Silicone Shield Sealants FAQ

- **What is the base chemistry for 0816/0826KB Silicone Sealants?** Acetoxy cure silicone.
- **Do these silicones carry FDA or UL listing?** No.
- **What total joint movement are these silicone formulas designed to provide?** 50% total joint movement (+/- 25%).
- **What is the recommended temperature range for application?** Product will apply from 10F to 100F. For best results, apply between 40F & 90F, to clean, dry surface.
- **What is the typical service temperature range for 0816/0826KB?** -60F to 400F (See TDS for additional details related to intermittent temperature exposures).
- **What does Acetoxy cure mean?** During the curing process from a putty-like material to a rubber-like elastomeric material, acetic acid is given off as a by-product. Acetic acid corrodes some soft metals (like brass or copper) & therefore should not be used in tandem w/ these substrates. Acetic acid has an odor similar to vinegar & is the most common of all silicone sealants sold.
- **What does neutral cure mean?** Neutral cure indicates that a non-corrosive or benign by-product is released during cure of the silicone sealant. The by-product may be an alkyl alcohol or a methyl alcohol. There are several neutral cure alternatives. **Oxime** (Red Devil): is the most common, is non-corrosive & low odor. **Alkoxy**: (Sometimes called a Tin Cure) is less common than Oxime, is non-corrosive, low-odor & is usually low to medium modulus. **Alkoxy/Titanium** is the least common, is non-corrosive & low-odor. It is usually low or medium modulus & represents the base chemistry for some of the Fire-Stop Silicones. **Methoxy** (Also a Tin Cure) is low-odor, non-corrosive & is typically low or medium modulus.
- **Is this silicone sealant series paintable?** No.
- **Can this silicone sealant series be used in a submerged/water immersion application?** Not recommended, as over time, water will seep into the bond-line area & adhesion failure may result.
- **What is ARC Resistance?** It denotes the resistance of a material to an arc produced by a current of electricity flowing between two electrodes.
- **What is Dielectric?** An electrical term denoting the ability of a substance to resist a charge of electricity as compared to the ability of air in this regard. Silicones are excellent dielectric materials.
- **What is meant by dissipation factor?** The measure of the quality of an insulating material. The lower the figure, the better the insulator.

- **What is Dielectric Strength?** Measurement of the amount of voltage an insulative material will withstand before breaking down & losing its insulative capabilities.

- **What is meant by RTV?** Room temperature vulcanizing – refers to the ability of a material to cure or harden to a solid substance, w/o the application of heat.

- **What is refractive index?** The amount of light beam is refracted (or bent) as it passes through a substance, as compared to water being 1.0.

- **What are silanes?** Silicon chemicals. Silicones are made from silanes by a chemical process.

- **What is surface tension?** An effect of the forces of attraction existing between the molecules of a liquid. It exists only on the boundary surface of the liquid. These formulas have low surface tension.

- **At what temperature does 0816/0826/KB silicone sealant become brittle?** – 80F (ASTM D746)

- **What are some limitations of 0816/0826/KB?** Will corrode copper, brass & other copper-containing alloys; magnesium, zinc & galvanized metals (& other zinc-containing alloys). These KB formulas are not recommended for use on brick, masonry & other cementitious substrates. Best adhesion & compatibility not achieved w/substances made of methylmethacrylate (Plexiglas), polycarbonate, polypropylene, polyethylene & polytetrafluoroethylene (Teflon). These KB formulas are not recommended for below-grade applications or for joints w/ over +/- 25% joint movement. Formulas not intended for structural glazing applications. Formulas not recommended for areas where abrasion & physical abuse are encountered.

- **What is the typical tack free time of these KB formulas?** 20 minutes (77F/50% RH).

- **How quickly must these formulas be tooled?** Tooling should be completed within 5 to 10 minutes of application.

- **How does a partially enclosed area of application effect cure time for these formulas?** In applications where material may be partially or totally confined during cure, the time required for proper cure is lengthened by the degree of confinement. It is possible that w/ absolute confinement, cure will not be completed. The result can be the softening of the sealant @ elevated temperatures. Curing time
increases w/ the thickness of the sealant. A ½” cross-section may require 3-4 days for complete cure, however the cure will have penetrated the outer 1/8” in about 24 hrs.

- **What is the approximate Peel Strength of these KB formulas?** For typical substrates encountered in KB applications, sealants have an average peel strength of approximately 10 to 20 lbs per inch after 72 hrs @ RT.

- **What is the odor w/ these 0816/0826KB sealants?** Vinegar-like odor during application & cure – no odor following full cure.

- **How can the best possible bond be achieved w/ these KB Sealants?** Thoroughly clean & dry surface, free of any contaminants, prior to application.

- **Do these KB formulas contain Formaldehyde?** Formaldehyde is not added as a part of the formula; however Formaldehyde vapors are formed @ temperatures above 300F in the presence of air. Formaldehyde is a potential cancer hazard & known skin & respiratory sensitizer. Vapors irritate eyes, nose & throat.

- **What is the typical shelf life of these KB Silicones?** Stored in original, unopened containers @ 72 to 77F, should see excellent stability for a minimum of 12 months.

- **How do I remove these silicone sealants from clothing?** This is difficult, if not impossible. There are silicone sealant removers available, however directions & precautions provided by the manufacturer must be closely followed for the remover chosen.

- **How do I remove these silicone sealants from skin?** If the sealant is not cured/still sticky, wipe the area thoroughly w/ a clean, dry cloth or towel, before washing area w/ soap & warm water. Do not use solvent on skin. It may take 3-4 days for the entire residue to be removed, peeled off or to wear off. Do not handle contact lenses during this time.

- **What should be done if contact lens irritation takes place after using silicone sealant?** Lens should be cleaned in an enzyme solution. Do not touch lenses until all silicone has been removed from fingers, nails & hands. Residual silicone may remain on hands for several days & be transferred to lenses. All sealant should be removed prior to re-insertion of lenses. Seek medical attention if irritation persists.

- **What should I do if a child or pet eats or tastes this silicone sealant?** Seek medical attention immediately or contact INFOTRAC @ 800-535-5053.

- **Can these silicone sealants be used as a barrier for gases (Oxygen, Carbon Monoxide, etc) to keep gases in or out?** No – silicone sealants are vapor-permeable & will not form a hermetic seal.
• **Typically, how long will these silicone sealants release an odor?** These silicone sealants outgas during cure. Most occurs during the first 24 hrs after application, however depending on the application, atmospheric conditions, etc., minimal outgassing/odor can sometimes occur for up to a week. (If vapor is irritating, provide adequate ventilation until full cure or wear the appropriate respirator.

• **How can I prevent silicone sealant from curing in the cartridge?** These silicones are condensation cure products; hence the only way to prevent curing is to protect them from the atmosphere. For cartridges, insert a nail into nozzle hole or squeeze out a bead of silicone above the nozzle tip & wrap plastic tightly over the silicone & nozzle.

• **Where can additional information be found on 0816KB/0826/KB silicone sealants?** See MSDS & TDS on this website ([www.reddevil.com](http://www.reddevil.com))