



Paint Disposal

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Introduction

We receive numerous inquiries about how to dispose of unused paint. Paint is a very common product, and unused paint tends to accumulate in homes and businesses until it is disposed of. Industry sources estimate that an average of two gallons of household paint is sold for each person in the United States each year. The industry sources estimate that Americans use 3,000,000 gallons of paint per day, and more than 1,000,000,000 gallons per year. In Colorado, our arid environment causes us to think of liquids in acre foot measurements. The 3,000,000 gallons per day is the equivalent of slightly more than 9 acre feet – the amount of liquid required to cover one acre of ground to a depth of one foot. That is a lot of paint, and it generates a lot of unused paint to be stored or disposed of.

For the purposes of this discussion, the information includes both oil-based and water-based paint. While this discussion focuses on household paints, the same information is generally applicable to hobby paints and special paints.

There have been attempts by manufacturers to develop true recycling of paints, but the attempts have met with varied success and multiple problems. Actual reprocessing of leftover paint is difficult. Because the nature of paint purchase, use and disposal is so individualistic, it is almost impossible to guarantee the quality of any paint that would be placed into the remanufacturing stream. Manufacturers generally cannot have any confidence of the quality of the unused paint they are bringing into their factory and they may not be able to determine ahead of time if the leftover paint can be used. Once the paint container is opened, it is almost impossible to guarantee that it has not become contaminated with foreign matter that would render it unusable for remanufacturing.

Oil-Based and Water-Based Paints

Oil-based paints include enamels, varnishes, shellacs lacquers, stains and sealers. Water-based paints are latex paints. If you have difficulty distinguishing between the two, the clean up instructions for the paint can provide a major clue. If water can be used for cleanup, then the paint is a water-based paint. If, however, the cleanup requires the use of solvents such as paint thinner, then the paint is an oil-based paint. As a general rule, latex paints are identified by words on the container label such as “Clean with soap and water”, “latex”, “vinyl”, “acrylic” or “water-based.” Oil-based paints are identified by the use of words on the label such as “alkyd”, “oil-based”, “urethane”, “epoxy”, “varnish”, “Clean up with mineral spirits or paint thinners”, “contains petroleum distillates”, or “combustible: keep away from heat and flame.” If the label has the word “combustible” on it, it is almost certainly an oil-based paint.

Because latex paints are water-based paints, they are not considered to be part of the larger category of household hazardous waste, and generally do not need special handling by the consumer or waste or disposal services after they have

left their liquid state. Latex paint should be distinguished from other products that are manufactured with latex that hold potential allergy problems for some people. Latex paint is not manufactured with latex rubber, which is the substance that provides the potential for allergic reaction. The word “latex” in paint is an advertising word rather than a descriptive word. Latex paint is made from polyvinyl material mixed with acrylic resin and does not contain any natural rubber.

Potential Hazards of Misuse

Simply because paint is so common does not mean that it is without potential hazard, however. Paint contains many chemicals that can pose a hazard to people, animals and the environment. However, proper handling, storage and disposal will eliminate any risks. It is very, very important that paint never simply be thrown into the trash or poured down the drain, sanitary sewer or storm drain. Many of the chemicals that pose potential hazards cannot be treated by sewage treatment or septic treatment systems. Those chemicals could end up in waterways, lakes, streams or the aquifers and cause long term contamination that could find its way back into the drinking water supplies.

Trash that is picked up by waste haulers gets compacted, and compacting will inevitably damage the container to the extent that it will no longer hold the paint. Landfills are constructed in such a way that the paint can leach through the system and into the underlying aquifers. If the aquifer is hydrologically connected to a stream or body of water, the chemicals will seep into those water supplies. Waste haulers and landfill operators attempt to spot liquid paints as they service their clients, and will generally not accept liquid paint without special handling arrangements having been made.

It should go without saying that paint should never, never be poured on the ground or into the street gutters to dispose of it.

For more information concerning hazardous wastes, please visit the website for the Colorado Department of Public Health and Environment at <http://www.cdph.state.co.us/hm/hmhom.asp> or the website for the Environmental Protection Agency at <http://www.epa.gov/>.

The Best Strategy – Use It All Up

The best strategy is to use the paint up. Paint is intended to be used, and if it can be completely used up there is no disposal problem. Oil-based paints are generally usable for as long as fifteen years. Latex paints, as long as they have not been subjected to freezing and thawing, are generally usable for up to ten years.

The first step is to purchase only the amount of paint that you reasonably need. Almost all paint retailers have formulas for helping you estimate the amount of paint that you reasonably need for the job. Some people make the decision to buy larger quantities of paint because gallons are usually cheaper than quarts. However, they do not take into consideration that the excess paint has to be stored or disposed of, and if it is not used then the money seemingly saved was just wasted for no good reason. A general rule of thumb is that an average coverage rate is 400 to 450 square feet per gallon for one-coat coverage, although that figure may vary depending on the condition of the surface you are painting and the type of paint product you are using. When calculating the coverage area, be sure to exclude the area represented by doors and windows. Most paint cans have information on their labels that will help you refine your calculations for the specific paint that you are using.

Use all leftover paint on odd jobs such as closets, under-side of steps, fences, dog house, attic, etc. There are innumerable uses around the house, business, marina, and other sites where unused paint can be applied, and where color is not important. Leftover paint is frequently a good primer for a paint job.

It is also important to purchase the right kind of paint for the application. Using paints designed for exterior uses for interior uses may present some potential hazards. Some exterior paints are manufactured with mercury or other biocides, and are not intended to be used inside. About 30% of the latex paint manufactured for interior use before August 1990 contains mercury. A good clue is to read the label – if the label indicates that the paint kills fungus or mildew it is likely that it contains potentially harmful chemicals. Additionally, some paints which were manufactured before 1978 may

contain lead, and simply should not be used. New federal regulations prohibit the use of mercury in interior latex paint manufactured after August 20, 1990.

With the long life-spans of paints, it is important to determine when old, stored paint was manufactured and what is in it before using it. Lead was banned from paint in 1973 and mercury was banned in 1990. Industry sources estimate that the average American has about four gallons of old paint sitting around in basements and garages. Collection programs still turn up lead paint, and mercury will be common for some time to come. Lead based paints are more common in older communities than in new ones. Before using leftover paint on interior surfaces, read the label on the can carefully for mercury content. If you're unsure, review the information on the website of the National Pesticide Information Center at <http://ace.orst.edu/info/nptn/>. The Center also has a toll-free number at 800-858-7378. They can tell you whether or not your paint contains mercury or other pesticides.

If It Is Usable – Consider Donation

If you cannot use up all of the paint, and you do not want to store it for a future use, look for organizations to which it may be donated. Many civic groups that rehabilitate property for senior citizens or lower income citizens will accept paint to be used on their projects. Latex paints may be mixed with each other, and oil-based paints may be mixed with each other. However, a word to the wise suggests that the colors should be compatible before the mixing begins! Mixing various colors may provide you with a very soft and mellow color of beige. Advice from a paint retailer or manufacturer about what the resulting color will be is easy to secure. And, it should be obvious that latex and oil-based paints should not be mixed together.

There are other community groups and organizations that might be in need of paint. Many schools will accept paint for their drama and music departments. Those organizations are constantly building sets and decorating for their productions. The same is true for community theater repertoire companies.

Many churches will accept donations of unused paint for their programs and projects.

And, please make sure that the paint that you are donating does not contain lead or mercury that could pose potential hazards to the recipients of the donation when they use it.

Unused Paint Can Be Stored For Future Use

When properly stored, paint can last for several years. Make sure that the lid is sealed well, and then cover it with plastic wrap. The key to successful storage is to turn the paint can upside down. The paint will create an even tighter seal around the lid, which will keep it fresh until it is used again. The trick to storing paint so you can use it again is to keep the air out. Another storage technique is to store leftover paint in a small jar (you don't need much for touch-ups) and fill it completely to the top, before closing the jar with a tight lid and covering it with plastic wrap.

Generally, paint that mixes smoothly when stirred can still be used. If it is an oil-based paint and is thin, watery or contains lumps it may not be usable. If latex paint has been frozen, brush it on a newspaper. If there are no lumps, it hasn't been damaged and can be used. If the latex paint is thick and lumpy, it probably just needs some thinning and straining before it is applied.

As a safety note, be sure to avoid storing the paint near a heat or ignition source.

Paint thinners, turpentine, mineral spirits, solvents, and other chemicals used for cleanup can be stored and reused. The liquid should be allowed to sit in a closed container. The paint particles that were introduced as part of the cleanup operations will settle to the bottom of the container. You can then carefully pour off the clear liquid and use it. The residue left from the settling can then be disposed of.

Because paint thinner is basically a petroleum-based solvent, it is considered a household hazardous material. Therefore, the less you use the better. Paint thinner can be used many times without losing its ability to clean paint from the paint brush. Let the used thinner settle for a few days (a glass jar works nice for viewing, but handle with care). Pour the clear thinner on top into a labeled container with a secure lid. This clear portion can be used over again for cleaning brushes. The sediment that remains then can be dried out in the original container. It is extremely flammable, however, and must be dried only in a well ventilated area away from open flames. Make sure the sediment is completely dry and hard before sending it to the landfill.

Disposal of Unused Paint

If the paint cannot be entirely used up, properly stored or donated to other users, and needs to be disposed of, there are some steps you should take to make sure that the paint is properly prepared before disposal. The essential key to properly disposing of unused paint is to get it out of its liquid state and into a solid state.

A word of caution is warranted. The rules and regulations for disposing of latex and oil-based paints may vary from community to community and from state to state. You should verify the proper disposal techniques with the appropriate regulatory authority for your community.

It is becoming increasingly common for communities to sponsor special household hazardous waste collection events or roundups. The Colorado Department of Public Health and Environment maintains a current list of such events on a community by community basis. To check whether your community has such an event scheduled, please review the information on the Department's website by clicking the following link: <http://www.cdphe.state.co.us/hm/hhwcollect.asp>

It should also be noted that these drying and disposal techniques are really intended for small amounts of unused paints. Let your leftover latex paint air dry away from children and pets. One method is to pour the latex paint into a paper box or bag that has had absorbent material such as shredded newspaper or cat litter box filler added to the container to speed drying. Recycle the empty can, and then throw the dried paint away with your normal trash.

Drying paint can take a long time, so be patient and diligent about checking it. The drying process may take several days or weeks, and, in some cases, the drying process may take up to a year.

If the amount of paint is small, consider painting it on to newspapers or cardboard to allow it to dry. These newspapers or cardboard can then be disposed of in the normal manner. For larger amounts, pour a one-half inch to one-inch layer of paint into a cardboard box lined with plastic. Allow the paint to dry one layer at a time--thin layers will speed up drying. Or, mix paint with cat litter, sawdust or sand in a cardboard box lined with plastic and let it dry.

It is preferable to allow the drying to occur outdoors in the open air (be sure to make it inaccessible to children or animals). If, however, it is necessary to allow it to dry indoors, be sure to provide adequate ventilation, and to keep the paint secured from children and pets. Adequate ventilation is particularly important if the paint to be dried is oil-based. As oil-based paints dry out, they release fumes from the chemicals and solvents in the paint, and these fumes are potentially hazardous.

Whether the drying occurs indoors or outdoors, make certain that the paint is not close to any potential heat or ignition source that could cause a fire.

It is likely that the drying paint will form a crust. The paint beneath this crust may still be liquid, so it may be necessary to break the crust, stir the paint and let it continue to dry. Before disposing of the paint, make certain that it has truly dried into a solid mass. Once the paint is completely solidified, it can be disposed of in the trash. Waste haulers are trained to look for liquid paints, so be sure to remove the container lid so that the hauler can verify that the paint has solidified. As you check the contents to see if they have dried, be sure to remove any rainwater or snow melt that may have accumulated in the container during the drying process.

If the paint is liquid, do not attempt to place it in the trash. Either allow it to dry or dispose of the liquid paint through a household hazardous waste collection event that will accept liquid paint. Some household hazardous waste programs will not accept latex paint because it is generally not considered to be hazardous. In that case, you will need to revert to the drying techniques.

If your paint has come in an aerosol can, the best technique is to spray the paint onto newspaper or cardboard, and allow it to thoroughly dry and then dispose of it with the trash. An empty aerosol can may be recycled or placed in the trash. However, please do not attempt to recycle or dispose of an aerosol can that still contains paint. Check with your local waste hauler or household hazardous waste collection facility for proper disposal instructions.

At the beginning of this discussion paper, we noted that the rules for disposal are generally the same for special kinds of paints (such as hobby paints). Shellacs, varnishes and paints with heavy metals may need to have special techniques used for their proper disposal. Generally, this category of paints would include any paint that contains lead, cobalt blue, cadmium or cobalt yellow. These ingredients are frequently found in automobile paints and artist paints. Because they are solvent based, they should be considered household hazardous material, and should be properly disposed of through a collection center or event.

Other Information Sources

In addition to the resources and information available through the US Environmental Protection Agency, and the Colorado Department of Public Health and Environment, a good source of information can be found at the website maintained by the National Paint and Coatings Association at <http://www.paint.org/>

Many of the paint manufacturers also have national websites with information about their paints and the proper care and disposal of the paints.

Many of the Colorado counties and municipalities maintain household hazardous waste centers and sponsor periodic collection events. The collection events are most likely listed on the Department of Health website noted previously, but it is a good idea to stay in contact with the local officials for the most current information.

Finally, Colorado Recycles maintains a statewide Recycling Guide on our website at www.colorado-recycles.org. Just click on Recycling Guide on the menu on the home page.