HOMEOWNER REPAIR GUIDE

SPECIAL PROBLEMS

In preparing surfaces for painting – for do-it-yourself or contracted repairs

Getting ready to paint your house involves cleaning and repairing a variety of surfaces. This process can take longer than the actual painting, but it will play a major role in how the finished job will look and how long it will last. There are two purposes behind these preparation tasks: first, to remove dirt, oil, and grease and other materials that prevent the new paint from "gripping" the surface; and, second, to prevent moisture from getting under the new paint and destroying it.

PREPARING THE BODY OF THE HOUSE

1. **Remove deteriorated paint.** The first step is to remove any deteriorated paint and thoroughly clean the surface. Because houses built before 1978 may contain lead-based paint, you need to take precautions to prevent leaded paint dust from contaminating the surrounding area *(see separate handout on "Working Safely with Lead-Painted Surfaces")*. The best way to remove chipping or peeling paint is to tarp the area and wet scrape, using a garden hose or spray bottle to keep the surface damp. Place all chips in a "contractor grade" (4 mil) plastic garbage bag and close it securely before disposal.

2. **Wash the surface.** Once you have removed the loose paint, wash down the surface of the house with detergent, such as a commercial-type cleaner like **TSP** (tri-sodium phosphate). You can use a pressure washer on the lower-pressure "wash" setting, an automotive brush, or even a heavy-duty sponge. Pay special attention to protected areas, such as overhang eaves, gables, and porch ceilings. Rinse thoroughly and let the surface dry for several days.

3. **Treat stains.** Areas that are heavily soiled or stained by rust or mildew will require special attention. In many cases, detergent and a scrub brush will be sufficient. For tougher stains, see the table below.

4. **Repair deteriorated surfaces.** Look for split or rotted pieces of wood siding or siding shingles and replace them before you paint. Re-nail any loose siding boards, and fill all nail holes and small cracks in the surface with vinyl spackling. Replace any loose nails with slightly larger ones, and countersink any rusty nails 1/8" deep; then, putty over the nail heads.

5. **Repair trim, glazing and caulk.** Repair any trim pieces, and replace any deteriorated glazing around windows. Check for cracks or openings where water might enter the wall, especially around door and window frames and where siding meets a roof slope or brick surface. Remove any old caulk and replace it with fresh (siliconized acrylic works best).

6. **Prime.** Finally, apply a coat of primer – at least to any areas of bare wood, and preferably to all areas that have been cleaned and repaired – before applying the final coat(s) of paint.

STAIN	TREATMENT
Rust stains	Remove with a solution of **oxalic acid**. (Follow up with a rust-inhibiting primer, or the stain will reappear.)
Mildew	A **bleach** solution will kill the mildew spores.
Organic stains	Can be removed with a solution of **ammonium sulfamate** powder.

SAFETY

Rinse off all these products with clear water, and remember to wear protective clothing and goggles.

PREPARING PORCHES AND DECKS

High-traffic areas, such as porches, should be wet scraped and painted with an **exterior deck enamel.** Places where the old paint has chipped or peeled can be filled with **vinyl spackling**. Although this material does not hold up particularly well under foot traffic, it is still wiser to repair the surface and repaint more frequently than to spot sand and contaminate the area with lead dust.

PREPARING METAL SURFACES

Unpainted metal surfaces should be painted with a suitable primer. Older steel and iron metal surfaces need to be cleaned of grease, oil, and rust before painting. For oil or grease, use a solvent such as **mineral spirits** or **turpentine**.

RUST METHOD	HOW
Traditional method	Scrape and sand the fixture down to bare metal by hand or with a power tool, prime it with a **rust-inhibiting primer**, and then repaint it.
Rust converter	Use a **rust converter** (like Duro's Extend®), found in the form of brush-on liquids or sprays. Before you apply the product, scrape away any loose rust or paint flakes, but you don't need to sand or grind the metal to a shine. The rust converter will cause the rusty areas to turn bluish-black as the surface is stabilized; where any old paint is left, the polymer vehicle dries clear. After the converter has dried, coat the entire surface with a **rust-inhibiting paint**, such as Rustoleum®, to protect the metal from further deterioration.

PREPARING EXTERIOR MASONRY SURFACES

If your existing brickwork has been painted, you need to clean off any white, powdery deposits of crystallized salts ("**efflorescence**"), commonly found on masonry surfaces, before repainting. Paint will not adhere properly over these deposits. You can remove the built-up efflorescence with a 10% solution of **muriatic acid** applied with a wire brush, and then rinsed with clear water. (Be sure to wear protective clothing and goggles.)

Although some people look for ways to remove old paint from masonry surfaces like brick or structural clay tile, you may never be able to get all traces out of the nooks and crannies. Probably the best results can be achieved with a **paste remover** (like Peel Away®), but you still may have to deal with lead residue.

PREPARING CONCRETE

NEW CONCRETE

New concrete should not be painted for at least 96 days, until it finishes curing.

Before painting a smooth concrete floor, etch the surface with a solution of one part **muriatic acid** to eight parts water, applied with a stiff fiber brush. Allow the solution to remain on the surface until it stops bubbling. Then, rinse thoroughly.

Clean all concrete with a good **detergent** before painting, to remove oils and grime that prevent the paint from adhering properly. You should also remove any efflorescence with muriatic acid, as described above.

POWER SANDING AND MACHINE BLASTING

PROHIBITED IN MANY COMMUNITIES

Although abrasive blasting for paint removal was popular in the past, it is now prohibited in many communities with older homes (including Cleveland Heights) – at least until technology is developed to contain all the lead dust created when old paint is removed. Dry sanding is also prohibited, as is use of volatile paint strippers, an open flame or burning torch, or a heat gun that operates above 1100° Fahrenheit or that chars the paint. You may dry scrape only in conjunction with a heat gun or immediately around electrical outlets or when treating small spots of defective paint (totaling no more than 20 square feet on exterior surfaces).

Of course, each house is unique. Yours may have special circumstances that pose a challenge. If you have questions about preparing specific surfaces for painting, your local paint retailer will probably be able to guide you.

Home Repair Resource center

Home Repair Resource Center empowers homeowners to maintain their homes for sustainable and diverse communities.

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