

ANAEROBIC ADHESIVES - MAINTENANCE PRACTICES

1. General

- A. This maintenance practice provides procedures for application of anaerobic adhesives. Anaerobic adhesives are retaining compounds which will harden between properly prepared mating surfaces where air is excluded.

WARNING: Some of these materials contain Aromatic Amines and/or Cyano-Acrylate fluids and are mildly poisonous. Avoid prolonged or repeated contact with the liquid or breathing of the vapors. Use with adequate ventilation. Cyano-Acrylate adhesives will instantly bond skin and can cause severe eye injury. Apply only to surface to be bonded. In case of skin contact, flush with water. In case of eye or internal contact, get medical attention.

2. Materials

- A. For anaerobic adhesive materials and application, refer to Table 201., Adhesives and Applications.

NOTE: Equivalent substitutes may be used for the following items.

NAME	NUMBER	MANUFACTURER	USE
Methyl n-Propyl Ketone		Commercially available	Cleaning solvent.
Sotoclean 110		PRC-DeSoto International 5340 San Fernando Rd. Glendale, CA 94710	Cleaning solvent.
DS108		Dynamold, Inc. 2905 Shamrock Ave. Fort Worth, TX 76107	Cleaning solvent.
Locquic Primer N (Ready to use)	Catalog Number 764-56	Loctite Corp. 705 North Mountain Road Newington, CT 06111	May be used with Loctite products 515, 569 and 592.
Locquic Primer T	Catalog Number 747-56	Loctite Corp.	May be used with Loctite products 222, 242, 271, 277, 290, 416, 601, 620 and 680.
Wire Tacking Kit (Loctite)		Loctite Corp.	Tacking wires or wire bundles in place.

3. General Requirements for Bonding/Sealing

- A. All surfaces to be bonded and/or sealed must be free of paints and corrosion preventive organic coatings.
- B. Surfaces must be clean and dry prior to application of adhesive.
- (1) Surface must be free from dust, lint, grease, chips, oil, condensation or other moisture and all other contaminating substances.
- C. Primers and/or adhesives must not be applied when the temperature of the primer, adhesive or parts is below 60°F.
- D. Excess adhesive must squeeze out of the joint when it is secured.
- E. Correct primer and/or adhesive must be used.
- F. Correct cleaning solvent and procedure must be used.

Table 201. Adhesives and Applications

LOCTITE PRODUCT	COLOR	APPLICATION
222	Purple	Low strength locking and sealing of threaded fasteners (removable).
242	Blue	Medium strength locking and sealing of threaded fasteners and key assemblies (removable) (one-fourth inch diameter or larger).
271	Red	High strength locking and sealing of threaded fasteners (removable) (three-eighth inch diameter or larger).

277	Red	High strength locking and sealing welds and locking preassembled threaded fasteners.
290	Green	Penetrating action for sealing welds and locking preassembled threaded fasteners.
515	Purple	Form-in-place gaskets and dressing cut gaskets.
569	Brown	Seals hydraulic fluids, including fire resistant synthetics, to the working pressure of the hydraulic line.
592	White	Low strength sealing of pipe threads and threaded fittings.
601	Green	High strength retaining for studs, bearings, and bushings.
620	Green	High strength retaining at temperatures up to 450°F.
680	Red	Extra-high strength retaining for strengthening press fits and bonding cylindrical parts.
416	Clear	Wire tacking adhesive.

4. Cleaning

- A. All surfaces to which adhesive is to be applied must be clean and dry.

WARNING: Caution must be observed during cleaning. Most cleaning solvents are toxic and/or flammable.

- (1) Parts will be vapor degreased, cleaned with solvents, or, when a primer is to be used, the primer may also be used for cleaning.
- (2) Allow all cleaned surfaces to dry a minimum of five minutes prior to application of primer and/or adhesive materials.
- (3) In the event that contamination occurs, the surfaces must be recleaned.

5. Primer Application

- A. When primer is used, it may be applied by dipping, brushing or spraying the surfaces to be bonded and/or sealed. The parts should be allowed to drain and air dry prior to application of the adhesive materials.

- (1) Apply only a thin uniform coating, avoiding any excess.

6. Adhesive Application

NOTE: All applications must be made using the proper adhesive material.

- A. Application of Adhesive.

- (1) Apply the adhesive to both mating surfaces of the joint when possible.
- (2) Sufficient adhesive must be applied so the space between the assembled surfaces is completely filled with adhesive and a small excess is squeezed out around the periphery of the joint when the joint is secured.
- (3) After application of adhesive over primed surfaces, the joint should be secured immediately.
- (4) After the assembly is secured, remove uncured adhesive which extrudes onto the exterior of the joint. Use a wiper dampened with water or solvent as applicable.

7. Adhesive Cure

- A. In most cases, adhesives applied to active surfaces will cure in 24 to 26 hours at 77°F.

- (1) Factors that influence cure are:
 - (a) Activity of the surfaces.
 - (b) Clearance in joint fit.
 - (c) Specific adhesive material used.
 - (d) Specific primer used, if any.
 - (e) Temperature.

8. Wire Tacking

- A. Wires and/or wire bundles may be tacked in place with adhesive Loctite 416 or using a Wire Tacking Kit.

- (1) When utilizing a Wire Tacking Kit, follow the instructions provided with the kit.
- (2) When utilizing adhesive Loctite 416 not in a kit, perform the following:

- (a) Hand solvent clean the surface. Refer to Cleaning.
- (b) Apply a thin stripe of "Speed" activator (primer) with the felt applicator in the bottle.
- (c) Position the wire and hold it against the surface.
- (d) Apply one or two drops of wire tacking adhesive over the wire.
- (e) Hold for 15 to 30 seconds.