

BASIC CHEMISTRY OF SOLVENTS

A solvent is a substance, usually liquid, that will dissolve another substance. Choosing the right solvent will make a job easier; using the wrong one can damage tools or a work project. To avoid costly mistakes, one should be familiar with the most useful solvents and where, when and how to use them. The longer the graffiti has to dry, the stronger the solvent and more difficult the cleanup process will be. Time may be your best tool...don't delay remove it TODAY! Obviously, most chemical solvents are flammable and release toxic fumes. Be sure to read the manufacturers' instructions before using them and observe all safety precautions. Buy them in limited quantities — only as much as you need — and store them in metal containers away from children, pets and flames.

THINNER LIST

• Turpentine is produced by distilling the oleoresins from pine trees. It is also known as spirits of turpentine or turps. The best grade of turpentine is called pure gum spirits of turpentine. Turpentine has more solvency than mineral spirits. Even though turpentine is less toxic than petroleum-based solvents, it can cause an allergic reaction in some individuals.

• Mineral spirits, also called "white spirits", is a petroleum distillate specifically manufactured as a substitute for turpentine. Most painters prefer it as a paint thinner because it costs less, is not so sticky and has a less offensive odor than turpentine.

Turpentine and mineral spirits are good first-try cleaners, although turpentine can remove paint that has hardened slightly. Mineral spirits will dissolve only fresh paint.

• Naphtha is a petroleum solvent similar to mineral spirits but with a greater volatility. It is used chiefly as a paint thinner or as a cleaning agent. Naphtha is a more powerful solvent than mineral spirits, so less is needed to dissolve the same amount of paint. Naphtha is highly flammable. When using it, work in a well ventilated area and wear rubber gloves and a respiratory mask. Good on crayons.

Alcohol is sold in many forms: isopropyl, methyl, wood, ethyl and denatured alcohol.

• Isopropyl alcohol is the familiar rubbing alcohol formulated for external medicinal use. It is also useful for removing resinous stains and for removing the gummy tar residue such as in shoe polish and magic markers.

• Denatured alcohol is used for thinning shellac and for cleaning brushes used to apply shellac. It can be used to remove light pencil marks on wood. It can be used to clean certain permanent markers.

• Lacquer thinner is a blended mixture of two or more solvents. Acetone, amyl or ethyl acetate, heptane and toluene are common ingredients in lacquer thinners. Lacquer thinners are designed to thin lacquers and clean equipment used for lacquer finishing. It can soften and dissolve most paints even after they've hardened. It is highly effective at removing spray paint. However, it can soften underlying paint and many plastics and vinyls.

• Acetone, a common ingredient in lacquer thinner, is a useful solvent for working with plastics. It is effective in removing residue from plastic cements, especially the cyanoacrylates (also called instant or super glues). It is the recommended thinner for polyester resins and fiberglass. It will melt plastic vinyl.

Acetone and lacquer thinner are useful for removing paint and varnish, but they will soften and dissolve many plastics like plexiglass. Do not use a nylon brush for applying these solvents because the acetone may attack the bristles. Both acetone and lacquer thinner are highly flammable, and both release toxic fumes, so avoid inhaling them as much as possible.

• Methylene chloride is the principal ingredient in most paint removers and in heavy-duty brush cleaners. Sometimes it is combined with other ingredients and sold as "graffiti remover." It is effective in removing all finishes, but it too attacks and softens plastics. It can be hard on human skin, so wear rubber gloves when working with this solvent.

If you know the type of graffiti (crayon, spray paint, magic marker) go right to the type of solvent you need. Otherwise, work your way up the solvent list and see what works.

Technique is as important as the right solvent. You must use a CLEAN low-nap rag and keep using a clean part of the rag with each wipe. Otherwise as the graffiti softens, you'll just end up smearing it around. See the Graffiti Removal Techniques Section for details.

GRAFFITI

REMOVAL

TECHNIQUES

Painting Over Graffiti

If a large portion of a property has been vandalized, it may be cheaper to simply repaint. A \$10 gallon of paint covers the average 100 sq. ft. garage door for an average cost of 10¢ a sq. ft. It will also give you the opportunity to possibly change paints to a glossy enamel which will resist future graffiti attacks better than a flat finish. For added protection, an extra gallon of the same type of paint will help ensure a quick and painless perfect match if graffiti returns.

Before painting, try to clean the surface of any dirt or grease. Certain marker pens and indelible markers have the ability to absorb paint pigments. That's what makes them permanent so use a special paint called a stain blocker. Also, if the base color is light and the graffiti a dark color, use a stain blocker first. This special type of paint prevents the darker paint from seeping through the fresh paint.

Oil or Latex paint? Sealers? Foam brushes?

Oil base paint is tougher than latex. Latex is cheaper and easier to clean up. Though not recommended, oil base, can be applied at below freezing temperatures if needed. Oil base takes longer to dry, but can be used if light rain threatens. Once the new paint is on, you might consider using a "sealer" or "protectorant." These types of products seal the small surface pores and prevent graffiti's ability to adhere. Once sealed, the new graffiti is easier to remove with less work. Some protectorant systems sacrifice a small amount of the sheen and need to be reapplied after the graffiti is removed. As a good insurance policy, buy some foam-type brushes. If graffiti reappears, use the foam brushes and the new paint will blend into the old with perfect results. Then just toss the brushes away since they are inexpensive.

Identify Type of Surface

BRICK, CEMENT, CONCRETE:

Use extra strength paint remover, graffiti remover or Peel Away. Apply with a wire brush to work into holes and pores of stone. Allow time to activate and rinse with a forceful stream of water from a hose. Use of a pressure washer or soda-blaster may be needed.

If the surface is uniformly flat, a light grit (60) sand paper can remove paint, but will also scratch the surface. Consider using a sealer after removal to close pores and make future removal easier.

Products: Procon, Blaster

STUCCO:

Due to the multi-faceted surface of stucco, it is impossible to sand off. Use paint remover or Peel Away and follow up with a high pressure water hose or better yet a pressure washer. Use stucco paint and go over the graffiti carefully. Consider using a sealer as a finish coat.

Products: Off, Procon

ALUMINUM/VINYL SIDING:

Aluminum siding is usually coated or painted. Vinyl siding is made of plastic which can be marred by lacquer thinner-type cleaners. Solvents may work too aggressively and remove the coating as well. Experiment in a small inconspicuous area first and then tackle the more visible areas. Use paint remover sparingly and carefully. Use a clean rag and keep turning to a clean part of the rag before each wipe. The longer the solvent stays on the surface, the deeper it penetrates. In most cases, you will probably have to repaint. Peel Away may work better on certain types of vinyl.

Products: Off, Procon

WOOD:

Try working up the solvent list if the marks are new. Most thinners will remove magic markers and acetone will remove day old spray paint. You must use a clean rag and keep using a fresh part on each wipe. On latex or oil-based paint, use a stain-killing primer for exterior use. After the primer or stain blocker coat has dried, you can proceed with regular paints, oil or latex. Most oil base paints are more durable to solvents and hence could make future clean up easier. Consider a sealer coat after final finish. Avoid using flat paints as they readily absorb pigments from markers and spray paint.

Products: See thinner list, Off, Procon, Kilz II