


Subject: Tourism & Hospitality

Production of Courseware

 -Content for Post Graduate Courses



Paper 15: Hotel Housekeeping

Module 12: Composition, Care & Cleaning of Different Surfaces



THE DEVELOPMENT TEAM

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ITEMS	DESCRIPTION OF MODULE
Subject Name	Tourism & Hospitality
Paper Name	Hotel Housekeeping
Module Title	Composition, Care & Cleaning of Different Surfaces
Module Id	Module no-12
Pre- Requisites	Basic knowledge on different surfaces
Objectives	To understand the methods & procedures of cleaning hard surfaces
Keywords	Hard Surfaces, Cleaning Procedures, Maintenance, Housekeeping

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QUADRANT – I

LEARNING OUTCOMES

After completing this module students will be able to:

- I. Understand the importance of maintaining different surfaces, such as metals, glass, plastics, etc.
- II. Understand the importance and methods of protecting hard surfaces from wear and tear
- III. Discuss the methods of cleaning and maintaining different surfaces

COMPOSITION, CARE & CLEANING OF DIFFERENT SURFACES

INTRODUCTION

Every hospitality establishment is full of different surfaces located in different areas throughout the establishment. To keep the hotel property look as fresh as it did when it first opened, housekeeping employees involved in the care and maintenance of these hard surfaces must understand the composition of these surfaces. Staff needs to be trained adequately on the care and maintenance of various surfaces to avoid them getting spoilt. Once spoiled, these surfaces cannot be revived to their original appeal or function.




The variety of hard surfaces commonly used in hotels:

1. METALS

- Metals form the whole or a part of numerous fixtures, fittings and furniture.
- They are generally used in door and window fittings, wall panels, light fittings, sanitary-ware, restaurant cutlery, cooking utensils, guestroom accessories (such as ashtrays, vases, and picture frames), and furniture (such as beds, chairs, and tables).

- Most metal surfaces get tarnished, scratched, or rusted unless treated or protected.
- The most commonly used metals are: *silver, copper, bronze, brass, iron, aluminium and steel*
- **Silver**
 - This soft, flexible, elastic metal has a brilliant sheen when well-polished.
 - Small amounts of silver 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, and a majority of food stuffs, but pure silver gets scratched easily.
 - Silver is used for plating in electroplated nickel silver (EPNS), for making cutlery, utensils, vases, and various decorative articles.

EPNS Fish Knife Set

TYPES OF SILVER	
<p>Sterling Silver</p> <p>It is an alloy containing 92.5 per cent silver, rest is mainly copper.</p>	<p>Silver Plated (EPNS)</p> <p>Table silver or ‘silverware’ - made of silver-plated alloy by plating ‘blanks’ of nickel silver alloy. ‘Nickel silver’ does not contain any silver at all.</p> <div style="text-align: center; margin: 10px 0;">  </div>
<p>Sterling silver is more expensive than silver-plated alloy and for this reason is seldom used in hotels.</p>	<p>Nickel Silver is a term for alloys that look like silver (being white metal) and made of nickel, copper, and sometimes brass, along with a few other metals for added strength and shine.</p>

Cleaning Procedure for Silver

- Silver needs to be cleaned and polished on a regular basis.
- When it gets tarnished, more complex cleaning methods have to be employed.

Cleaning & Polishing Methods for Silver:

CLEANING METHODS (C)	Regular Cleaning	Silver Dip	Polivit/Aluminium- Soda
POLISHING METHODS (P)	Burnishing	Plate-Powder	Long-Term Silver Polish

CI. 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 enamelled tray.



Once the articles are clean, drain the water away and wipe dry while it is still warm, rubbing hard with a lint-free linen cloth or chamois leather.



Polish until a good sheen is achieved

CII. Silver-Dip Method

- A silver dip solution is used when tarnished silver is to be cleaned.
- It is usually a pink coloured liquid based on an acid solution of a compound into which the articles are immersed completely for removal of tarnish.
- The silver should remain in the liquid for a very short time, the articles should be lifted out, washed with warm water and dried.
- While working with silver dip, stainless steel containers should not be used since the dip attacks steel.

- Enamel or plastic containers must be used instead.
- Silver dip should not be used too frequently on the silver since it is harder on silver due to the chemical reaction between the silver and the liquid and can damage the metal.
- However, many establishments use silver dip frequently since it is faster than other methods.

Tarnish: Dullness of color, loss of brightness

CIII. Polivit or Aluminium-Soda Method: Polivit is an aluminium metal sheet containing holes, which is best used in an enamel bowl or galvanized iron bowl.

The polivit is placed in the bowl together with some soda.



The silver to be cleaned is then put into the bowl, ensuring that at least one piece of silver has contact with the polivit



Sufficient boiling water is poured into the bowl to cover the silver being cleaned



A chemical reaction takes place between the polivit, soda, boiling water and silver which removes the tarnish



After 2-4 minutes, silver should be removed from the bowl and placed into the 2nd bowl of boiling water and then rinsed



On removal from the second bowl the silver is allowed to drain and then polished with a clean cloth and then dried with a tea cloth

PI. Burnishing Machine: A burnishing machine comprises of a revolving drum with a safety shield.

In this revolving drum, highly polished steel balls are immersed in a detergent solution with silver articles



The machine rotates, resulting in friction between the steel balls which polishes the silver



These articles are then rinsed with hot water and dried



The burnishing machine is used for polishing large quantities of silver articles



Ball bearings need to be covered with water when not in use, or else they will rust

PII. Plate-Powder Method: This pink powder should be mixed with just enough methylated spirit to make a smooth paste. Water may also be used however, methylated spirit is preferred as it evaporates quickly and the silverware can be polished much more speedily.

The smooth paste is rubbed thoroughly onto the silver article with a clean rag and left to dry. It is then rubbed off with rags.



The article should now be rinsed well in boiling water and buffed with a clean cloth.



Though this method is time consuming but it gives a good result.

- **Steel**

Steel is sometimes galvanized or enamelled to prevent corrosion. If an enamelled steel surface gets stained, it can be washed with a mild liquid abrasive.

Types of steel commonly used

Chrome Steel	Stainless Steel	Galvanized Steel
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1. Chrome Steel

- Steel is coated with chromium for manufacturing taps, bath handles, shower fittings, and so on.
- Chrome Steel may get spotted with water marks or get greased, but they do not tarnish.

STEEL FACTS

Steel is an alloy of iron that contains mainly iron and carbon; other materials are found in small quantities. It is used in the form of pressed chrome steel for the manufacture of baths, sinks, and so on. Stainless steel is used to make cutlery, protective panelling, sanitary-ware, furniture, trays, and cooking utensils.

2. Stainless Steel

- Stainless steel contains 8-25 per cent of chromium which makes it corrosion-proof.
- It is tough, sturdy, and can take a mirror-polished finish. It is often used in making cutlery, sinks, Water Closets (WC), etc.
- For the purpose of cutlery (spoons and forks), steel containing 18 per cent chromium and 8 per cent nickel is normally used.
- Stainless steel is harmed by when put under excessive heat, silver-dip solutions, acidic solutions, and salt-vinegar mixtures.

3. Galvanized Steel

- Coating steel with a layer of zinc, to protect it from rusting, is known as *Galvanization* and the resulting steel is known as *Galvanized Steel*.
- This kind of steel is used for making buckets.

Cleaning Procedures for Steel:

- **Stainless steel** can be washed in a hot solution of synthetic detergent, using a scrubber (soft nylon), 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 washed with synthetic detergent solution, stains removed with soft steel-wool, the articles rinsed with clean water, and buffed with a linen cloth.
- For greasy stains, **sodium bicarbonate** can be used on all types of steel.

Sodium Bicarbonate: Commonly known as Baking Soda

➤ **Copper**

- Copper with its orange-brown shade has a light sheen of its own.
- It is commonly used for wall panelling and counter tops (E.g., bars and restaurants); in bowls & vases; in urns in hotel lobbies and guestrooms; and utensils in the kitchen.
- Copper is also used in cutlery and serving dishes at various Indian restaurants.
- It is advisable to line copper cookware with tin or nickel for protection, as the copper may react harmfully with certain foods.

Cleaning Procedure for Copper

Wash copper in warm water and then rub with a mixture of salt, fine sand, and vinegar



Then rinse in warm water and dry with a smooth cloth.



A thin coat of vegetable oil should be applied to the copper surface to check further tarnish.



For a heavily tarnished copper, a weak ammonia solution can remove the greenish deposits from the surface

➤ **Brass**

- Brass is a golden-brown alloy of copper and zinc, commonly used in making door and window fittings, stair rods & railings, foot rails (in bars) taps, ashtrays, and

Lacquer: A Liquid made of shellac dissolved in alcohol, or of synthetic substances, that dries to form a hard shiny protective coating for metal, wood etc.

Shellac: Lac (Sticky substance secreted on trees) melted into thin flakes, refined & used for making varnish by mixing with

ornaments.

- Brass tarnishes and scratches easily. Hence, brass fixtures are usually lacquered.

Cleaning Procedure for Brass

Remove surface dirt with a duster and rub with a paste made of white flour, salt, and vinegar in equal ratios



This will remove mild tarnish. Make sure to rub away all the mixture



Corroded brass should be treated with spirit of salt (hydrochloric acid) and then rinsed thoroughly



Polish with Brasso, using damp dusters



A long-term hard-metal polish can also be used on brass.

➤ **Bronze**

- Bronze is a brown alloy of copper and tin. Primarily used in making works of art and medals.
- It does not tarnish easily.

Cleaning Procedure for Bronze

Wash well with water and then apply a mixture of muriatic acid and water (1:2) with a piece of flannel.



Allow the solution to dry and then polish the bronze well with vegetable oil.

Flannel: A plain-weave cotton fabric with a brushed or napped surface.

➤ **Aluminium**

- Aluminium is a silvery, lightweight metal is highly ductile and elastic.
- It is used to make light fittings, and other utensils.
- Aluminium is not tarnished by air however, is damaged by soda, alkalis and acids.
- It also scratches and bends easily.

Cleaning Procedure of Aluminium

To clean aluminium, wash in a hot solution of synthetic detergents, using soft steel-wool to scrub



Use mild abrasives only in the case of difficult stains



Discolouration of aluminium saucepans can be corrected by boiling a mixture of water and lemon juice in them, rinsing and then drying



In case of aluminium showpieces, some liquid wax polish may be applied to maintain the gloss.

➤ **Iron**

- This silver-white metal of great strength is used in making furniture, buckets, dustbins, and cookware. Iron can be forged or cast.
- Wrought iron is iron that has been forged (i.e., it has been shaped by heating in fire and then hammering while hot).
- Cast iron is a hard alloy of iron, carbon, and silicon that has been cast in a mould.
- Non-enamelled cast iron is flame and oven proof.

Cleaning Procedure for Iron

- Unprotected iron should be washed only when necessary and then thoroughly dried.
- Galvanized iron needs regular washing and thorough drying.
- Rust can be removed from galvanized items with fine steel-wool dampened with oxalic acid.
- Do not store iron in damp areas.

Maintenance of Iron

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 slow oven for about two hours.

Enamelled cast-iron utensils do not need seasoning and are easier to clean. If handled carelessly, however, the enamel may chip away. If the utensils are put under cold water immediately after use, while still hot, the enamel may gain flake off. Therefore, before cleaning, allow the

- Before long-term storage, coat with oil or black lead (graphite).

2. GLASS

- Glass is a transparent, glossy, and fragile 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 degree Celsius, where it fuses into molten glass.
- From the furnace, the molten glass is led away for shaping.
- After shaping, the glass is cooled by a process called '**annealing**'.



Types of Glass

Flat glass	Fibreglass	Obscured Glass	Safety Glass	Cut Glass
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a. Flat Glass

- It is usually soda-lime glass, used in making windows, table tops, and shelves.
- Flat glass is be of two types:
 - *Sheet Glass or Plate Glass*: Used as ordinary windows and picture glass.
 - *Float Glass*: It provides clear transparency, used in shop windows, mirrors, and protective covering for furniture.



b. Fibreglass

- Glass for usage in making curtains and fire blankets is manufactured as a textile fibre.
- Fibreglass may also be manufactured as rigid sheets of plastic or other material with glass filaments implanted for strength.
- Fibreglass is impermeable, fire-proof, & resistant to damage by pests, sunlight, or air.

c. Obscured Glass

- This glass is derived from sheet or float glass.
- Obscured glass is textured from one side i.e., some light passes through and some is blocked, leading to the glass not being entirely transparent.



- It is commonly used in areas where privacy is desired (Example: bathroom windows).

d. Hollow Glassware

- This is produced by blowing, moulding, and pressing molten glass into the desired shapes.

e. Safety Glass

- This is another kind of glass that is made from sheet or float glass in various ways:

SAFETY GLASS			
Obscured Glass with Wire	Toughened Glass	Laminated Glass	Toughened & Laminated

GLASS FACTS

Glass is used in making:

- ✚ **Doors**
- ✚ **Windows**
- ✚ **Furniture**
- ✚ **Vases**
- ✚ **Lighting fixtures**
- ✚ **Mirrors**
- ✚ **Partitions**
- ✚ **Tableware**
- ✚ **Kitchenware**
- ✚ **Bottles.**

e1. Obscured Glass with wire

- Wire is incorporated in obscured glass during the rolling process.
- If broken, the glass pieces are held in tact by the wire until knocked out of the frame for repair.

e2. Laminated Glass

- This comprises of two thin sheets of glass with has a transparent plastic between them.
- If this laminated glass sheet breaks, the glass pieces will keep to the plastic layer.



e3. Toughened Glass

- It is made by heating the glass sheet to a temperature just below softening point and then cooling the surface rapidly.

e4. Toughened & Laminated Glass

- This safety glass is made by the combination of the above mentioned two methods laminating and toughening.
- The combination creates a glass which is five times tougher than other safety glasses.

f. Cut Glass

- This glass belongs to the luxury segment owing to its high costs. It is used for chandeliers, vases and quality glassware.

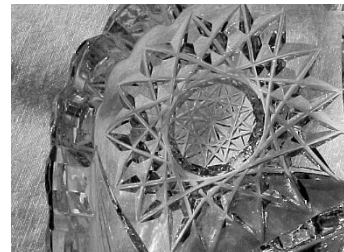
Cleaning Procedure (Flat Glass)

- Even slight marks and smudges show prominently on glass surfaces. Therefore glass surfaces, especially flat sheets, require frequent cleaning.
- Dusting should be done daily with a lint-free cloth.
- Damp dusting needs to be done whenever necessary. Light soiling and greasy fingerprints should be wiped away with a mixture of vinegar and water (1:1) or a solution of liquid ammonia and water (9 ml in approximately 1 litre Water).
- Glass cleaners applied with a sponge also clean glass effectively.
- For cleaning larger surfaces, a small window squeegee may be used.
- Stubborn marks on mirrors—such as toothpaste deposits, hair-spray, and make-up—should be removed by wiping with a cloth moistened with methylated spirit.
- Newsprint contains an effective solvent; therefore newspaper can be used to remove marks from windows too.
- Use a lint-free cloth to dry the glass surface afterwards.

Lint-Free: Refers to fabrics that do not shed small fibers due to wearing down.

Cleaning of Hollow glassware & other articles

- Textured glassware should be cleaned using a soft nylon brush.
- Abrasives should always be avoided.
- Discoloured or stained bottles and vases can be cleaned using a solution of crushed eggshells, synthetic detergents, and lukewarm water.



- For jars and bottles, a mixture of construction sand and water can also be used to remove discolouration.
- To remove lime deposits from hard water in water jugs, vases, and tumblers, soak the items in distilled water for an hour, scrub with a nylon scrubber and synthetic detergent solution, and rinse with water.
- Dry the articles with a lint-free cloth.

Cleaning of Chandeliers

- Chandeliers are usually featured in the public areas i.e. in lobbies, banquet halls, and VIP suites.
- They can be cleaned either by bringing down and cleaning each piece with spirit or it can be cleaned in-site where the chandelier is very large.
- Cleaning chandeliers is a time-consuming laborious process; but it should be done with utmost care since parts from a chandelier, once broken, may not be easy to replace.
- For cleaning purpose, Chandeliers are taken down, dismantled piece by piece, and dipped into a warm solution of synthetic detergent



Each piece is then gently cleaned with a nylon scrubber and rinsed in clean warm water



A second rinsing is done in a mixture of one teaspoon liquid ammonia in 2.5 litres of water. This will result in a brilliant sparkle

- *Another method, which is more efficient, uses an upholstery shampooing machine.*

The machine sprays a detergent solution through a fine nozzle with enough pressure to clean each prism



The dripping wash water is collected in a catch basin or cloth installed below the chandelier.

3. PLASTICS

- Plastics are resinous synthetic polymers that have the following qualities, **advantages and disadvantages:**

<ul style="list-style-type: none">--Light in weight--Quiet in use--Resistant to most chemicals--Non-conductors of electricity--Easy to clean--Largely Non-absorbent, except thermoplastics, which absorb grease--Resistant to moths and other pests	<ul style="list-style-type: none">--Scratched if harsh abrasives are used on them-Have a tendency to discolour and crack-Produce toxic fumes on burning-Attract dust due to static electricity-Non-biodegradable
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Uses of Plastic

- In the hospitality industry alone, they are used in making furniture, wall coverings, floor coverings, cleaning equipment, etc.

Types of Plastics

Thermoplastics	Thermosetting Plastics
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A. Thermoplastics

- These are soft plastic that soften when exposed to heat and harden again when cool.
- This is the most commonly used plastic in hotels.
- Some thermoplastics are heat-sensitive while others may withstand higher temperatures.

- Thermoplastics include acrylics, polyesters, PVC derivatives, and some other plastics produced as synthetic fibres.

B. Thermosetting Plastics

- These are hard plastics, moulded by heat and pressure. They do not soften when they are reheated.
- Examples of thermosetting plastics are melamine, phenolics and laminates.

The Don'ts with plastics:

- ✚ *Don't expose to direct heat, such as from cigarette butts, hotplates, and so on.*
- ✚ *Don't use harsh abrasives.*
- ✚ *Don't buff with a dry cloth.*
- ✚ *Don't apply strong acids or alkalis.*
- ✚ *Don't drag heavy objects over plastic surfaces.*

Cleaning & Maintenance Procedures

- Plastic surfaces are easy to clean and maintain.
- Daily damp-dusting is required as plastics attract dust due to static electricity.
- Light soil can be removed by wiping with a warm solution of synthetic detergent, followed by rinsing and air-drying.
- Stains can be removed by rubbing with methylated spirit.

4. 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 glazed and if unglazed the articles remain highly porous.
- 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.
- Ceramic plates used in hotels usually have rolled edges to avoid the problem of

China: a broad term which covers all 'clay ware' used for crockery and sanitary fittings, and includes glazed and vitrified earthenware, bone china and porcelain.

Glaze: As applied on clay articles, it is basically composed of glass-forming minerals (silica or boron) combined with stiffeners and melting agents (such as lead or soda)

chipping at the rim.

.Types of Ceramics



Earthenware

Porcelain

Bone China

a. Earthenware

- This thick, heavy, porous material is used in making jugs, bowls, vases, and ashtrays.
- Earthenware should be handled with care, as it chips and breaks easily.
- These types of ceramic may also be *glazed or vitrified*.

Glazed Earthenware: It contains fine white clay which makes it thick and opaque and then glaze is applied on the surface as this clay structure is highly porous.

Vitrified Earthenware: Also known as vitreous china and it is very hard, stronger, heavier, less easily chipped, and more expensive than other kinds of earthenware.

b. Porcelain

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

c. Bone China

- Bone china contains bone ash and china clay.
- The addition of bone makes the clay easier to work and gives it strength.
- It is very thin but strong and impervious.
- Harsh abrasives should be avoided as designs are often applied to the outer surface of this material.
- Bone china is used to make fine cups, saucers, and other types of crockery.

Cleaning Procedure for Ceramics

- 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 a lint-free duster



Stains may be removed by rubbing with a damp cloth to which sodium bicarbonate has been applied.

5. WOOD

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



Types of Wood

Solid Wood	Woven Stems
Wood Boards	Cork

A. Solid Wood

- Depending on its strength and resilience, it may be **hard or soft wood**.
- *Hard Wood*: These are obtained from broad-leaved trees and most popular woods are teak, oak, ash, beech, walnut and rosewood.
- *Soft Wood*: These are obtained from coniferous trees.
- Commonly used softwoods are pine, fir, cedar, and rubber-wood.

B. Wood Boards

- A variety of wood boards are available at significantly cheaper rates than solid wood.
- These are much lighter than solid wood and most have undergone treatments such as termite-proofing and waterproofing.

Types of Wood Boards

Hard-board	Block-board
Plywood	Chipboard

a. Hard Board

- This is a type of thin, flexible board made of compressed and processed wood-pulp fibre.
- It is smooth on one side and has a mesh-like texture on the reverse.
- It is used to make door panels, picture backings, cupboards and wardrobe backings, bases of drawers etc.



b. Plywood

- This type of board is manufactured by gluing together many thin sheets of hardwood, which are termed 'plies'.
- To enhance its visual appeal, plywood boards are often veneered with hardwood or laminated.
- It is used to make tables, desks, shelves, countertops, and cupboards.



c. Block-board

- Each block board is made up of plywood veneers laid over a core of wood strips.
- The inner strips of wood may be up to 3cm in thickness, making the board strong and durable.
- It is used for making worktops, tabletops, and shelves.



d. Chip-board

- This type of board is manufactured from compressed wood chips and synthetic resin.
- It is strong and heavy.
- Like plywood, this too is often veneered or laminated.
- Chipboard is used for making closets, cabinets, drawers, wardrobes, and worktops.



C. Woven Stems

- Cane and wicker are included in this class.
- Both materials are used in making woven items such as bread-baskets, flower-baskets, trays, sofas, chairs, tables, and beds.
- Cane and wicker products are usually cheaper than solid wood.

D. 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.
- Cork has warm and restful appearance. It has also excellent acoustic properties.

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 listed below:

Beeswax	Varnish	Lacquer	French Polish	Paint
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a. Beeswax

- Beeswax is a comb material secreted by bees.
- It is applied to solid wood furniture and floors.
- It should be allowed to dry and rubbed in well to get a good gloss.

b. Varnish

- It is a clear, pale solution of a viscous substance dissolved in oil, turpentine, or alcohol.
- Varnish forms a hard and transparent film on the wood surface.
- Varnish is most commonly applied on wooden floors, furniture, and doors.

c. Lacquer

- It is applied to wood furniture and provides a glossy finish or matt finish.

- It is damaged by water, heat and solvents.

d. *French Polish*

- It is a solution of shellac and methylated spirit.
- It is usually applied on small furniture items made of solid wood.
- French polish is easily spoiled by water, heat, and solvents.

e. *Paint*

- The function of paint may be to provide protection or decoration or both.
- The unique property of paint is that it also lends colour along with protection to the wood surface.
- This finish is damaged by abrasives and heat.

Care & Cleaning of Wood Surfaces

- Wood, being porous, deteriorates in contact with an excess of water.
- Therefore, the least possible amount of water should be used for cleaning wood.

Always dry-dust the surface first with an impregnated mop, or vacuum-clean.



Then remove excess soiling by damp-dusting in case of small articles and light damp-mopping for larger surfaces.



Wooden floor surfaces need to be buffed with a floor polisher two times a week.



Spills and stains should be removed immediately from wood surfaces so that they are not absorbed into the surface.



Cork should only be dusted or vacuumed daily.

6. LEATHER

- Leather is made from the skins of various animals including sheep, goat, pigs, and cattle.
- It is one of the most durable and versatile of all natural materials.
- The skins are treated in various ways to give different varieties of leather, ranging from the soft, flexible types to tougher types.
- Leather can be dyed in a variety of colours and is used for belts, shoes, gloves, purses, wallets, luggage, upholstery, desktops, and book bindings.
- Leather is expensive and should be kept supple to prevent cracking.
- Leather also picks up oil and grease readily.

Cleaning Procedure for Leather

- General cleaning of leather involves daily dusting or suction cleaning.

In case of soiling, wipe the leather with a soft cloth wrung out of warm water and mild synthetic detergent



Follow with a damp-dusting with clean water and then dry thoroughly



Occasionally leather may be polished with a good furniture polish cream to keep it supple



Solvents should not be used on leather as they will stiffen it

7. STONE

- Stones are mainly used as floor finishes and external wall surfaces.
- Other areas where they may be found are: table tops, countertops and tops of vanity unit, furniture, decorative idols, and ashtrays.
- Stones such as marble are often used as flooring and on walls in luxury bathrooms.

Natural Stones Used Frequently

Marble	Sandstone	Granite	Quartzite	Slate
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- *Marble*: It is available in many colours and pattern such as white, black, grey, green, brown, and pink.
- *Sandstone*: This sedimentary rock is composed of compressed sand.
- *Granite*: This is a granular, crystalline stone composed of quartz, feldspar, and mica.
- *Quartzite*: This is a compact granular stone made up of silica.
- *Slate*: This is a grey or blue-grey stone formed when layers of mud and silt build up and solidify over millions of years. These layers allow slate to be easily made into slabs.

Maintenance & Cleaning of Stone

Stone surfaces may be cleaned using synthetic detergent and hot water



Stains may be removed using fine abrasives



For large areas, a wet-pickup vacuum cleaner may be used



Use of acids and strong alkalis should be avoided, as they may cause pits on the surface

8. RUBBER

- Rubber is a natural substance characterized by elasticity, water repellence and electrical resistance. However, synthetic rubber is also available.
- *Vulcanization*: It is a chemical process for converting natural rubber into more durable materials by the addition of sulfur. These additives modify rubber which results in a rubber which has less stickiness and more superior mechanical properties. Rubber undergoing vulcanization is called *cured rubber*.

Types of Rubber

Crude	Vulcanized	Foam	Synthetic
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- a. *Crude*: Uncured rubber is used to make crepe rubber, used in insulating blanket.
- b. *Vulcanized*: Rubber products are vulcanized at high temperatures and pressures. This rubber is used to make conveyor belts, rollers for mop-wringers, rainwear, shower curtains and diving gear.
- c. *Foam*: It is manufactured from latex by using emulsified compounding ingredients.
- d. *Synthetic*: It is produced from unsaturated hydrocarbons by the process of polymerization.

Cleaning of Rubber

Clean rubber with a neutral detergent solution and rinse with water.

Rubber is a hygienic material and is not prone to mould growth or pest infestations.

It is sensitive to grease, strong alkalis and excessive heat.

Hot water soften rubber so should be avoided

SUMMARY

Housekeeping staff must have an insight into the types, composition, care and maintenance of different hard surfaces they are responsible for cleaning. A thorough knowledge of chemical agents that can or cannot be used is imperative. This module covers eight different hard surfaces such as metals, glass, plastic, ceramic, wood, stone, leather and rubber. Their composition, types, care needed and cleaning procedures have been thoroughly discussed in this chapter. There is no dearth of different cleaning methods available through various resources. However, it is necessary to use only the tried and tested cleaning methods, approved by experts. As many hard surfaces are very costly, wrong cleaning methodology can result in surface damage and ultimately affects cost