaned with a suitable solvent such as naphtha, methyl ethyl ketone (MEK) or iso propyl alcohol to remove dirt, oil and grease. The surface should be wiped dry before applying the silicone sealant.

Cure Time Cycle:

The cure process begins with the formation of a skin on the exposed surface of the sealant and progresses inwards through the material. At 23° C and 50% relative humidity, the R1531 will form a surface skin, which is tack free to the touch in about 15 minutes. Within 24 hours a section of minimum 2 mm is fully cured. Since cure times progressively increase with the thickness, sealant depth should be limited to 15 mm.

Contact ABchimie for assistance where applications involve depths greater than 15 mm. Higher temperatures and humidity will accelerate the cure process. Do not cure the sealant at or above 70° C as bubbles may form in the sealant that may affect the overall physical properties and adhesion.

Dispensing:

Bulk containers require a larger initial investment in dispensing equipment, but offer economical packaging for volume production. Bulk dispensing systems are air-operated extrusion pumps coupled to hand or automated dispensing units. Pumps, which are specifically designed, for one component condensation cure material like R1531 has Teflon seals, gaskets and Teflon lined hoses to prevent moisture penetration and pump cure problems.

Clean Up and Removal:

For not cured material, solvent systems such as naphtha or methyl ethyl ketone (MEK) are most effective for clean-up. After cure, selected chemical strippers that will remove the silicone rubber are available from other manufacturers.

Limitations:

Customers must evaluate ABchimie products and make their own determination as to fitness of use in their particular applications.

Available Packages :

R1531 : 310mL cartridges, 20kg pails

All information is given in good faith but without warranty. Properties are given as a guide only and should not be taken as a specification. ABchimie cannot be held responsible for the performance of its products within any application determined by the customer, who must satisfy themselves as to the suitability of the product.