



CARE OF METALS AND KITCHENWARE

On the next few pages are suggestions for cleaning various surfaces, metals, and plastics found in the home. The following pointers will help in using the charts.

1. Know your material before you start to clean it

Suggestions and warnings for cleaning and polishing different materials are based on the characteristics of the basic material. Avoid trouble by knowing "what you have" before you start to work.

2. Choose the method of cleaning that suits your purpose

Some cleaning methods are time-consuming but frequently are most suitable for valued keepsakes. Other methods for the same metal may be less exacting and are quite acceptable for utility articles. Know the different cleaning methods in order that you may choose one that suits your purpose.

3. Watch temperature in chemical cleaning

Heat speeds up any chemical cleaning action. Sometimes this is desirable. Sometimes slower action is preferred. Watch the temperatures of solution used.

4. Know your cleaning materials

- ▶ *Soaps and synthetic detergents.* These products usually are interchangeable, but in some instances only one is recommended.
- ▶ *Solvents*, such as acids, denatured alcohol, linseed oil, kerosene, etc.
- ▶ *Abrasive-type cleaners*, such as whiting, scouring powders, steel wool, and plastic scouring pads. These will vary greatly in degree of hardness and fineness. Correct choice is important with certain soft metals.
- ▶ *Household chemicals*, such as certain commercial metal cleansers, baking soda, and ammonia.

5. Know your protective materials

These include lacquers, various types of waxes, tarnish-resistant flannel, and plastic bags or sheeting.

6. Keep your cleaning shelf adequately stocked

Keep only those cleaning supplies on hand which you need for your home. Make your selection from those listed in the last column of the chart. Choose those that clean efficiently and suit your purpose. Select supplies suitable for several surfaces whenever possible.

7. Keep cleaning supplies handy—store in safe place

Some of these materials are poisonous or harmful. Store out of the reach of children.

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Methods of Cleaning Metals, Heat-Resistant Glassware, and Other Kitchenware

"Know your material before you start to clean it"

Material or surface to be cleaned	Characteristics	General care and cleaning	Polishing or special treatments	Special supplies for your cleaning shelf*
Aluminum or aluminum alloys (Pans and decorative items)	<p>Aluminum is a soft metal noted for its lightness in weight and resistance to oxidation.</p> <p>Alkaline foods or water leave a dark film on the surface of aluminum pans. Salty foods allowed to stand in pans may cause pitting.</p> <p>Some dishwasher detergents cause discoloration.</p>	<p>Wash in warm water using mild soap or detergent. Strong detergents, alkalis, and alkaline scouring powders cause discoloration.</p> <p>If food burns, soak in hot water until it is loosened. Scraping with a wooden spoon or plastic scouring pad will not damage the surface.</p> <p>Pans may become warped if water is added when they are dry and overheated.</p>	<p>To brighten darkened aluminum:</p> <ul style="list-style-type: none">► Cook rhubarb, tomatoes, or tart apples in the pan. Foods are edible when so cooked.► Boil solution of 2 teaspoons cream of tartar to 1 quart water in pan for 10 minutes.► Or, boil solution of 1 tablespoon vinegar to 1 quart water, until discoloration is removed. <p>Follow any of these methods by a quick scouring with fine steel wool treated with soap.</p>	<p>Mild soap or detergent</p> <p>Plastic scouring pad</p> <p>Wooden spoon</p> <p>Fine steel wool treated with soap</p> <p>Acid food, cream of tartar, or vinegar</p>
Brass, bronze, and copper	<p>Brass, an alloy of copper and zinc, is most often used for decorative items.</p> <p>Bronze, used similarly, is an alloy of copper and tin.</p> <p>Copper is a metal used for decorative items in the home and for kitchenware. It is a good conductor of heat and is often applied to the bottom of utensils made of other metals.</p> <p>should be judged in relation to value of article and time homemaker has for care of her silver.</p>	<p>Keep <i>decorative</i> items dusted and clean. To clean, wash in hot, sudsy water. Rinse well and dry with soft, nonlinting cloth.</p> <p>Wash <i>kitchenware</i> in warm water using soap or detergent. Rinse well and drain or wipe dry. Wiping will bring up the luster.</p> <p><i>Long-time storage of silver:</i> When storing silver for a period of time, rub with oil or vaseline and wrap in soft cloths or tissue before placing in flannel bags.</p>	<p>If lacquer has been used, remove with denatured alcohol or recommended solvent before polishing. <i>To polish decorative items:</i></p> <ul style="list-style-type: none">► Use a commercial metal polish, following the directions on the container.► Use a mixture of salt moistened with vinegar. Apply with a soft cloth using a rubbing motion. Follow by washing well in sudsy, warm water; rinse and polish dry with a soft dry cloth.► For a soft, dull finish rub with a mixture of linseed oil and whiting. Wipe off with a clean, soft cloth and polish by rubbing.► For antique brass, rub with oil, remove excess, and polish with soft, dry cloth. <p>After polishing, a metal lacquer may be used to retard tarnishing.</p> <p>spoon salt and 1 tablespoon baking soda for each quart of water. Place a piece of aluminum foil in pan and add silver. (Silver must touch foil or another piece of silver.) Let stand until silver becomes bright. Remove with tongs. Wash, rinse, and polish dry.</p> <ul style="list-style-type: none">► <i>Commercial "dip" cleaners:</i>† Follow instructions given.► <i>Magnesium alloy and a detergent:</i> The alloy is placed in the dishpan with each dishwashing. Magnesium piece must be scoured regularly to remain effective. <p>Any of these methods gives a better appearance if followed by a quick, rubbing polish.</p>	<p>Soap or detergent</p> <p>Cleaning and polishing cloths</p> <p>Denatured alcohol</p> <p>A commercial metal polish</p> <p>or</p> <p>Salt</p> <p>Vinegar</p> <p>or</p> <p>Linseed oil</p> <p>Whiting</p> <p>Salt</p> <p>Baking soda</p> <p>Tongs</p> <p>or</p> <p>Commercial "dip" cleansers</p> <p>or</p> <p>Magnesium alloy and detergent</p>
Stainless steel	<p>An alloy containing iron and carbon, noted for its hardness. Stainless steel is easy to clean and is used for utensils, tableware, sinks, counter tops, etc. Recently finishes on some electrical appliances have also been of stainless steel.</p>	<p>Wash with warm water using soap or detergent. Rinse, and polish dry with a soft cloth. Or use a commercial cleaner.</p> <p>A film or heat spots sometimes appear on this metal. An abrasive or commercial cleanser will sometimes remove spots.</p>	<p>Polish with soft cloth.</p> <p>Do not overheat or let pans boil dry. This causes discoloration.</p>	<p>Soap or detergent</p> <p>Scouring powder</p> <p>Soft cloths</p>
Tin	<p>A soft metal used for decorative items and kitchenware.</p> <p>Tinware, used in the oven, is soft and only a thin coating is applied. Metal base may rust when tin coating breaks through. Avoid harsh abrasives or sharp scraping tools.</p>	<p>Keep <i>decorative items</i> dusted. To wash use warm, sudsy water. Wax or lacquer may be used for ease in upkeep.</p> <p>Wash <i>tinware</i> in warm, sudsy water, rinse, and dry immediately to prevent rusting. If rusting occurs, use fine whiting to remove. Use baking soda and water to hasten removal of baked-on-food.</p>	<p>Polish decorative items with cloth. Heat darkens tin. Don't try to keep tin ovenware shiny. Scouring may remove tin coating. The darkened pan absorbs heat faster than a shiny one.</p>	<p>Soap or detergent</p> <p>Whiting</p> <p>Wax or metal lacquer</p> <p>Baking soda</p>

* Stock only those supplies needed for metals found in your home.

† These cleaners are strong chemicals which may harm other metals—as stainless steel. Follow all warnings if used.

Pottery or earthenware	Conducts heat slowly and evenly; retains heat well. Glaze is usually acid-resistant, but is affected by sudden changes in temperature. Do not place hot utensil in cold water. Protect from harsh abrasives and heavy blows.	Wash in hot, soapy water. Soak to loosen burned or stuck food. Baking soda may be added to help loosen food. Use only plastic scouring pad or wooden spoon to scrape utensil. When scouring must be done, use whiting and ammonia. Avoid scratching the surface of ovenware.	No special polish desired.	Soap or detergent Whiting Ammonia Plastic scouring pad Wooden spoon Baking soda
Silver or silver alloy	<p>A white, soft metal capable of a high degree of polish. Easily scratched by harsh abrasives. Salt and salt air will corrode silver quickly. (Empty silver salt dishes and salt shakers after each use.)</p> <p>With use, silver acquires a patina or soft sheen which is desirable. Silver tarnishes readily and even stored silver, well protected, will become discolored. Tarnish is caused by sulfur which may come from food, from the air (smoke fumes, fuel gases, soot, etc.), or from rubber. Frequent use of silver deters tarnish.</p> <p><i>Choose methods of cleaning silver in relation to value placed on it.</i> Some silver is of great value—sentimental or monetary. The most careful methods should be used in its care. On the other hand, some silver is a utility item in the kitchen. For it, quick and efficient methods of cleaning are important. Cleaning results</p>	<p>Wash in warm, soapy water. Rinse well and dry immediately. Do not let silverware stand with food on it. Do not let hollow-handled silverware or hollowware stand in water.</p> <p><i>To protect silver:</i></p> <ul style="list-style-type: none">► Store silverware in a chest lined with tarnish-resistant flannel. Wrap large silver items in tarnish-resistant flannel or air-tight plastic bag when not in use.► Lacquer or wax may be used on silver decorative objects. It is not suggested for tableware. This may prevent tarnish, but many feel that some of the beauty of silver is lost when so treated.► Handle silver with care to avoid nicks and heavy scratches; knife blades and other metals can do damage if they come in contact with silverware.	<p><i>Rubbing methods of polishing:</i></p> <ul style="list-style-type: none">► <i>Polishing cloth:</i> Light tarnish is easily removed by rubbing with a polishing cloth.► <i>Paste or cream-type polish</i> Apply with soft cloth, small sponge, or soft brush. Rub lengthwise, not in circular motion. Wash in hot, soapy water; rinse and polish with soft, dry cloth. <p><i>Electrolytic methods of cleaning:</i> Do not use these methods if silver has an oxidized or French gray finish. Darkened sections of pattern will be brightened. These methods remove little silver.</p> <ul style="list-style-type: none">► <i>Aluminum-salt-soda:</i> Use an enamel pan. Fill with enough water to cover silver. Bring to a boil. Add 1 table- <p>A spray-type lacquer is easy to apply. Follow directions on container when applying or removing metal lacquer. <i>To polish kitchenware</i>, use a commercial metal cleanser recommended for copper.</p>	<p>Mild soap Soft cloths Polishing cloth or Paste polish Soft brush Small sponge, cloth or Cream-type polish Small sponge or cloth</p> <p>Enamel pan Aluminum foil</p> <p>Spray-type lacquer</p>
Chromium	A metal noted for its hardness and brittleness. Avoid letting salt-containing food or salt in acid stand on chromium surfaces.	<p>Wash with soap or detergent and water. Rinse and wipe dry to bring up luster.</p> <p><i>To remove burned-on-grease</i> (in case of electrical appliances) use whiting moistened with ammonia or denatured alcohol. Avoid coarse abrasives, scouring powders, or steel wool.</p>	Polish, using soft, dry cloth.	Soap or detergent Whiting Ammonia or denatured alcohol Cleaning and polishing cloths
Enameled appliances— (synthetic or porcelain enamel)	A glass-like substance fused to a metallic base. May or may not be treated to withstand acids in food.	<p>Wash with soap or detergent and warm water; rinse and polish with dry cloth.</p> <p>For hard-to-remove soil or stains, use cream-type wax or whiting moistened with water. For burned grease, use whiting and ammonia. Avoid coarse cleansers or steel wool.</p>	Occasional cleaning with cream-type wax makes surfaces easier to dust and keep clean. Polish with soft, dry cloth.	Soap or detergent Soft cloths Whiting Ammonia Cream-type wax
Enameledware (cooking utensils)	Glass fused to a steel base. Smooth, nonporous, easy-to-clean. Better grades are resistant to acids and not readily marked by spoons. They are also more resistant to chipping.	<p>Wash enameledware in hot, sudsy water. Soak to loosen sticking food. Baking soda may be added to help loosen food.</p> <p>Use only plastic scouring pad or wooden spoon to scrape utensil. When scouring must be done, use whiting and ammonia. Avoid scratching the surface of enameledware.</p> <p>Baking soda may help remove discolorations.</p>	No polish desired.	Soap or detergent Whiting Ammonia Plastic scouring pad Wooden spoon Baking soda

Enameled fixtures—sinks, tubs, wash basins	A vitreous (glass) or porcelain enamel surface fused to a metal base. Subject to damage from chipping, strong acids, and coarse cleansers.	Wash with warm, sudsy water and rinse well. <i>To remove soap curd</i> , use whiting, similar fine cleanser, non-precipitating water softener, or kerosene. Follow kerosene with soap and water wash. Rinse well. <i>To remove rust stains</i> , use 1 tablespoon oxalic acid crystals (Poison) dissolved in $\frac{1}{2}$ cup warm water. Apply to stain, allow to stand a few minutes, and rinse well. Avoid strong acids or harsh chemicals in removing rust. Glaze may be affected.	Polish with soft cloth. Use of softened water or detergent will reduce scum formation.	Soap or detergent Kerosene and whiting or similar fine cleanser Nonprecipitating water softener Oxalic acid crystals (Poison) or Commercial rust remover
Glassware (oven and top-of-range utensils)	Heat-resistant glassware has been treated to withstand high temperatures. Such utensils may break when subjected to sudden changes in temperature. Ovenware is not suitable for top-of-range use. Avoid scratching glassware.	Wash glassware in hot, sudsy water. Soak to remove sticking food. Baking soda may be added to help loosen food. Use only plastic scouring pad or wooden spoon to scrape utensil. When scouring must be done, use whiting or whiting and ammonia.	No polish desired. <i>To prevent sticking</i> , grease glassware containers lightly before using.	Soap or detergent Plastic scouring pad Whiting Ammonia Baking soda
Iron (<i>cast iron</i> as used in cooking utensils)	If cast iron is not preseasoned it is readily oxidized (rusted) in the presence of moisture. It is heavy, hard, somewhat brittle, and may break if dropped.	Wash with soap and water, using a stiff brush or scouring powder as needed. Rinse and wipe dry immediately or heat dry. <i>To retain the seasoning desirable for cast-iron utensils</i> , use detergent or highly alkaline cleansers <i>only when needed</i> for hard-to-remove foods. <i>To remove sticking or burned-on foods</i> , soak in hot water. Use plastic scouring pad or wooden spoon to loosen food. Add baking soda <i>only if needed</i> . Re-seasoning may be necessary after repeated use, since fat may have been removed from pores of metal. <i>To remove rust stains</i> , scour with a fine cleanser or steel wool.	Seasoning is desirable in cast-iron utensils. Unseasoned utensils will rust readily and foods will stick. <i>To season a cast-iron utensil</i> wash utensil well and scour with powdered cleanser or steel wool. Wash and dry thoroughly. Rub the inside with unsalted fat and heat slowly for several hours. Use low temperature whether heated on top of range or in oven (250° to 300°). More fat may be added as needed. <i>To make ready for use</i> , wipe out extra fat, wash utensil in soap and water, rinse, and dry thoroughly. With added use, fat will continue to fill the pores of the metal.	Soap Stiff-bristled brush Household cleanser Fine steel wool pad Plastic scouring pad or wooden spoon Soda
Iron (<i>wrought iron</i> as used for decorative items)	Generally made of the purest form of iron, thus somewhat more resistant to rust than cast iron.	Keep dusted. Occasionally wash with damp cloth and wipe dry. A protective coat of liquid wax will make cleaning easier and retard rusting. Do not use liquid wax on fireplace accessories as it is flammable.	No polish desired. <i>To remove rust stains</i> , rub with kerosene and scour with fine grade steel wool. If rust is difficult to remove, allow kerosene to remain long enough to loosen.	Liquid wax Kerosene Fine steel wool (untreated)
Monel	An alloy of nickel, copper, and other elements. Resembles nickel in appearance and is used for sinks, table tops, etc. Acquires a patina (change in appearance) with use and is then easier to care for.	Wash with soap or detergent and water. Rinse and wipe with dry cloth. Fine scouring powder (whiting) may be used as needed. Add ammonia to scouring powder for hard-to-clean spots.	After cleaning, rub with soft dry cloth to develop sheen. Paper towels may also be used.	Soap or detergent Whiting Ammonia Soft cloths or paper towels
Nickel	A metal capable of high polish, resistant to oxidation, often used as a plating for iron, steel, and copper. This finish is relatively soft, thus subject to wear from abrasive cleaners. Metal beneath plating corrodes when exposed.	Wash with sudsy water, rinse, and wipe dry. For stubborn stains, use fine grade whiting and water or denatured alcohol.	Polish with soft, dry cloth.	Soap or detergent Whiting Denatured alcohol
Pewter	An alloy made of tin and other metals—frequently of tin and copper. Pewter is very soft and must be handled with care to avoid scratching.	Wash in hot, sudsy water, rinse, and dry thoroughly with a soft cloth.	Polish with soft, dry cloth. To remove slight tarnish, use a silver polish. Avoid a harsh metal polish or cleanser. A soft luster is desired in pewter.	Soap or detergent Soft cloths Silver polish

Care of Plastic Housewares

In general, plastics should be washed in warm, sudsy water. Avoid abrasives, high heat, bleach, cleaning fluids, and alcohol.

Types	Characteristics	Typical household articles	General care	Precautions
Thermoplastic Materials				
Acrylic	Softens when heated. Good resistance to cracking or breaking. May be transparent or opaque. Easily scratched.	Clock cases, salad bowls, combs, jewelry, lighting diffusers	Wash in warm, sudsy water. Wax helps hide scratches.	Do not use cleaning fluid or abrasives. Do not put in dishwasher. Avoid high heat.
Cellulosic	Fairly resistant to hard knocks. Easily scratched. Resistant to most acids and moderate heat.	Bowls, toys, trays, tool handles, vacuum cleaner parts	Wash in warm, sudsy water.	Do not use cleaning fluid, alcohol, or abrasives. Keep away from high heat and do not put in dishwasher.
Nylon	Can be scratched. Not affected by boiling water.	Brush bristles, gaskets, faucet washers, tumblers	Wash in warm or hot, sudsy water.	Do not use abrasives. Stained by coffee, tea, and colored foods.
Polyethylene	Semi-rigid or rigid form. Can stand hot water.	Flexible bowls, ice cube trays, refrigerator and freezer dishes, squeeze bottles	Wash in warm or hot, sudsy water.	Do not put in boiling water, in dishwasher, or in the oven. Avoid abrasives.
Polystyrene	Made in different grades. Usually will not withstand hard knocks or boiling water. Scratches easily. Resists alcohol, vinegar.	Refrigerator dishes, utility trays, canisters, parts of major appliances, wall tile	Wash in warm, sudsy water.	Do not put in hot water or in dishwasher. Avoid dropping, bending. Do not use cleaning fluids or abrasives. Avoid long contact with citrus rinds.
Polypropylene	Good resistance to heat, breakage, acids.	Heat sterilizable bottles, refrigerator parts, other household products	Wash in warm or hot, sudsy water. Can be sterilized.	
Vinyl	Rigid, semi-rigid; sheet form and as a coating. Strong, stain-resistant, not easily scratched.	Floor tile, upholstery, shower curtains	Wash in warm, sudsy water.	Avoid abrasives, direct heat, moth repellants, and nail polish remover.
Thermosetting Plastics				
	Set into permanent shape with heat. Do not soften when reheated.			
Phenolic	Does not break or scratch easily. Good electrical insulator. Resists heat up to 300° F.	Radio cabinets, toaster bases, appliance handles, washing machine agitators	Wash in warm or hot, sudsy water.	Do not use abrasives. Tends to yellow with long exposure to light.
Melamine	Strong but not unbreakable. Withstands temperatures to 210° F. Counter tops will stand temperatures to 300° F. Not affected by cleaning fluids, alcohol, nail polish remover, or oil.	Dishes, cutlery handles, counter tops, buttons	May be washed in hot, sudsy water and scalded. Dishes may be washed in dishwasher. Use cream wax for counter tops.	Do not use abrasives. Check label to determine if boilable. Do not put in oven or over flame.
Urea	Similar to melamine except water temperatures should not exceed 170° F.	Similar to melamine	May be washed in hot, sudsy water.	Do not put in dishwasher. Do not use abrasives. Do not put in oven or over flame.