

## Painting: Walls, Ceilings and Floors

Painting is not the chore it used to be. A professional look is now easier to achieve. Whatever your project, talk to the paint experts where you purchase your paint. They are a valuable resource.

If you are having a hard time visualizing the colour, inexpensive computer software programs can allow you to try out different colours. Or, there may be a decorating service where you buy your paint.

### SELECTING PAINTS

There are two main types of paint depending on the thinners and binders used; water-based (or latex) and oil-based (or alkyd).

Water-based paints use water as a thinner. They are often called latex paints even though they don't use real latex, since rubber is not used as a binder any more. Today synthetic latexes are used, most commonly acrylic or polyvinyl acetate. Paints with a high acrylic content tend to have a tougher skin and can perform almost as well as oil-based paints. Latex paints can be easily cleaned up with soap and water.

Oil-based paints use a solvent thinner. Despite the name, oil-based paints are usually not made with oil. Instead, most use polyester resins, called alkyds. Although alkyds may be more durable and achieve a higher gloss finish, they are usually a less healthy choice than latex. Alkyd paints require mineral spirits for cleaning up.

Because paints are applied wet, and because they cover such a large area, paints can create a significant health problem during a renovation project. The problem is mainly caused by alkyd or solvent-based paints. They give off a number of volatile organic compounds (VOCs) as the solvent evaporates after painting.

These VOCs can be a strong irritant and can add to air pollution. Once the paint has completely dried and formed a tough skin, the emission levels drop. However, some paints can emit odours at low levels for a long time.

Exposure to VOCs varies from person to person. Effects include coughing, headaches, dizziness, or more serious conditions. It is especially important for respiratory sufferers, those with allergies, asthma, and households with young children or pregnant women to avoid paints with VOCs.

Comparing the VOCs of one paint to another is not an easy task. Material Safety Data Sheets (MSDS) are helpful, but manufacturers don't have to list components which make up one per cent or less of their product's weight. This means that some toxic components may not show up on the MSDS. The only sure way to know what the paint contains is by asking the manufacturer to list trace compounds.

There are some paints on the market that are solvent and VOC free. Look for the key words: Low VOC, or better yet, No VOC.

### Painting myth

Contrary to popular belief, you can paint over oil or alkyd paint with latex paint.

To do so the walls should be cleaned, painted with a super adherent acrylic primer, then latex paint can be applied. To test if the paint on the walls is oil or alkyd some stores carry inexpensive test kits, or you can use methyl hydrate (gas line anti-freeze) or non acetone based nail polish remover. Apply a small quantity of one of these products to a pad and rub vigorously on the painted surface. If the surface remains shiny it is oil/alkyd; if the paint is stripped it is latex.

### Types of paint

It can be confusing when selecting the sheen of paint you want since the term used for the sheen varies by manufacturer.

**Low-sheen (low-gloss) paints** have none to little observable sheen. The amount varies slightly by manufacturer. Low-sheen paints can be called: flat, matt, eggshell, satin and velvet.

**Higher sheen paints** are semi-gloss, gloss and enamel. They have the most visible shine to them.

Low-sheen paints can be washed, but with care, higher sheen paints are the most washable and have the most durable finishes.

Most people select semi-gloss or high-gloss paints for rooms with high moisture levels such as kitchens and bathrooms, and high traffic areas such as main stairways and halls. Most people prefer to use semi-gloss or high-gloss paint on windows, trim and doors.

Bedrooms, dining and living rooms are more commonly painted with lower sheen paints.

Years ago, **enamel** meant oil-based paints. Today the term enamel can also mean durable latex paint.

**Sealers** are primarily used on new wood or masonry surfaces. They seal the surface of the material, forming a base coat which keeps the topcoat from being absorbed unevenly. They can be used to encapsulate materials to seal in gases thus preventing them from offgassing.

**Primers** are used to make the substrate more uniform, and to create a tight bond between the topcoat and the surface to be painted.

**Cementious or masonry paints** are used on concrete walls and floors.

**Ceiling paints** are designed not to drip.

**Melamine paints** are used for cabinets and shelves, and are very durable and washable.

Choosing paint by the brand is not enough. Many brand manufacturers make higher and lower quality lines of paint. As you move up in quality so does the price. Each grade is usually a few dollars more expensive than the previous grade. Avoid mixing the brands by using the primer of one brand with the finish paint of another. Paint will adhere better if you use the same brand for both applications.

If you buy all the paint you need at one time you have a better chance of getting a uniform colour.

### Brushes and other tools

Ensure the rollers and paint brushes you buy are rated for the type of paint you are using. Better quality brushes help ensure that the paint strokes are less visible.

### ESTIMATING HOW MUCH PAINT YOU WILL NEED

Measure the height and width of each wall to be painted then multiply to obtain the square footage.

For rooms with lots of windows and doors deduct the square footage of the windows and doors.

A 4-litre (1 gallon) pail of paint will usually cover 37 square metres (400 square feet).

When calculating how much paint to buy, check how well it is expected to cover the surface to be painted. This is called **hiding quality**. Painting over very dark colours may require using primer as the first coat or more coats of paint.

Having the primer tinted the same colour as the finish coat can provide better hiding qualities.

Latex based paints should not be stored for extended periods of time as they can go bad. When buying paint look for the most current date of manufacture on the container.

## GETTING READY

Preparation is the most important and most time consuming part of painting. Usually at least 80 per cent of the time spent on a painting project is spent getting ready and cleaning up.

- Assess the surface that requires painting for needed repairs. Popped nails in the drywall or wallboard can be corrected by screwing a new screw into the stud either two inches above or below the popped nail. The popped nail can then be nailed in and the holes filled with wallboard or spackling compound. Make the patch on the hole as smooth as possible to minimize sanding.
- Wear a mask while sanding using no. 100 or no. 120 grit sandpaper if using wall repair compound and no. 220 grit for spackling compound.

- For larger holes the compound may need to be applied in layers. Each layer should dry before the next one is applied. To help the compound bond to the drywall, apply a layer of glass fibre (mesh) tape. It comes in a roll similar to cellophane tape.
- Vacuum the whole room and damp mop the floor if possible. Wash the surface to be painted with mild detergent and water. If there are grease marks on the walls, or if someone in the household smokes, you may first need to clean with TSP (tri-sodium phosphate). If using TSP, be aware that it is not a benign product, and should only be used while wearing rubber gloves and eye protection. Rinse well with clean water.
- For very textured walls or ceilings, vacuuming may be the only pre-cleaning option.

## Painting new drywall or wood

Previously unpainted drywall or plaster must be primed.

Previously unpainted wood can be stained, painted or urethaned.

## SPECIAL CONSIDERATIONS

### Lead in paint

Lead in interior paint was taken off the market in 1979. Paint in houses or apartments built before that date almost certainly contain small amounts of lead paint.

Exposure to large amounts of lead can cause serious illness. Infants and children are especially vulnerable to lead. However, lead paint is not generally a problem if it is not flaking, peeling or blistering. To check if the walls contain lead, you can obtain a lead paint test kit at most major hardware and some health food stores.

Sanding or heat stripping lead paint requires safety precautions, including protective clothing, a mask, goggles and gloves. Lead paint in the form of sanded particles are a health hazard.

Pregnant women and children should never be exposed to dust or fumes caused during lead paint removal.

For further information on lead, order the free booklet *Lead In Your Home* from CMHC.

### Covering water stains, marks and knot holes

Water stains on ceilings, wax crayon marks on walls and previously unpainted knot holes will bleed through most water based paints. A special stain blocking sealer should first be applied sparingly on the knots, stains or marks before applying the paint. For these special situations you may need to use shellac, alkyd or a polyvinyl acetate primer.

These products have an odour and therefore should be used only on the affected areas. When using these products ventilate well, preferably by running a fan. Place the fan in an open window and have the fan facing out.

### Severely damaged walls

If walls are badly damaged, it may be quicker and cheaper to install an additional layer of new drywall.

### Peeling paint

Peeling is usually a result of moisture under the paint, or of using the wrong type of paint. If moisture is the cause, it must first be corrected, then the surface can be scraped and sanded before painting.

### Covering mold and water stains

Mold which appears as dark spots on the painted surface must be washed with soap and water, rinsed and dried before repainting. The

cause of the moisture which resulted in mold, if not corrected, will allow the mold to come back.

### PAINTING TIPS

- Do not excessively thin paints as this decreases their wear resistance and washability.
- If you use solvents of any kind, store the used solvents in an old paint container with a seal, and take them to the toxic waste centre in your community. Do not pour solvents down the drain.
- Always paint with a window open and when the temperature is above 10°C (50°F).
- You can remove solvent based paint from your skin by using vegetable oil.
- Smooth evenly painted walls are more readily achievable if you:
  - Sand really well after patching.
  - Use a roller which you have taken a lint brush to, before using.
  - Use a roller designated for the type of paint you are using.
  - Clean the surface to be painted thoroughly after sanding

**To find more About Your House fact sheets plus a wide variety of information products, visit our website at [www.cmhc.ca](http://www.cmhc.ca) You can also reach us by telephone at 1-800-668-2642 or by fax at 1-800-245-9274.**

#### Priced Publications

*Healthy Housing™ Renovation Planner*

Order No. 60957

#### Free Publications

*Lead In Your Home*

Order No. 61941

**About Your House** fact sheets

*Fighting Mold: The Homeowners' Guide*

Order No. 60516

*How to Read a Material Safety Data Sheet (MSDS)*

Order No. 62038

*Lead in Older Homes*

Order No. 64064

©2003, Canada Mortgage and Housing Corporation  
 Printed in Canada  
 Produced by CMHC  
 Revised 2005, 2008

27-02-08

Although this information product reflects housing experts' current knowledge, it is provided for general information purposes only. Any reliance or action taken based on the information, materials and techniques described are the responsibility of the user. Readers are advised to consult appropriate professional resources to determine what is safe and suitable in their particular case. Canada Mortgage and Housing Corporation assumes no responsibility for any consequence arising from use of the information, materials and techniques described.