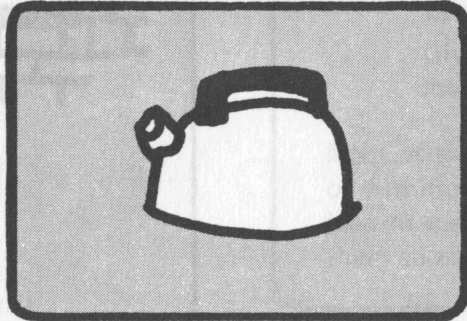
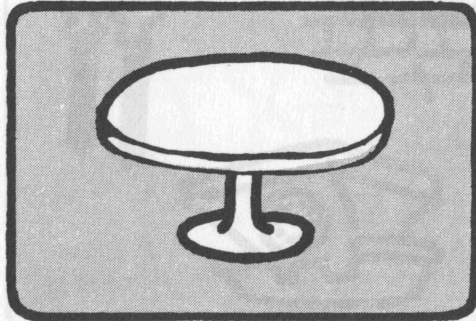
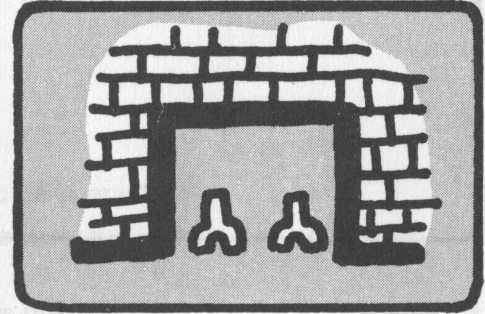
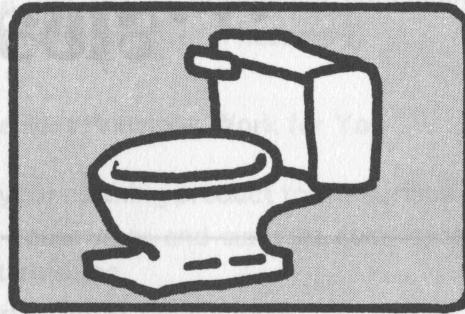
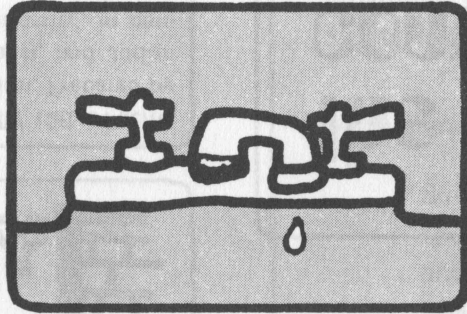
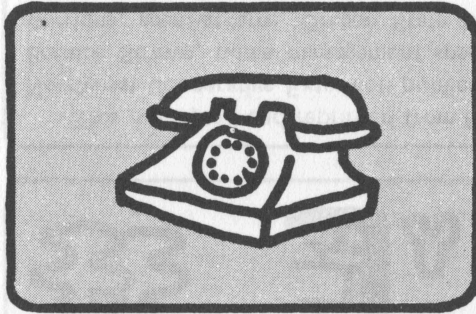
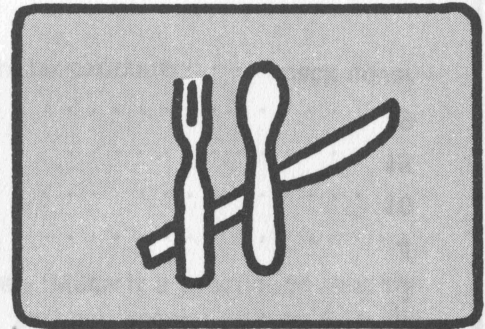
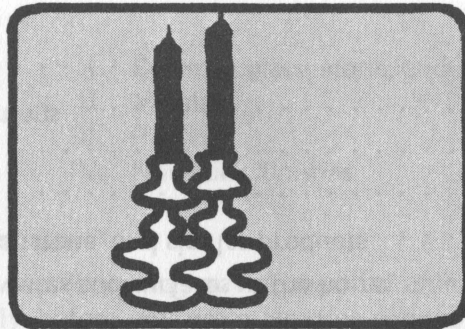
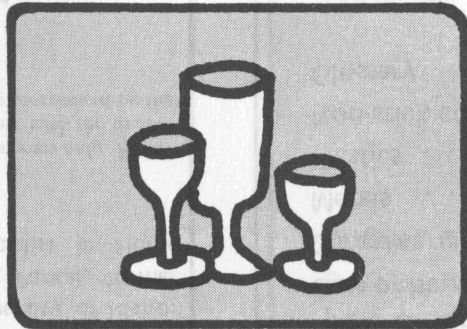
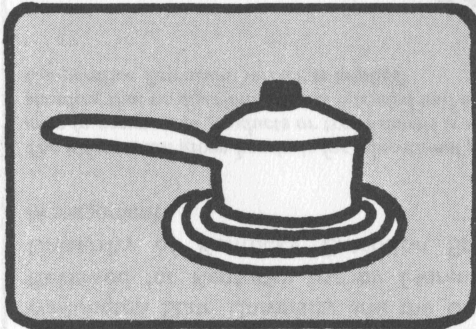


CARE of HOUSEWARES and SURFACES in the HOME...

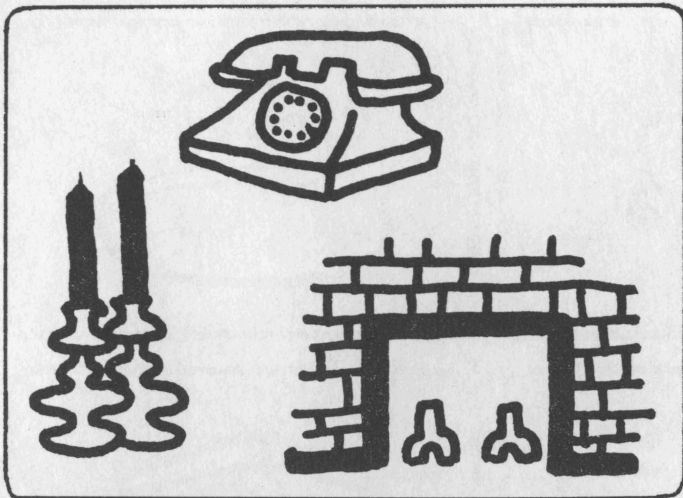
This publication is designed to help you care for all kinds of surfaces in the home.
SPECIFIC INFORMATION REGARDING MATERIALS TO BE CLEANED IS LISTED UP INTO FOUR MAJOR



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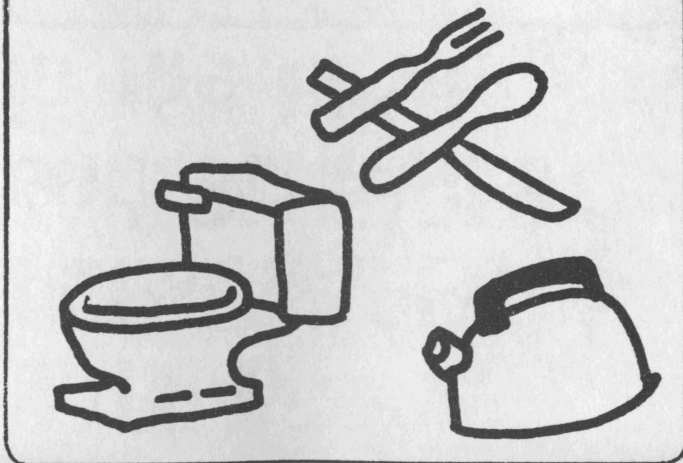
**Texas
Agricultural
Extension
Service**

Daniel C. Pfannstiel,
Director
College Station



This is adapted and reprinted from PNW 126, a Pacific Northwest Cooperative Extension publication. Prepared by Bernice Strawn, home management specialist, and Judith Burrige, agent-at-large, Oregon State University, in consultation with Extension home management specialists at Washington State University and the University of Idaho. Reviewed for Kentucky use by Florence Parker, former University of Kentucky Extension Specialist in Home Management.

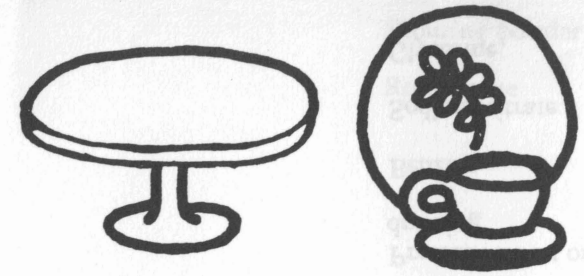
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CARE of HOUSEWARES and SURFACES in the HOME...



This publication is designed to help you care for all kinds of surfaces in the home. Specific information regarding materials to be cleaned is divided up into four major categories:

- I. Ceramic, glass, stone, and similar products
- II. Metals
- III. Plastics
- IV. Non-stick finishes

A Word of Caution

Put cleaning supplies away, out of reach of children. Make it a practice to read the label carefully before you use a cleaning product, and pay special attention to the directions for the use of pressurized containers. Do not mix chemical cleaning agents, and use rubber gloves if necessary.

Make Management Principles Work for You

Suit your cleaning product to the surface to be cleaned.

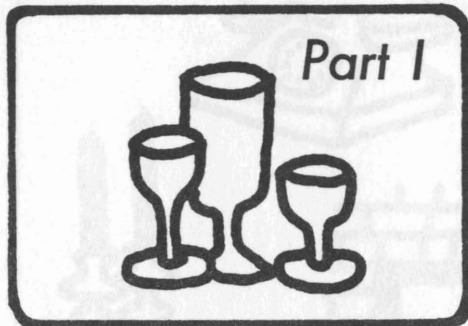
Give housewares and surfaces good protective care to help prevent soiling and tarnishing.

Spend as little time, energy, and money as possible on utilitarian, inexpensive items.

Give more time and attention to articles that may be of monetary or sentimental value.

Most of the cleaning products named can be purchased in a drug, grocery, hardware, or furniture store. In studying each section of the publication, it would be a good idea to make a list of the cleaning products you expect to be using, and then to get them all together in one or two shopping trips.





Ceramics, Glass, Stone, and Similar Products

Ceramics are made by molding clays and firing them. Glass is made by heating silicates, then forming them and letting them cool. Stone products are quarried, shaped, or cut and may be either polished or left "natural."

MATERIAL TO BE CLEANED	CHARACTERISTICS	GENERAL CARE and CLEANING	SPECIAL TREATMENTS	SPECIAL SUPPLIES
BRICK	Bricks are made from clay and other materials which are formed into workable shapes; fired in a kiln to make them strong and durable. Red bricks contain large amounts of iron; yellow bricks contain little iron.	Interior bricks may be dusted with vacuum cleaner dusting attachments. Freshen periodically with commercial brick cleaner.	<ul style="list-style-type: none"> • <i>Brick</i> fireplaces may be cleaned by using a 10% solution of hydrochloric acid (also known as muriatic acid). Scrub with a brush and rinse with water. Will remove soot and white spots (efflorescence) from rough brick. The acid will eat holes in clothes; take precautions and use rubber gloves. • Make brick or stone fireplaces easier to clean by applying a finish of penetrating sealer which contains tung oil. This is moisture resistant and forms a tough coating which can be washed with soap and water. 	<p>Commercial brick cleaner</p> <p>Hydrochloric acid and water (use cautiously)</p> <p>Penetrating sealer</p>
CONCRETE	Extremely strong, durable material made from cement and aggregate.	<ul style="list-style-type: none"> • Wet with clear water. Apply a hot solution of 2 to 2½ ounces washing soda or ½ ounce trisodium phosphate per gallon of water. <p><i>Concrete</i> floor grease stains may be removed by rubbing with benzine or make a poultice by mixing:</p> <ul style="list-style-type: none"> 1 part sodium citrate 6 parts water 6 parts commercial glycerine. 	Protective wax, dressing or sealer may be used to retard soiling.	<p>Washing soda or trisodium phosphate</p> <p>Protective wax or dressing</p> <p>Benzine</p> <p>Sodium citrate</p> <p>Glycerine</p>

		<p>Add rottenstone to make a thick paste.</p> <p>Spread paste over the stain. Leave until dry. Add more paste on top of old paste. Leave for a week. Flush away and stain will be gone.</p> <ul style="list-style-type: none"> • Use scouring powder on heavily soiled spots. Rinse thoroughly with clear warm water to remove scouring powder and alkali. 	<p>Scouring powder</p> <p>Rottenstone</p>	
CERAMIC TILE	<p>Ceramics are inorganic, non-metallic materials that have been subjected to heat treatment. Material used is a clay that contains a large amount of silicates. Tiles used in the home are set in a thin plaster-like substance called grout.</p>	<p>Glazed tile should be treated like porcelain enamel—avoid using harsh abrasive powders which will scratch the finish. Occasional bleaching will clean grout. Aerosol bathroom cleaners are effective to clean tile; follow directions on container.</p>	<ul style="list-style-type: none"> • Bathroom tiles that are extremely soiled with soap scum can be cleaned with this solution: <ul style="list-style-type: none"> $\frac{1}{2}$ cup water softener 2 tablespoons mild abrasive (rottenstone) 1 cup hot water <p>Apply to walls with sponge or cloth and to grout with a stiff brush. In hard-to-reach areas a nylon toothbrush is useful.</p> <ul style="list-style-type: none"> • Dingy grout between tiles can be brightened by scrubbing with hot suds, then apply a diluted solution of chlorine bleach. Repeat procedure, keeping tile wet 5 minutes. • Mildew can be prevented by using a chlorine bleach solution which retards mold growth or by use of a mildew retardant spray. 	<p>Water softener</p> <p>Rottenstone</p> <p>Detergent</p> <p>Chlorine bleach</p> <p>Mildew retardant spray</p>
ENAMEL, porcelain	<p>Porcelain enamel is a specially formulated, highly durable glass permanently fused to metal under extremely high temperatures. The metal may be steel, cast iron, or aluminum. It may be a protective surface for cooking utensils, kitchen and bathroom fixtures, and appliances such as dishwashers, ranges, refrigerators, washers, and dryers. It is acid resistant. Porcelain enamel may be a decorative surface of metal, glass or pottery.</p>	<ul style="list-style-type: none"> • <i>Decorated</i> enamelware—wash in sudsy water, dry with a soft cloth. • <i>Bathroom fixtures</i> can be cleaned in a solution of 1 tablespoon detergent to 1 gallon hot water or with a foam bathroom cleaner. Avoid using household cleaners which contain abrasives. • <i>Kitchenware</i>—wash in sudsy water. If necessary use a plastic scouring pad or wooden scraper to remove burnt-on food. Burnt-on food may be loosened by soaking in a solution of 2 teaspoons baking soda and 1 quart water. 	<p>Lime deposit in teakettles may be removed by a solution of vinegar and water. Bring to a boil.</p> <p>Bathroom fixtures should be disinfected weekly with a solution of chlorine bleach and water or a spray-on disinfectant or by using a disinfectant cleaning foam.</p> <p>Rust stains can be removed by using commercial rust remover or by using a solution of 1 tablespoon oxalic acid crystals (poison), dissolved in $\frac{1}{2}$ cup warm water. Apply to stain, allow to stand a few minutes, then rinse well.</p>	<p>Baking soda</p> <p>Detergent</p> <p>Foam bathroom cleaner</p> <p>Vinegar</p> <p>Disinfectant; spray cleaner, chlorine bleach</p> <p>Commercial rust remover</p>

(see next page)

(see next page)

MATERIAL TO BE CLEANED	CHARACTERISTICS	GENERAL CARE and CLEANING	SPECIAL TREATMENTS	SPECIAL SUPPLIES
ENAMEL, porcelain <i>(continued)</i>		Avoid abrasive scouring powder or steel wool.		Oxalic acid (poison)
ENAMEL, synthetic	Synthetic enamel is an organic material applied to metal and dried on by mild heat. It is usually found on major appliances on surfaces that won't be damaged by alkali or acid. Abrasive cleaners and metal scouring pads will scratch and wear surface.	Use sudsy water, rinse, wipe dry. Avoid abrasives or metal scouring pads.	Protective kitchen cleaning wax can be applied to the surface to keep it from soiling.	Detergent Kitchen cleaning wax
GLASS CERAMIC	Glass ceramics are made from hard crystalline materials which were first used on missile nose cones. Glass ceramics are used for range tops, counter tops, dinnerware, and cookware. The cookware may be used in the oven, under the broiler, on the stove, or in the microwave oven. They are guaranteed by the manufacturer not to break from temperature change.	<ul style="list-style-type: none"> • Daily care—wash with detergent, either by hand or in the dishwasher. • Scouring can be done with a plastic scouring pad and a mild abrasive powder such as Bon Ami. Avoid using harsh abrasives or steel wool which will mar the finish. • Cooked-on food may be removed by soaking in baking soda (3 tablespoons to 1 quart water). If need be, heat the utensil to speed up action. 	<ul style="list-style-type: none"> • Stubborn stains such as coffee or tea in glass ceramic coffee or tea pots can be removed by using 2 tablespoons of chlorine bleach to 1 quart of water. • Gray marks caused by rubbing against metal can be removed with a non-abrasive household cleanser and a plastic scouring pad. • Range tops of glass ceramic can be cleaned with a commercial cleaner-conditioner sold by the manufacturer. If scrubbing is necessary, the manufacturer suggests using baking soda and non-impregnated plastic pads. Do not use abrasive materials. 	Non-abrasive scouring powder, such as Bon Ami. Baking soda Chlorine bleach Commercial cleaner-conditioner for glass ceramic range top Vinegar
GLASSWARE (ovenware 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. Glass has a "memory" for knocks and may break with only a slight bump because of an accumulation of knocks. Treat glassware kindly to have it last a long time.	<ul style="list-style-type: none"> • Use a non-abrasive cleaner and ammonia to scour glass. • Cooked-on food may be removed by soaking the utensil in 3 tablespoons of baking soda and 1 quart of water. A plastic scouring pad and wooden spoon are useful in removing cooked-on food. • Mineral deposits may be removed from top-of-the-range ware by boiling a solution of equal parts water and vinegar in them. 		Non-abrasive scouring powder Ammonia Baking soda Vinegar

GLASSWARE, crystal and decorative

May be blown or molded into shape. Fine crystal contains lead which makes the glassware softer and less likely to break.

Rotate so all is used frequently. This aids in keeping crystal clean and sparkling. Use a crystal case or store out of the food preparation area. Store so the bases or lips do not touch, to avoid chipping. Do not subject crystal to extreme hot and cold; pour water in goblets before adding ice. Crystal may be washed in the dishwasher if it does not vibrate.

Do not overuse detergent—1 tablespoon is ample in soft-water areas. Patterns with gold or platinum decorations should not be washed in the dishwasher.

When washing glassware by hand avoid putting too many pieces into the sink at one time. Put a rubber mat or towel in the bottom of the sink to avoid chipping the rim or the foot of goblets.

Crystal hollowware should not be washed in the dishwasher as extreme heat might cause large pieces to break.

Do not leave flowers, fruit, or food in crystal longer than necessary as they cause chemical changes which may permanently stain crystal. When bottles or items are impossible to dry inside, remove the remaining water by pouring alcohol into the piece *when it is cool* and then emptying.

and earthenware should be protected from harsh abrasives and heavy flows

is not used for long periods and bursts in the home.

SLATE and STONE

MURDER

These items are not to be used in the kitchen and should be protected from harsh abrasives and heavy flows

GLASS, windows

Glass panes may be plate, insulating, or shatter-proof glass. All are cleaned in the same manner.

Many companies manufacture cleaners for glass panes. These are of three types: liquid, aerosol foam, and emulsion. Window cleaners should clean glass easily and exhibit anti-fogging characteristics (rain water should run off the window, enabling one to see through the window and water). Be careful of surfaces surrounding the windows when washing them as they may be

Use newspapers, chamois, soft cloth, or squeegee to polish windows.

Windows spotted from lawn sprinklers need special treatment. Use commercial rust remover, copper cleaner, soap-filled scouring pad, or a water softener, depending on the nature of stain.

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Detergent

Alcohol (denatured)

Rubber mat or cloth

See Wash and Rinse

Hand soap

Crystals of caustic

Ammonia

Commercial rust remover

Water softener

Commercial rust remover

Water softener

Commercial cleaners

Vinegar

Ammonia

Kerosene

Washing Soda

Trisodium phosphate

Commercial rust remover

TO BE CLEANED

CHARACTERISTICS

SPECIAL TREATMENTS

MATERIAL TO BE CLEANED	CHARACTERISTICS	GENERAL CARE and CLEANING	SPECIAL TREATMENTS	SPECIAL SUPPLIES
GLASS, windows (continued)		harmful by some cleaners. Home-made solutions may be made in any of the following ways: 1 tablespoon of ammonia or vinegar per quart of water; two teaspoons of borax or kerosene or washing soda or tri-sodium phosphate or $\frac{1}{4}$ cup of alcohol per cup of water. (Alcohol and water are recommended for washing windows during freezing weather.)		Alcohol Newspapers Chamois Soft cloth Squeegee Special supplies for removing stain
MARBLE	Marble is stone that is generally polished and used in fine building work, furniture, or decorative art. It may be white or colored. Beverage glasses, placed on marble top furniture, leave moisture rings. Fruit acids etch the surface.	Wash with clean cloths and warm water. Wipe until dry to prevent spotting.	<i>Etch Marks and Stains</i> —wash with clear water. If a stain is present, remove it by using a poultice. The poultice should be left from 1 to 48 hours, depending on the stain. (See glossary.) <i>Organic Stains</i> —tea, coffee, wet bark, flowers, and bleached colors from paper or textiles should be removed with a poultice soaked in 20-volume peroxide or full-strength ammonia. (See glossary.) <i>Oil stains</i> —butter, milk, cream, salad oil, peanut butter, mustard, or hand cream should be removed with a poultice soaked with amyl acetate or acetone. <i>Rust Stains</i> —these may be orange to brown in color and should be removed by a poultice which has been soaked in commercial iron rust remover. To polish the surface, wet with clear water, sprinkle with tin oxide, and buff with a soft cloth or electric buffer.	White blotting paper, white napkins, or tissue for poultices Peroxide 20 volume (hair strength) Ammonia Commercial rust remover Tin oxide Cloths or electric buffer
POTTERY or EARTHENWARE	These include all tiles, dishes, and other articles made of baked clay which have been fired. There are basically two types: vitreous, which includes fine porcelain, china, and stoneware, and the	Dinnerware made since 1953 may be washed in the dishwasher with a dishwasher detergent (1 tablespoon is adequate in soft-water areas) if the glaze is put on after the decorations. When washing	Tea stains may be removed from cups by using a solution of chlorine bleach—2 tablespoons per quart of water.	Neutral detergent or dishwasher detergent Chlorine bleach

non-vitreous or earthenware. Pottery or earthenware conducts heat slowly and evenly; retains heat well. Glaze is usually acid-resistant, but is affected by sudden changes in temperature. Pottery and earthenware should be protected from harsh abrasives and heavy blows.

dinnerware by hand, do not let it soak for prolonged periods of time as detergents can be harmful to glaze—do not stack cups as handles are weakened or easily broken. Abrasive powders will scratch or remove gold or platinum decorations and should not be used on dinnerware.

SLATE and STONE

Quarried stone used for fireplaces and hearths in the home.

Stone—brush occasionally to remove dust and “freshen” stone or dust with dusting attachment of vacuum cleaner.

Slate—wash with detergent or soap, using a mild abrasive if necessary.

Stone—to remove soot, dissolve 4 ounces of yellow laundry soap in boiling water. After the mixture has cooled, add ½ pound of powdered pumice and ½ cup of household ammonia. Mix thoroughly. Use a stiff brush to remove as much soot as possible. Then using a paint brush, paint stones with soap mixture, let remain ½ hour and clean off with a stiff brush and warm water. Rinse thoroughly with warm water.

Slate—wash with detergent or soap, using a mild abrasive if necessary. Rinse and wipe dry. For added beauty, rub dry slate with a soft cloth dipped in lemon oil furniture polish. Using a fresh cloth, wipe off excess oil and buff the stone. This makes stone uniformly dark and glossy. *Do not use wax* on fireplaces as it is affected by heat.

Stiff brush and paint brush

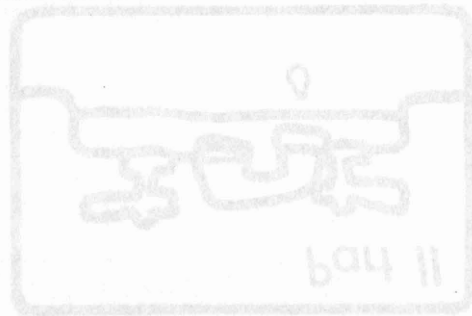
Detergent

Yellow Laundry soap

Pumice

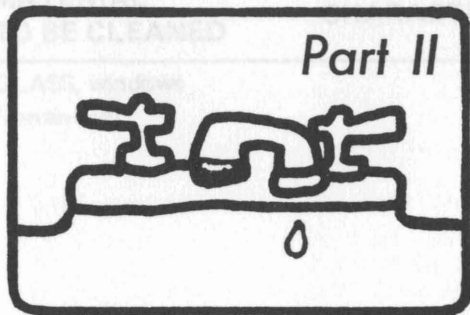
Ammonia

Lemon oil furniture polish



Metal

II bay



Metals

Metals are a category of materials which generally are mined or extracted from the earth and valued for beauty, durability, and ability to conduct heat and electricity.

MATERIAL TO BE CLEANED	CHARACTERISTICS	GENERAL CARE and CLEANING	SPECIAL TREATMENTS	SPECIAL SUPPLIES
ALUMINUM	<p>Aluminum is a light-weight metal with a bright silvery luster. Its affinity for oxygen makes it resistant to corrosion and attack by most chemicals. It can be color anodized (dyed) by an electrochemical process.</p> <p>Alkaline foods or water and some dishwasher detergents may leave a dark film on the surface of aluminum pans. This is harmless but not pleasing to the eye.</p> <p>Salty foods allowed to stand in pans may pit the metal.</p>	<ul style="list-style-type: none"> • Wash in warm water using mild soap or detergent. Soaking pans in strong detergents, alkalis, and alkaline scouring powders cause discoloration. • Pans may become warped if water is added when they are dry and overheated. • Waffle grids should be cleaned with a wire brush when cool. If grids have to be washed, they will need to be re-seasoned. 	<ul style="list-style-type: none"> • Brighten aluminum utensils by cooking acid foods such as tomatoes, apples, or rhubarb or by boiling 1 to 2 teaspoons cream of tartar per quart of water for 10 minutes in the pan. • Lime scale can be loosened by boiling equal parts of vinegar and water. Putting glass marbles in teakettles while boiling scale helps to loosen the sedimentation. • Commercial cleaners to clean and brighten aluminum are available. • Waffle and sandwich grids that have not been pre-treated should be seasoned before using. Cover grids with unsalted fat, using a pastry brush. Heat until grids start to smoke. Bake a waffle to absorb excess fat and discard it. 	<p>Powdered aluminum cleaner</p> <p>Mild soap or neutral detergent</p> <p>Acid food, cream of tartar, vinegar</p> <p>Plastic scouring pad</p> <p>Fine steel wool soap pad</p>
BRASS	<p>Brass is a yellow-colored alloy of copper and zinc and is generally used for decorative items. The more zinc in the metal, the more yellow it appears. High brass is a 70% copper and 30% zinc alloy. Muntz metal is brass of 60% copper and 40% zinc alloy.</p>	<p>Decorative items should be kept dusted and clean. Wash in sudsy water.</p>	<ul style="list-style-type: none"> • Tarnish spots can be rubbed with hot vinegar and salt or with a lemon rind dipped in salt. • If a dull finish is desired, use rottenstone, moistened with cooking or salad oil (consistency should be like heavy cream) or paste of rottenstone and dena- 	<p>Vinegar</p> <p>Lemon</p> <p>Rottenstone</p> <p>Salt</p>

MONEL

An alloy of nickel, copper and other elements. It is highly resistant to corrosion and is used in many industrial applications.

When used in the home, Monel is highly resistant to corrosion and is used in many industrial applications.

tured alcohol which is applied to brass, left to dry, and then polished.

- Antique finishes can be obtained by polishing with boiled linseed or lemon oil.
 - Commercial polishes or papers can be used for polishing brass.
 - Protective lacquers can be applied at home or commercially.
 - Tarnished fireplace screens can be cleaned with heavy-duty household cleaning detergent.
- If this doesn't work, spray with black or brass colored paint in a pressurized can.

- Denatured alcohol
- Linseed or lemon oil
- Commercial polish
- Commercial polish papers
- Paint
- Lacquer

NICKEL

A metal capable of high polish, resistant to oxidation, often used as a plating for iron, steel and

When used in the home, nickel is highly resistant to oxidation and is often used as a plating for iron, steel and

BRONZE

Bronze is copper alloy. Historically, it is an alloy of copper and tin or copper and manganese. In modern times, bronze is an alloy of copper and any metal except zinc. It is generally more expensive than brass and more corrosion resistant. Bronze forms a patina (green color) which is protective to the metal and is often seen on artwork. Bronze will deteriorate rapidly if exposed to moisture and chlorides or sulfides.

- Decorative objects should be dusted and washed regularly in sudsy water.
- Flatware is kept bright by frequent use and washing in a mild neutral detergent.

- Rub with cloth dipped in white vinegar and rottenstone.
- Commercial cleaners or polishes may also be used on bronze.

- Rottenstone
- White vinegar
- Commercial cleaner for bronze, copper, and brass

COPPER

Copper is valued for strength, malleability, ductility, and ability to conduct electricity and heat. It is also non-magnetic, resists wear, and forms a green patina which makes it resistant to corrosion.

- Decorative items should be kept clean and dusted.
- It may be desirable to let green patina form. Kitchenware, especially copper-clad pans, should be kept polished.

- New copper items may be lacquered to preserve color. Lacquer must be removed from eating and cooking utensils before using. To remove lacquer, place the item in 2 gallons of boiling water to which 1 cup of washing soda has been added. The lacquer will peel off.
- An alternate method to remove lacquer is to rub with a cloth saturated with acetone or alcohol.
- Polish with a commercial polish or polishing paper for copper, following directions on the container.
- Polish can be made at home by moistening salt with vinegar or

- Washing soda
- Commercial copper polish or paper
- Lacquer
- Lemon juice
- Salt
- Acetone
- Rottenstone
- Alcohol

(see next page)

MATERIAL TO BE CLEANED	CHARACTERISTICS	GENERAL CARE and CLEANING	SPECIAL TREATMENTS	SPECIAL SUPPLIES
COPPER (continued)			<p>lemon juice to make a paste for a bright finish or a paste of rottenstone and olive oil for a dull finish.</p> <ul style="list-style-type: none"> • After polishing decorative items, spray with lacquer to preserve color if desired. 	
CHROMIUM	<p>Chromium is a hard blue-white metal with a brilliant luster that is generally used to plate other metals. Examples of use of chromium are car bumpers and handles, plating on appliances such as toasters, electric fry pans, and coffeemakers, and handles on ranges and refrigerators.</p>	<p>Wash with sudsy water. Rinse and wipe dry to bring up luster.</p>	<ul style="list-style-type: none"> • Burned-on grease on appliances may be removed by commercial cleaners or by using silver polish. Several applications may be necessary if burned-on grease is allowed to build up. • To prevent burned-on grease, do not wash the appliance in greasy dishwater. If this is done, a greasy film will burn on with next use. 	<p>Commercial cleaners for small appliances</p> <p>Silver polish</p>
IRON (cast iron)	<p>Cast iron is heavy, hard, somewhat brittle, and may break if dropped. Cast iron will oxidize (rust) if it is not seasoned.</p>	<ul style="list-style-type: none"> • Cast iron utensils should be washed with mild soap as detergent will remove the seasoning. Wash and dry thoroughly at once. If storing for long periods of time, paper towels placed in the pan will absorb moisture which causes rust. • Stubborn cooked-on food is best removed by soaking in hot water. Use a plastic scouring pad if necessary. Soak in a solution of 3 tablespoons of washing soda or baking soda per 1 quart of water to remove burned on food. This necessitates reseasoning of the pan. • Rust may be scoured with fine steel wool or scouring powder but re-seasoning of the utensil will be necessary. 	<ul style="list-style-type: none"> • To season utensils, wash and scour with fine cleanser and steel wool. Wash and dry thoroughly. Rub the inside with unsalted fat or cooking oil and place on top of range on low heat or in oven (250-300 degrees) for 2 to 3 hours. More fat may be added as needed. When finished, wipe out extra fat, wash in soap, and dry thoroughly. • If not properly seasoned, cast iron pans will drip dark liquid into food. 	<p>Soap</p> <p>Soda (washing or baking)</p> <p>Unsalted fat or oil.</p> <p>Scouring powder</p>
IRON (wrought iron as used for decorative items)	<p>Generally made of the purest form of iron, thus somewhat more resistant to rust than cast iron.</p>	<ul style="list-style-type: none"> • 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 	<p>To remove rust stains, rub with kerosene, and scour with fine-grade steel wool. If rust is difficult to remove, allow kerosene to remain long enough to loosen.</p>	<p>Liquid wax</p> <p>Kerosene</p>

		wax on fireplace accessories because it is flammable.	Commercial rust removers may also be used.	Commercial rust remover Fine steel wool (untreated)
MONEL	An alloy of nickel, copper and other elements, monel resembles nickel in appearance and is used for sinks, table tops, etc. It acquires a patina (change in appearance) with use and is then easier to care for.	Wash with soap or detergent and water. Rinse and dry with a soft cloth. Add ammonia to rottenstone powder for hard-to-clean spots.	Polish with a soft, dry cloth.	Soap or detergent Rottenstone 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 rottenstone and water or denatured alcohol.	Polish with a soft, dry cloth.	Soap or detergent Rottenstone Denatured alcohol
PEWTER	An alloy made of 75-85% tin and other metals—frequently copper. Pewter is a soft metal that must be handled with care to avoid scratching.	Wash in hot, sudsy water, rinse and dry thoroughly with a soft cloth.	<ul style="list-style-type: none"> Polish with a soft, dry cloth. To remove slight tarnish, use a silver polish. For a bright finish, use a paste of rottenstone and denatured alcohol. For a dull finish, use a paste of rottenstone and boiled linseed oil, salad oil, or cooking oil. Heavy tarnish can be removed by soaking the pewter piece in hot water and potash. Use a piece of potash about the size of a filbert in 1 quart of water. 	Silver polish Rottenstone Denatured alcohol Salad oil or linseed oil Potash Soap or detergent
SILVER or SILVER ALLOY	Silver is a lustrous white metal which is capable of a high degree of polish. It is easily scratched by harsh abrasives. It is corroded or tarnished by salt and salt air, sulfur and sulfur-containing foods, and rubber. Frequent use deters formation of tarnish. Sterling silver is an alloy of 92½% silver and 7½% copper. Its beauty increases with use which causes a patina or soft sheen to form. <i>(see next page)</i>	<ul style="list-style-type: none"> Wash in warm, sudsy water. Rinse well and dry immediately. Do not let silverware stand with food on it. Do not let hollowhandled silverware or hollow ware stand in water as a combination of heat, water, and detergent may loosen soldering. Silverware may be washed in the dishwasher but the patina on fine silver is enhanced by the rubbing. <i>(see next page)</i>	Rubbing methods of polishing: <ul style="list-style-type: none"> Polishing cloth: Light tarnish is easily removed by rubbing with a polishing cloth. Paste or cream-type polish: 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. <i>(see next page)</i>	Mild soap or detergent Soft cloths Polishing cloths or paste polish Soft brush, small sponge, cloth, or cream type polish Enamel pan <i>(see next page)</i>

MATERIAL TO BE CLEANED	CHARACTERISTICS	GENERAL CARE and CLEANING	SPECIAL TREATMENTS	SPECIAL SUPPLIES
SILVER or SILVER ALLOY <i>(continued)</i>	<p>Plated silver is silver that has been electroplated over another metal.</p> <p>Methods of cleaning silver should be determined by the value placed on it—monetary or sentimental—and the design of the pattern. Silver with deeply “carved” patterns that are enhanced by an oxide or French gray finish should be hand polished with a high quality silver cream or polish. Hand rubbing develops patina on silver which adds to its beauty.</p> <p>Utilitarian silver may be cleaned by dip or electrolytic methods of cleaning.</p>	<p>bing that occurs when washing and drying by hand.</p> <ul style="list-style-type: none"> • Hollow handles may be loosened with exposure to heat and detergent in the dishwasher. • <i>Electrolytic methods of cleaning</i>: these methods are not recommended for cleaning silver with an oxidized or French gray finish. • Aluminum-salt-soda: Use an enamel pan. Fill with enough water to cover silver. Bring to a boil. Add 1 tablespoon 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>Commercial dip cleaners: Follow instructions given on label.*</p>	<p>To protect silver:</p> <ul style="list-style-type: none"> • Tarnish formation may be delayed on silver by polishing with an antitarnish polish. • Store silverware in a chest lined with tarnish-resistant flannel or air-tight plastic bag when not in use. <i>Do not</i> put rubber bands on silver as they cause tarnish. • 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>Aluminum foil</p> <p>Salt</p> <p>Baking soda</p> <p>Tongs</p> <p>* Commercial “dip” cleaners</p>
STAINLESS STEEL	<p>Stainless steel is an alloy of iron which contains more than 10% chromium. Stainless steel cannot be stained but occasionally dulls or will show oily finger prints. This steel is noted for its hardness and is used for utensils, tableware, sinks, counter tops, and small appliances.</p>	<p>Electrolytic methods give a better appearance if followed by a quick, rubbing polish.</p> <ul style="list-style-type: none"> • Wash with warm water using soap or detergent. Rinse and polish dry with a soft cloth or use a commercial cleaner. • Do not use harsh abrasives or steel wool on stainless steel. Cooked-on food can be removed from utensils by using a fine abrasive cleaning powder such as Bon Ami or a paste of ammonia and rottenstone. Commercial stainless steel cleaner is available. • Do not overheat or let pans boil dry as this causes discoloration. In some cases discoloration can be removed by scouring. 	<ul style="list-style-type: none"> • Polish with a soft cloth. • If stainless steel counters or sinks need brightening, they can be polished with a cloth dipped in ammonia or vinegar. • Commercial “dressings” are available for treating stainless steel so marks such as finger marks, etc., will not be visible. • The blue cast that appears on stainless steel utensils, when washed in the dishwasher, can be removed with silver polish. 	<p>Soap or detergent</p> <p>Scouring powder</p> <p>Commercial cleaner</p> <p>Rottenstone</p> <p>Ammonia</p> <p>Scouring pads</p> <p>Vinegar</p> <p>Commercial dressing</p>

*Commercial dip cleaners are strong chemicals and may be harmful to other materials and metals—such as stainless steel. Note warnings on container if used.

TIN

Tin is a soft crystalline metal that is silvery-white with a brilliant luster. It resists attack by air and by many organic acids. It is used for decorative tinware, especially by the Mexicans, and for kitchenware.

When tin is used on ovenware, only a thin coating is applied. The base metal may break through, causing rust, if harsh abrasives or sharp scraping tools are used.

- Keep decorative items dusted. To wash, use warm, sudsy water. Wax or lacquer may be used for ease in upkeep.

- Wash tinware in warm, sudsy water, rinse, and dry immediately to prevent rusting. If rusting occurs, use rottenstone to remove.

- Use baking soda and water to hasten removal of baked on food.

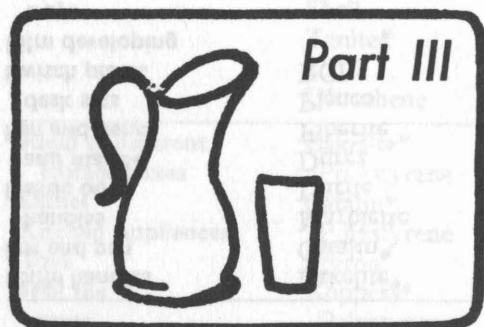
Decorative articles should be lacquered if exposed to weather. If used indoors, automobile wax will ease cleaning.

Soap or detergent

Rottenstone

Baking soda

Automobile wax or metal cleaner



Plastics

Plastics are organic compounds made from petroleum derivatives and are of two types, thermoplastics and thermosetting plastics.

Thermoplastics soften when heated, harden when cooled. Because of this characteristic, caution is required in use. Examples are: Acrylic, Cellulosic, Nylon, Polyethylene, Polystyrene, Polypropylene, and Vinyl.

Thermosetting plastics are set into permanent shape with heat. They do not soften when reheated. Examples are: Phenolic, Melamine, and Urea.

Plastics are generally odorless, tasteless, and non-toxic. They are washable in warm sudsy water, but vary in

resistance to scratching or breaking and tolerance to heat—thermoplastics being reshaped by boiling water or lower dry temperatures. Surface may be softened or dulled by solvents and strong acids.

Properties of basic plastics resins can be changed by adding fillers, plasticizers, or stabilizers. Examples are: Polystyrene, which cracks easily, can be made to resist impact by addition of rubber modifiers; Polyester resin, reinforced with glass fibers, makes durable products such as shower stalls or boats.

Plastics may be shaped by molding, casting, extrusion, calendering, and foaming. Examples are as follows:

Molded—dishes, furniture

Cast—furniture, cutlery handles

Laminated—materials for counter tops, furniture

Extruded—fibers

Calendered—plastic film, plastic-coated fabric

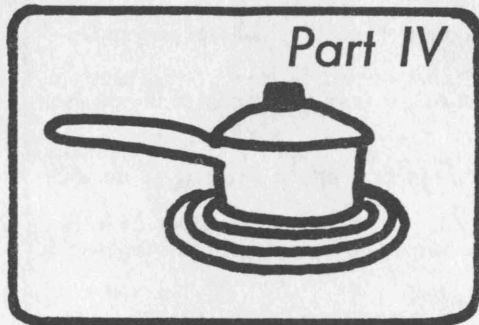
Foamed—upholstery foam, sponges

EXAMPLES OF PRODUCTS	TRADE NAMES	GENERIC NAME	PROPERTIES	GENERAL CARE	SPECIAL CARE, HANDLING	SUPPLIES NEEDED
Rigid plastic hair brushes Salad bowls Lamps Clock cases Furniture Tabletops Plastic sheets Piano keys Telephone dials	Acrylite Lucite Plexiglas XT Polymer	Acrylic (thermoplastic)	<ul style="list-style-type: none"> • Good light properties • Lightweight • Resists weathering • Holds shape unless subjected to high heat • Resistant to food, oil, alkalies 	<ul style="list-style-type: none"> • Wash in warm, sudsy water • Do not scour with scouring powder 	<ul style="list-style-type: none"> • Avoid heat, solvents, alcohol, or scratchy objects • Waxing camouflages scratches 	<ul style="list-style-type: none"> • Mild soap • Mild detergent • Wax
Knife handles Pot and pan handles Plastic onyx and marble Pen and pencil desk sets Switch plates Film developing trays	Bakelite* Catalin* Marblette Durite Durez Fiberite Plenco RCI	Phenolic (thermosetting)	<ul style="list-style-type: none"> • Rigid, strong • Scratch resistant • Lightweight 	<ul style="list-style-type: none"> • Wash in warm, sudsy water or wipe with cloth • Do not scour with scouring powder 	<ul style="list-style-type: none"> • Avoid outdoor weathering • Avoid flame 	<ul style="list-style-type: none"> • Mild soap • Mild detergent
Toys Piano Keys Toothbrush handles Highchair trays Lampshades Eyeglass frames Toilet seats Telephones Table mats Pens and pencils Casings Tool handles Flashlight cases Ping-pong balls Buttons	Celcon Celluloid Ethocel Forticel Lumarith Tenite Plastacele Pyralin Kodaloid Kodapak I Kodapak II	Cellulosics (thermoplastic)	<ul style="list-style-type: none"> • Durable • Lightweight • Many colors • Good surface finish • Rigid, unless exposed to high heat • Some forms are flammable 	<ul style="list-style-type: none"> • Wash in warm, sudsy water • Do not scour with scouring powder 	<ul style="list-style-type: none"> • Avoid nail polish and nail polish remover • Avoid high temperatures • Avoid outdoor weathering 	<ul style="list-style-type: none"> • Mild soap • Mild detergent
Dishes Kitchen utensils Electric plugs and outlets Cosmetic jar lids Laminated counter tops	Melmac Resimene Plaskon* Beetle Cymel Sylplast Plenco	Melamine and Urea (thermoset)	<ul style="list-style-type: none"> • Many colors • Opaque or translucent • Maintains shape 	<ul style="list-style-type: none"> • Guard against hard blows • Melamine may be washed in dishwasher • Do not scour with scouring powder 	<ul style="list-style-type: none"> • Urea will not tolerate repeated exposure to boiling water • Stains may be removed with commercial cleaner 	<ul style="list-style-type: none"> • Mild soap • Mild detergent • Commercial cleaner for Melamine, Urea

Tumblers	Nylon	Nylon (thermoplastic)	<ul style="list-style-type: none"> • Translucent, milky white or soft pastels • Resilient • High heat tolerance 	<ul style="list-style-type: none"> • Wash in soap or water or dry clean • Do not scour with scouring powder 	<ul style="list-style-type: none"> • May be sterilized • Not harmed by oil, grease, solvents 	<ul style="list-style-type: none"> • Mild soap • Mild detergent
Flexible ice trays, mixing bowls, refrigerator dishes, squeezeable bottles Plastic film Plastic sheeting Garbage cans Laundry baskets	Bakelite* Polyethylene Dupont Polythene Alathon Catalin* Dow*Polyethylene Dylan El Rex Marlex Fortiflex Grex Monsanto* Petrothene Plaskon* Poly-Eth Shell Tenite* TPX Ultrathene	Polyethylene (thermoplastic)	<ul style="list-style-type: none"> • Flexible at low temperatures • Can tolerate hot water for short periods of time • Insulates • Lightweight • Unaffected by chemicals • Impermeable to water 	<ul style="list-style-type: none"> • Wash in warm, sudsy water • Do not scour with scouring powder. 	<ul style="list-style-type: none"> • Cannot tolerate hot objects or dry heat over 150°F. • Plastic bags or sheeting may be reused. After washing be sure to dry thoroughly and air to avoid odor 	<ul style="list-style-type: none"> • Mild soap • Mild detergent
Rigid transparent storage boxes Dishes Kitchen Appliances Toys Wall tile Lenses Light Fixtures Clock cases Plastic sheeting Musical instrument reeds Place mats	Bakelite* Polystyrene Catalin* Polystyrene Styron Koppers* Polystyrene Plexene M Abson Lustrex Cylolac Kralastic Tybrene Cosden Fostarene Dylene El Rex* Shell* Solar* Lustran	Polystyrene (thermoplastic)	<ul style="list-style-type: none"> • Lightweight • Can have high degree of transparency • Maintains its shape • Wide color range • Resists water • High impact styrene plastics produced by inclusion of rubber (ABS Plastics) 	<ul style="list-style-type: none"> • Wash in warm, sudsy water • Frequent washing and airing avoids absorption of odor 	<ul style="list-style-type: none"> • Avoid cleaning fluids, nail polish remover, lemon and orange oil or rinds • Avoid weathering • Do not put in dishwasher 	<ul style="list-style-type: none"> • Mild soap • Mild detergent

EXAMPLES OF PRODUCTS	TRADE NAMES	GENERIC NAME	PROPERTIES	GENERAL CARE	SPECIAL CARE, HANDLING	SUPPLIES NEEDED
Baby bottles Refrigerators Packaging film and sheets Rope Nets Pipe Dishes	Avisun Catalin* Chevron* Dow* El Rex* Escon Grace* Marlex* Moplen Petrothene Poly-Pro Pro-Fax Shell* Tenite*	Polypropylene (thermoplastic)	<ul style="list-style-type: none"> Films impermeable to vapor and gases Films laminate well to paper, cloth, or aluminum Not affected by water solutions of inorganic salts, mineral acids, or bases 	<ul style="list-style-type: none"> Wash in warm, sudsy water Do not scour with scouring powder 	<ul style="list-style-type: none"> May be heat sterilized Plastics bags and sheeting may be reused. Wash, dry, and air to avoid odor 	<ul style="list-style-type: none"> Mild soap Detergent
Films Garment bags Inflatable toys Wallpaper coating Garden hoses Upholstery Plastic coated fabric Phonography records Drawing instruments Sheeting Draperies Shower curtains Window screens Floor tile	Vinylite Saran Geon Pliovic Marvinol Monsanto*Vinyl Butyral Vitron Opalon Dacovin Ethyl Exon Vyram Vinylite Gelva	Vinyl (thermoplastic)	<ul style="list-style-type: none"> May be flexible or rigid Strong—resists abrasion Resists common chemicals, water Resists weathering May have an odor when boxed Resists acid, fats petroleum products, salts, and fungus growth 	<ul style="list-style-type: none"> Wash in warm, sudsy water Do not use hot water 	<ul style="list-style-type: none"> Harmed by moth repellents Films may mar or stick to lacquered surfaces Plastics bags or sheeting may be reused. Wash and dry thoroughly and air to avoid odor 	<ul style="list-style-type: none"> Mild soap Mild detergent

*Denotes a tradename which may be used on more than one form of plastics produced by a manufacturer.



Non-Stick Coatings

Non-stick coatings for bakeware, top-of-the-range utensils, ovens, and small appliances may be applied at the factory or at home.

Factory-applied finishes are plastic resins or silicone coatings. They may be clear or colored. Plastic resins coat inside of utensils or appliances. Silicone coatings may be inside or coat all of the utensil. Common characteristics of both coatings are that they have the ability to release from other materials, they do not conduct electricity, and they are resistant to usual cooking temperatures.

- Plastic resins are fluorocarbons (TFE). Some examples are Teflon and Teflon II, Tuftram, and G.E. Double Non-stick Coating.
- Silicone coatings cost less to manufacture and can be applied to thin-gauge metal. Examples of silicone are General Electric Hardkote, and Dow Corning 800 and Panlon.

Care of Factory-applied Finishes

- **Pre-treating.** New plastic-coated utensils and appliances should be pre-treated in the following manner: Soak off label. Wash thoroughly. Then rub surface with a paper towel soaked in oil. Wash

and dry thoroughly. (Do not pretreat angel-food cake pan.)

- **General care.** After each use, wash thoroughly in hot sudsy water. Do not use abrasive household cleaners or metal scouring pads. Generally, cooked-on food can be removed by use of a plastic scouring pad. Plastic-coated utensils should be hung up or stored in racks to avoid scratching. Waffle grids should be stored with a piece of paper toweling between them.
- Metal utensils may be used with care on Teflon II and General Electric Double Non-Stick Coatings. Other plastic coatings require special tools. Coated utensils may be washed in the dishwasher; however, this may affect the color and appearance of the utensil.
- **Stain removal** on plastic-coated utensils may be done using a commercial cleaner for non-stick coatings. A solution of 1 cup water, ½ cup liquid household bleach, and 2 tablespoons of baking

soda boiled for 5 minutes in the utensil may be used on Teflon or Teflon II. Some manufacturers do not recommend using household bleach. After the stain-removal treatment, pre-treat with oil before using.

- **Repair** of plastic-coated utensils may be done with a liquid scratch-repair solution or spray-on coatings. For the best results, follow the directions on the container.

Home-applied finishes are available for the homemaker who wants to apply a non-stick coating to cookware or ovens. These are aerosol-spray coatings and are not permanent (one product claims to last about 2 months). For best results, apply as directed on container. Examples of products are Pan-Shield, Ovengard, and Magic Spray Coat.

A vegetable spray-on coating can be put on cookware to make it non-stick. Apply while the utensil is cool and each time the utensil is used. This is also good for spraying on barbecue racks to make them easy to clean. An example is Pam.

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glossary...

Abrasive Powder is commercially or homemade and is used to scour surfaces. As some abrasive powders are coarse ground, they are not usually recommended for use on glass, glass ceramic, fine metals, or porcelain enamel. A homemade abrasive may be made from alcohol or ammonia and rottenstone (see below). Examples: powdered household cleanser, powdered metal cleaners, jeweler's rouge.

Acetone is a chemical used to remove oily stains from marble.

Acids are effective in removing tarnish and rust on metal or to clean brick or stone. Examples of acids are: acids in foods such as found in pears and apples, rhubarb, grapes, citrus fruit, vinegar, sour milk, tartaric acid in cream of tartar. Too strong an acid can destroy fabrics and metals.

Alcohol, denatured, is an alcohol that has been rendered unfit for internal use and is used for industrial or household purposes.

Alkalis are effective household cleaners which release heavy accumulation of oily soil with little rubbing or agitation. Common alkalis used in the household are borax, caustic soda (lye), baking soda, washing soda (sal soda), trisodium phosphate, and ammonia. Alkalis are contained in soaps, detergents, drain pipe cleaners, oven cleaners, household bleaches, water softeners, and all-purpose cleaners. Alkalis can harm skin and eyes, may cause fabric dyes to bleed, attack wool and silk fabrics, darken and corrode aluminum.

Ammonia is a liquid alkali used to remove heavy accumulation of dirt and grease. It can be harmful to skin and eyes. Also harmful to wool and silk fibers and may cause some dyes to bleed.

Amyl acetate is used to remove oily stains from marble.

Benzine is an organic solvent obtained from the distillation of petroleum.

Cream of Tartar is a mild acid and is often used in removal of metal tarnish.

Corrosion is a gnawing away of metal by chemical action.

Crystalized cleaners for metals and plastics are commercial compounds diluted with water and may be used to clean coffee pots or Teflon-coated pans.

Examples: Teflon cleaner by Sunbeam, Tefix cleaner by Wantz, Dip-It cleaner (all-purpose), and Coffee-maker cleaners by Sunbeam and Wantz.

Detergent is anything that cleans. However, today common usage of detergent means a group of cleaners known as synthetic detergents, which are manufactured from petroleum or coal-tar derivatives. There are two types of detergents: light-duty, which are chemically neutral and are designed for dishwashing and lightly soiled fine fabrics, and the heavy-duty or all-purpose which are effective in cleaning the family wash, stubborn soil, and many surfaces in the home.

Dip cleaners are chemical cleaners designed to clean silver by electrolysis. As they are strong chemicals, care must be taken not to spill them on surfaces they might attack. Dip cleaners remove all tarnish on silverware which may not be desirable for some designs. They are not recommended by jewelers for sterling silver.

Hydrogen Peroxide (hair strength 20 volume) is used to remove organic stains from marble.

Jeweler's rouge is peroxide of iron and may be purchased in stick form or in polishing cloths. It is a mild abrasive used for polishing fine metals. Some liquid polishes now contain jeweler's rouge.

Kerosene is a solvent which is effective with rottenstone to remove soap curd from porcelain enamel, used full strength to remove rust from wrought iron and car grease from concrete.

Laquer, (protective) is often put on copper or brass to keep tarnish and patina from forming. In the case of copper cooking utensils, it should be removed before using, either with alcohol or by boiling objects in a solution of water and washing soda (sal soda).

Lemon oil used for polishing furniture is mineral oil containing a little oil of lemon.

Linseed oil is an oil used as a base in polishes, waxes, paints. For household use it can be used as a cleaner and polish.

Metal cleaners are available as powdered abrasives, creams, liquids, polishes, and treated papers and cloths.

Muriatic acid is hydrochloric acid which is available at drug stores.

Non-precipitating water softener is slightly alkaline water softener used to suspend calcium or magnesium compounds in the water so that soaps and detergents will not react with them to form scum. An example is Calgon.

Oxalic acid crystals are used to remove rust stains from porcelain enamel fixtures. (POISON.)

Patina is film or encrustation, usually green, produced by oxygen on surface of bronze or copper which may be regarded as being of decorative value. On silver, patina refers to the luster or "butler's polish" that is formed by use of silver or by hand rubbing.

Potash is a chemical derived from wood ashes and used in making soap, glass, etc. For cleaning purposes a solution of potash and water can be used to remove heavy tarnish on pewter.

Poultice is a soft composition made from white blotting paper, white napkins, or white cleansing tissue that is dampened with the proper agent and used to remove stains from marble. Also may be used to remove stains from concrete.

Rottenstone is a fine abrasive made of decomposed siliceous limestone used for polishing.

Soap is a product of a chemical reaction between fat and a strong alkali. It is helpful in removing dirt. The disadvantage of soap is that it combines with calcium or magnesium in water to form a scum. Soaps may be light duty or heavy duty.

Soda, baking, is a mild alkali that can be used as a household cleaner for plastics, metal, and glass.

Soda, washing, can be used to soften water and to remove protective laquers from metal.

Sodium citrate is white crystals or granules which are water-soluble having a cool saline taste.

Tarnish is discoloration, alteration of the luster of a metal.

Tin oxide or polishing putty powder is used for restoring a polished finish to marble. It is available from a marble supply house, a marble finisher, or a chemical supply house.

Vinegar is approximately 5 percent acetic acid which is often used to clean metals.

Wax or polish is a protective coating put on metal or enamel to prevent soiling or tarnishing.