Low V.O.C. Red-Kote® FUEL TANK LINER

V.O.C. COMPLIANT - Uses acetone instead of methyl ethyl ketone.
RESISTANT TO ALCOHOL AND MOST FUEL ADDITIVES.
STAYS FLEXIBLE - Will never crack or peel off.
BRIGHT COLOR - Coverage is easily visible.
COVERS RUST - Seals old rust in and prevents future rusting.
SEALS LEAKS - Gets the multitude of pin-holes you can't find.

Red-Kote is a solvent-based polymer coating which is resistant to gasoline, diesel fuel, alcohol and other fuel additives. Its major use is to seal leaking fuel tanks. Solvents such as methyl ethyl ketone, acetone, methylene chloride and propylene oxide will completely dissolve the polymer. Other industrial solvents will affect the coating but, not completely dissolve it.

This low V.O.C. product is legal in the state of California and in other states and EPA ozone non-attainment areas. The only difference from regular Red-Kote is that it is not quite as shiny.

Red-Kote is easy to use if the directions are followed closely. It seals the multitude of small leaks that often form where the straps wrap around the tank. You fix the obvious leaks and Red-Kote seals the rest.

Contrary to what some people will tell you, rust **does** form inside fuel tanks. The causes are condensation in the tank and water in the gas. Red-Kote seals rust under the coating so it cannot flake off to plug fuel-line filters or cause engine damage. Further rusting is also reduced.

Some of the specific advantages of Red-Kote are as follows:

1. The coating is very flexible and does not crack as do some of the others. This gives the repair a much longer life. Tanks coated in 1984 are still doing well.
2. The polymer was specifically chosen because of its tight adhering qualities. In comparison to some other coatings, Red-Kote does not peel off even when the metal is bent. This protects against loosening of the coating by vibration or denting of the tank.
3. Red-Kote is resistant to methanol. In the U.S. the federal government allows a maximum of 5% of methanol. Red-Kote is not affected by up to 10% methanol. Greater than 10% methanol will leech the red dye out and turn the fuel red, but the Red-Kote remains tightly bonded to the metal. Some fuel tank liners are dissolved by methanol into sticky lumps and strings that plug the fuel line. This will not happen with Red-Kote.
4. Red-Kote dries faster than many other sealers, saving you time. You can reduce time further by thinning with acetone and using two thin coats instead of one thick coat.
5. Red-Kote levels very well. You will not get a wide variation in thickness as with some other coatings.
6. Red-Kote is thicker and usually requires only one coat as opposed to two coats for many other coatings. Holes up to $^{1}/_{32}{}^{nd}$ (1mm) may be coated and sealed safely. Rust is sealed in so that it cannot flake off.
7. The bright red color is easily visible so you can be sure you didn't miss a spot. Some coatings are almost invisible.

Packaging: Red-Kote is available in one quart metal cans packed 9 per case or in one gallon metal cans packed 1 per case. It is backed by our guarantee and our over 70 years of service to the automotive industry.

Warranty: Damon Industries, Inc. warrants its products to be free of defects in material and workmanship as delivered in the original container. Liability is limited to replacement of product found to be defective. This warranty is in lieu of all other warranties, expressed or implied. Damon Industries guarantees the product only, not your application of it. Performance and length of service is totally dependent upon the user following the instructions exactly.

Warning: Red-Kote is only for use lining the inside of fuel tanks containing gasoline or diesel fuel. Do not use with bio-diesel fuel. Do not use with racing fuels unless you have discussed your particular mixture with our chemist to find out if it will work. Do not use with water/water-based substances, especially potable water. Red-Kote cannot be sprayed, even after thinning. Do not use Red-Kote on fiber-glass or any plastic.

Motorcycle Tanks - If a motorcycle tank has

Damon Industries, Inc. P.O. Box 2120 Alliance, Ohio 44601 E-mail: Rad@DamonQ.com
Phone: 330-821-5310 Fax: 330-821-6355 Toll Free in North America: 800-362-9850

custom artwork do not use Red-Kote unless you are willing to take the risk of ruining the art. Even the fumes can cause the paint to wrinkle or blister. Do not put Red-Kote or MEK into motorcycle tanks with regular automotive paint less than 30 days old. Even after 30 days be careful not to allow liquid to contact paint. **It is always best to line the tank before painting and adding artwork.**

Fuel Additives - We recommend that you do not to use fuel additives containing methanol (methyl alcohol). We have had instances of methanol pulling the red dye out of Red-Kote which turns the fuel red. This has not caused any damage to our knowledge. Usually only "cheap" additives contain methanol. Good products contain isopropanol or other solvents. Most engine warranties are voided by the use of methanol anyway.

Directions:

1. Empty all fuel from the tank.
2. Remove the sending unit, float, feed lines, filters, anything that could be clogged by the liner or that is made of plastic which the liner will not stick to.
3. Remove any loose rust by tapping on the tank with a rubber mallet or by tumbling or shaking with a piece of chain in the tank. Flush out debris.
4. If there is still a lot of rust, you may use a rust remover.
5. Clean the tank with a water-soluble detergent or degreaser. Add 2 ounces of detergent/degreaser per gallon of tank capacity and fill with hot water. Allow the detergent to work for 15 minutes and then rinse thoroughly. Boilout is not recommended because the high alkalinity removes the tin from terne plate making the plating flake off. Red-Kote will not stick if the plating is coming off. Some tanks do not have this plating.
6. Any leaks larger than 1/32nd of an inch (1 mm) should be repaired by a professional who knows how to avoid an explosion while repairing a fuel tank. Soldering is the method usually used to repair leaks. Never use a torch on a fuel tank unless you have been properly trained.
7. Make sure that the tank is completely dry before continuing. This is very important. Without a blower, drying may take up to 12 hours. The use of a blower to circulate air through the tank will cut the time to an hour or so. The fastest method is to drain the tank of water for 5 minutes and then pour 1 pint of acetone into the tank, slosh thoroughly and pour out. Repeat with a second pint of acetone and you are ready to use Red-Kote immediately after draining. Discard this acetone safely and properly, keeping it away from heat and sources of ignition. Acetone fumes are heavier than air and can travel along the ground to pilot lights and explode. One quart of acetone will absorb up to 5 ounces of water. If you use Acetone do not use a blower because a spark will cause the tank to explode.
8. Cover all open holes in the tank by plugging or covering with tape, except the one to be used for pouring in the coating.
9. Pour Red-Kote into the tank and cover the last opening. Motorcycle tanks need about one pint, tanks up to 12 gallons one quart and larger tanks two quarts. It is important that enough is added to flow into every part of the tank..
10. Tip the tank onto each side and slosh the coating around to completely cover the inside. Use a rocking motion rather than shaking. It is important to do a thorough job or you may miss parts of the tank behind baffles.
11. Drain out the excess coating and cover tightly to save for reuse. The best method is to stand the tank up with a corner drain hole over a can to collect the excess as it drips out. It is very important that you do not leave puddles in the tank. Tilt the tank in every direction and hold for 30 seconds to allow the liner to run toward the drain hole.
12. Open all tank openings to allow the best air flow. Air dry for 8 to 24 hours. When cured there will be no solvent smell left in the tank. If the coating is not completely cured before fuel is added the curing process will be stopped. Do not use open flame or an electric element for drying or an explosion may result. Do not blow air into the tank until at least 60 minutes of drying time have passed. Using air sooner may cause bubbles to form in the coating or cause the acetone vapors to ignite.
13. If the leaks or rust are severe, it is a good idea to use a second coat after the first coat has dried.
14. Reassemble and install the tank on the vehicle.
15. For clean-up use acetone or a quality lacquer thinner with no alcohol in it.

Do not rush the job. In many cases it will take more than one day to do a job worthy of your time.

Tips & Hints:

Do not leave the can open to the air as it will thicken or form a skin on top. When Red-Kote is reused after pouring it back out of a gas tank it may need thinning before reuse. Red-Kote may be thinned with Acetone. Do not use lacquer thinner to dilute Red-Kote.

Repair shops are punching a hole in a corner of the tank and soldering in a drain-cock. This allows better draining of water and excess Red-Kote. Do not solder or weld on the tank after it has been coated. The coating will turn to ash if heated above 250°F (81°C).

Some of our customers have reported a way to speed up the process significantly. They are thinning Red-Kote about 20% with Acetone. (5 to 6 ounces or 150 to 180 ml of acetone per quart of Red-Kote). This allows the Red-Kote to dry in only a couple of hours in many cases. They also report that using an air blower to dry the inside does not cause the bubbles that form when straight Red-Kote is blow dried. You will get a much thinner coating this way. We are told that two of these thin coats still take less time to dry than one thick coat.

Red-Kote does not stick well to plastic, fiberglass or carbon fiber tanks or to any plastic parts inside the tank. Remove plastic parts before lining.

Do not coat over other coatings. Remove them completely first, using acetone or the appropriate solvent. Harley Davidson produced some tanks with a gray epoxy paint inside. Over time this paint flakes off and the tank starts to rust. Solvents will not touch it. Put

some steel shot or a piece of chain into the tank and shake or slosh it around to knock off all the loose pieces of coating. If you shake too hard you could dent your tank and spoil its appearance. Flush well with water and then rinse with acetone. This is not a perfect solution since the old coating could still come loose in some places. Hopefully Red-Kote's toughness and flexibility should hold it together in any spots where the old coating comes loose. Call us if you have a problem removing an old coating.

The two most common failure problems we see are:

1) Not completely drying the tank of water before coating. Red-Kote will not stick to wet metal. When it dries it will peel off in sheets.
2) Not allowing the Red-Kote to dry completely. If Red-Kote is not completely dry or has puddles left it will form strings or flecks in the gas. These may get past the fuel filter and plug carburetors or injectors. Puddles of Red-Kote left behind baffles or in corners may never dry completely. This is because a skin forms over the puddles and prevents drying underneath. Once the skin ruptures the Red-Kote forms strings in the fuel.

With over 1 million vehicles tanks lined since 1985 we have seen less than 200 problems. All were application errors as described above. We have not yet seen failure due to ageing. Both of the above conditions are easily prevented by proper drying. All problems are correctable by stripping out the Red-Kote with M.E.K. or acetone and recoating.