

Chapter 8

Cleaning of Different Surfaces

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Objectives:

- ❖ Various types of surfaces in Hotel
- ❖ How to take care of them

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Various types of metallic surfaces:

- ❖ Metals form the whole or a part of many fixtures, fittings and items of furniture.
- ❖ The most commonly used metals are silver, steel, copper, brass, bronze, aluminum and iron.
- ❖ The metals may be used in door and window fittings, wall panels, light fittings, sanitary ware, restaurant cutlery, cooking utensils, guestroom accessories and furniture.
- ❖ Most metal surfaces get tarnished, scratched or rusted unless treated or protected.

Protective finishes on metals:

- ❖ Painting.
- ❖ Electroplating.
- ❖ Galvanizing.
- ❖ Enameling.
- ❖ Lacquering.
- ❖ Anodizing.
- ❖ Tin-plating.
- ❖ Plastic-coating.

Commonly used Metals and Alloys

Silver:

- ❖ This soft, malleable, and ductile metal has a brilliant sheen when well polished.
- ❖ Small amounts of the metal in elemental form occur naturally in the earth, but most of the silver we use is extracted from silver ores.
- ❖ Silver is chemically unaffected by pure water, pure air, & a majority of foodstuffs, gets scratched easily if pure.
- ❖ Silver is used as the plating in electroplated nickel silver, for making cutlery, utensils, vases and artifacts.

Commonly used Metals and Alloys

Tarnishing of Silver:

- ❖ This is due to the action of compounds of sulphur, present in industrial atmospheres and in certain foods stuff such as egg yolk, fish, onion, certain juices, green vegetables and pickles.
- ❖ If soap is not rinsed off completely after washing silver, it gets tarnished rapidly.
- ❖ Tarnish cannot be removed by simple washing operations and requires specific removal procedures.

Commonly used Metals and Alloys

Regular Cleaning: Wash the article in a hot solution of synthetic detergent, scrubbing with a piece of cotton cloth. Then rinse in clean boiling water in an enameled tray or soak the article for two hours in water left over from boiling potatoes and then clean.

Silver Dip: Pink colour silver dip solution based on an acid of thiourea compound is used into which the articles are immersed completely for a very short time. The article should be washed with warm water and dried.

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Commonly used Metals and Alloys

Polishing procedures for silver:

- ❖ Proprietary preparations.
- ❖ Plate powder.
- ❖ Long-term silver polish.
- ❖ Burnishing Machine.

Commonly used Metals and Alloys

Steel:

Steel is an alloy of iron containing mainly iron and carbon, other materials are found in small quantities.

Types of steel

Chrome Steel: Steel is coated with chromium for manufacturing taps, bath handles, shower fittings etc.

Stainless Steel: 8-25 percent of chromium has been added to steel, making it corrosion-resistant. It is used in making cutlery, sinks, WCs, etc.

Galvanized Steel: Steel may be coated with Zinc to prevent tarnishing, it is used for making buckets.

Commonly used Metals and Alloys

Cleaning and Polishing procedures

- ❖ Stainless steel is washed in a hot solution of synthetic detergent using a soft nylon scrubber, rinsed with clean water and immediately dried with a linen cloth.
- ❖ The use of harsh abrasives should be avoided as they may scratch the surface.
- ❖ Chrome steel and galvanized steel are wiped or washed with synthetic detergent solution, stains removed with soft steel-wool, the articles rinsed with clean water and buffed with a linen cloth.

Commonly used Metals and Alloys

Copper

- ❖ This metal with an orange-brown tinge has a light sheen of its own.
- ❖ It is used for wall paneling and counter tops in bars and restaurants, bowls, vases, and urns in lobbies and guestrooms, and utensils.
- ❖ It is even used in cutlery and serving dishes in some ethnic Indian restaurants.
- ❖ Copper cookware should be lined with tin or nickel for protection as it may react adversely with some foods.

Commonly used Metals and Alloys

Cleaning and polishing procedures

- ❖ Copper is washed in warm water and then rubbed with a mixture of salt, fine sand, and vinegar, using rags, to clean. It is then rinsed in warm water and dried with a flannel cloth.
- ❖ A thin coat of vegetable oils applied to the surface to retard further tarnish.
- ❖ In case of heavily tarnished copper, a weak ammonia solution will remove the greenish deposits on the surface.

Commonly used Metals and Alloys

Brass

- ❖ This is a golden-brown alloy of copper and zinc. It is used in making door and window fittings, stair rods and railings, foot rails in bars, taps, ashtrays and ornaments. Brass tarnishes and scratches easily.
- ❖ **Cleaning and polishing procedures:** Remove surface dirt and rub the article with a paste made of white flour, salt, and vinegar in equal parts. This will remove mild tarnish. A mixture of 30 ml oxalic acid and 300 ml soda solution will also remove tarnish.

Commonly used Metals and Alloys

Bronze

- ❖ This is a brown alloy of copper and tin. It is used primarily in making works of art and medals. It does not tarnish easily.
- ❖ **Cleaning procedure:** Wash well with water and then apply a mixture of one part muriatic acid and two parts water with a piece of flannel. Allow the solution to dry and then polish well with vegetable oil.

Commonly used Metals and Alloys

Aluminum

- ❖ This silvery, lightweight metal is highly malleable and ductile. It is used to make light fittings, insulation wire, window frames, venetian blinds, furniture items, door and window fittings, saucepan and other utensils. It is not tarnished by air. It is damaged by soda and alkalis as well as stained acids.
- ❖ **Cleaning procedures:** Wash in a hot solution of synthetic detergent using soft steel-wool to scrub. Use mild abrasives only in the case of difficult stains.

Commonly used Metals and Alloys

Iron

- ❖ This silver-white metal of great strength is used in making furniture, buckets, dustbins and cookware. Wrought iron is iron that has been forged, that is it has been shaped by heating in fire and then hammering while hot.
- ❖ **Maintenance problem:** Utensils made of cast iron need to be seasoned before first use to prevent rusting. Before seasoning, the article has to be washed in mild soap and water, then thoroughly dried. Seasoning is done by rubbing the inside surface with vegetable oil and heating in a low oven for about two hours.

Glass

- ❖ Glass is a transparent, lustrous, and brittle material made from silica or sand.
- ❖ A mixture of pure fine sand, soda or potash, and other ingredients is carefully measured out. This is called 'Batch'.
- ❖ The Batch is fed into a furnace and heated to an extremely high temperature, above 1300°C where it fuses into molten glass.

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Glass

- ❖ This molten glass is led away for shaping. After shaping, the glass is cooled by a process called “annealing”, in which the glass travels on a conveyer belt through an annealing oven.
- ❖ In the annealing oven, after the initial re-heating, the glass gradually cools as it passes through.

Types of Glasses

- ❖ Float Glass.
- ❖ Fibre Glass.
- ❖ Obscured glass.
- ❖ Hollow Glassware.
- ❖ Cut Glass.
- ❖ Safety Glass.
- ❖ Sheet Glass.
- ❖ Obscured glass with wire.
- ❖ Toughened Glass.
- ❖ Laminated Glass.
- ❖ Toughened and Laminated Glass.

Fiber Glass

- ❖ Glass can be manufactured as a textile fiber, which may be used for making curtains and fire blankets.
- ❖ Fiberglass may also be manufactured as rigid sheets of plastic or other material with glass filaments embedded for strength.
- ❖ These sheets can be molded and are used for sanitary ware, furniture, and wall panels.
- ❖ Fiber glass is fire-proof, impermeable and resistant to damage by pests, sunlight or air.

Obscured Glass

- ❖ This is a type actually derived from sheet or float glass.
- ❖ It is textured on one side, so that some light passes through and some is blocked or distorted, so that the material is not entirely transparent.
- ❖ The pattern is produced when molten glass is made to flow from the furnace between embossed rollers.
- ❖ Obscured glass is used in making bathroom windows and for screening areas where privacy or diffused light are desired.

Laminated Glass

- ❖ This consists of two thin sheets of glass with transparent plastic sandwiched between them.
- ❖ If a laminated glass sheet breaks, the glass pieces will adhere to the plastic layer.

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Toughened Glass

- ❖ This is made by heating the glass sheet to a temperature just below softening point and then cooling the surface rapidly.
- ❖ As a result, a skin is formed, which if the glass breaks, will cause the pieces to shatter into tiny, harmless fragments, less likely to fall out of its frame as their weight is supported.

Cut Glass

- ❖ This is produced by hand-cutting shaped glass articles using abrasive copper wheels that rotate at high speed.
- ❖ The 'cuts' have a matt surface in the beginning from being ground. But become highly reflective when polished. Cut glass is polished by treating the entire article with acid.
- ❖ Hand-cut lead crystal glass has a prismatic grooves that emit rainbow-colored reflections.
- ❖ This glass is expensive and used for chandeliers, decanters, vases and quality table glassware.

Plastic

- ❖ Plastics are resinous synthetic polymers that have a number of advantages as well as disadvantages.
- ❖ Plastics have become one of the most widely used groups of surfaces in homes and commercial establishments-including hotels-today.
- ❖ In the hospitality industry alone, they are used in making furniture, wall coverings, floor coverings, cleaning equipment, protective coatings and utensils.

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Types of Plastic

1. Thermosetting plastics.
2. Thermoplastics.

Thermosetting plastics:

- ❖ That are hard plastics, moulded by heat and pressure and do not usually soften when they are reheated e.g. melamine, phenolics and laminates.

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Melamine: This group of plastics is used in making tableware, trays, laminated workshop, wall panels, and shelves.

Phenolics: They are used in making buckets, trays, telephones, door handles, electrical fittings, and laminates, they are not affected by boiling in water.

Laminates: Melamine, phenolics and other plastic resins are together used to produce plastic laminates. Plastic laminates may be stuck directly to wall surfaces, to plywood, or to other supporting material.

Thermoplastics: These are soft plastics that soften when exposed to heat and harden again when cool. Most of the plastic material used in hotels fall under this group.

Thermoplastics include acrylics, acetal resins, cellulose acetate and nitrate, polyamides, polyesters, polyethylenes, polypropylenes, polystyrenes, polyurethane foams, polytetrafluoro ethylene (PTFE, known as teflon), polyvinyl chloride (PVC) derivatives, acrylonitriles and some other synthetic fibers.

Cleaning and Maintenance procedures:

- ❖ Plastic surfaces are easy to clean and maintain.
- ❖ Dally damp-dusting should be done since plastic attracts dust due to static electricity.
- ❖ Light spoilage may be removed by wiping with warm solution of synthetic detergent, followed by rinsing and air drying.
- ❖ Stains should be removed by rubbing with a cloth soaked in ethylated spirit.

Ceramics:

- ❖ Ceramics are made from sand and clay.
- ❖ Different proportions and types of clay are mixed with other ingredients to produce various kinds of ceramics.
- ❖ Ceramics are used for making sanitary fittings, drain pipes, vases, floor tiles, wall tiles and finishes, cooking utensils, and crockery.
- ❖ Ceramics should be handled with care since they are prone to cracking and chipping.

Common types of Ceramics:

- ❖ Earthenware.
- ❖ Glazed earthenware.
- ❖ Vitrified earthenware.
- ❖ Terracotta.
- ❖ Stoneware.
- ❖ Porcelain.
- ❖ Bone china.

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Vitrified earthenware:

- ❖ This is also known as vitreous china.
- ❖ It is very hard and heavy because of its higher flint content.
- ❖ Compound to other earthenware, this is fired at a higher temperature, so that consistent and complete fusion taken place.
- ❖ Vitrified articles are thus stronger, heavier, less easily chipped and more expensive than other kind of earthenware.

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Porcelain:

- ❖ This made from kaolin(china clay and china stone or feldspar).
- ❖ Porcelain has a translucent body and a transparent glaze.
- ❖ It is all extremely hard and strong ceramic.
- ❖ It is not in much use in hotel establishments.
- ❖ Porcelain can be used to make cups, saucers and other types of crockery.

Bone china:

- ❖ It contains bone ash. It also has less Feldspar and more china clay than porcelain.
- ❖ The addition of bone makes the clay easier to work and gives it strength.
- ❖ Bone china is fired at very high temperature, making it very thin and strong and impervious because of the complete fusion that takes place.
- ❖ It is used to make fine cups, saucers and other types of crockery.

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Cleaning procedures:

- ❖ Ceramics should be handled with care during cleaning since they are easily cracked and chipped.
- ❖ Extremely hot or too cold water should be avoided. A warm, neutral synthetic detergent solution should be used for cleaning ceramics.
- ❖ The articles must be rinsed thoroughly and dried with lint-free duster.

Wood

- ❖ Wood is hard, compact, fibrous, and porous.
- ❖ Good wood makes for a rich, warm and beautiful surface.
- ❖ It is an extremely versatile material, with its varied colours and different grain patterns, and is used throughout hotel establishment.
- ❖ Being a porous material, wood absorbs water as well as dust. It is also prone to fungal attacks and pest infestations.

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Types of Wood

- ❖ Solid wood.
- ❖ Hard wood.
- ❖ Soft wood.
- ❖ Wood Board.
- ❖ Hard Board.
- ❖ Plywood.
- ❖ Black Board.
- ❖ Chip Board.
- ❖ Woven Stems.
- ❖ Cork.

Types of Wood



Hardwood:

These are obtained from broad-leaved, deciduous tree. The most popular hardwoods are teak, oak, ash, beech, birch, walnut and rosewood. They are very strong and heavy, and thus can stand a good amount of wear and tear.



Softwood:

Obtained from coniferous trees. Commonly used softwoods are pine, fir, cedar and rubber wood. They are lighter in weight, more prone to wear and tear, indentations, grooves and splintering.

Types of Wood



Woven Stems:

Cane and wicker are included in this class.

Cane is derived from the hollow, jointed stems of giant reeds and grasses (such as Bamboo) or the solid stems of slender palms.

Wicker is typically derived from shoots of willow plants. They are used in making woven items such as bread-baskets, flower baskets, mats stools, sofas chair etc.

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Types of Wood

Cork:

- ❖ This is a material obtained from the outer, light-brown bark of the cork oak.
- ❖ The bark is ground into large granules, mixed with synthetic resin, pressed into sheets at high temperature and pressure, and then cut into tiles or strips of varying widths.
- ❖ It has excellent acoustic properties. It is extremely porous, therefore dents, burns and stains easily. Because of high porosity of natural cork, it is now marketed with various types of coating.

Protective treatments for wood

Wood surfaces often require extra protection since they are mostly porous and absorb moisture. They also tend to get stained and scratched. The most common treatments are :

- Beeswax.
- Varnish.
- Lacquer.
- Oil.
- Polyurethane Finish.
- French polish.
- Paint.

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Care and cleaning procedures for wooden surfaces

- ❖ Wood, being porous, deteriorates in contact with an excess water. Therefore the least possible amount of water should be used for cleaning wood.
- ❖ Always dry-dust the surface with an impregnated mop or vacuum cleaner.
- ❖ Spills and stains should be removed immediately so that they are not absorbed.
- ❖ Cane and wicker also need to be vacuumed daily as dust may get entrapped and deposited in the nooks of the weave.

Stones

- ❖ A variety of natural stones are used as hard surfaces in hotel establishments. Stones are used mainly as floor finishes and external wall surfaces, tabletops, countertops and tops of vanity, furniture, decorative idols and ashtrays.

Natural stones in use.

- ❖ Marble.
- ❖ Sandstone.
- ❖ Granite.
- ❖ Quartzite.
- ❖ Slate.

Leather

- ❖ Leather is made from the skins of various animals including sheep, goats, pigs and cattle by tanning or a similar process.
- ❖ It is one of the most durable and versatile of all natural materials.
- ❖ It can be dyed in a variety of colors and used for belts, shoes, gloves, purses etc. it also picks up oil and grease.
- ❖ General cleaning of leather involves daily dusting or suction. In case of soiling, wipe with a soft cloth with warm water and mild synthetic detergent. Occasionally leather may be polished.

Rubber

- ❖ Rubber is a group of natural or synthetic substances characterized by elasticity, water repellence, and electrical resistance. It is mostly used for safety purpose. Rubber is used for friction and sound reduction.
- ❖ It is obtained from milky white fluid called latex found in many plants. In the manufacture of articles, the crude is treated with compounding ingredients in several mixing machines.

Types of Rubber

- ❖ Crude Rubber.
- ❖ Vulcanized Rubber.
- ❖ Foam Rubber.
- ❖ Synthetic Rubber.

Cleaning Procedure for Rubber:

- ❖ Clean rubber with a neutral detergent solution and rinse with water. It is a hygienic material and is not prone to mould growth or pest infestations. It is sensitive to grease, strong alkalis, and excessive heat.