

CHAPTER – III

CLASSIFICATION OF WASTE

5. Classification of waste: The waste shall be classified as follows:-

- (1) Ashes
- (2) Bio-degradable waste/Wet waste
- (3) Bio-medical waste
- (4) Bulk garden and horticulture waste
- (5) Bulky waste
- (6) Commercial waste
- (7) Commercial/Household Hazardous waste
- (8) Construction and Demolition waste (C & D waste)
- (9) Dead Animals
- (10) Domestic Sewage
- (11) Slaughter house/mutton/chicken waste
- (12) E-waste
- (13) Garbage/Hotel Kitchen and other kitchens food waste
- (14) Garden waste
- (15) Hazardous waste
- (16) Household/Residential waste
- (17) Industrial Solid and Liquid waste
- (18) Inert Solid waste
- (19) Institutional waste
- (20) Liquid waste
- (21) Municipal Solid waste
- (22) Municipal waste
- (23) Recyclable waste/Dry waste
- (24) Septage
- (25) Sewage Liquid waste
- (26) Sewage Solid waste
- (27) Street Sweepings

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- (28) Utility Waste
- (29) Plastic Waste
- (30) Radio-Active Waste
- (31) Automobile Waste
- (32) Textile/Chindi Waste

1. **Ashes** shall consist of residues arising from the burning of wood, coal, charcoal, coke and other combustible materials used for cooking and heating in houses, institutions and small industrial establishments. This also includes fine powdery residue; cinders and clinker which are often mixed with small pieces of metal and glass.
2. **Bio-degradable waste/Wet Waste** shall consist of the following wastes generated within the limits of The Surat Municipal Corporations:(Green and Garden waste, Tea leaves, egg shells, fruit and vegetable peels, animal waste including tissues, blood, meat, fish and bones and other non vegetarian items waste, garden and leaf litter, including flowers, animal litter, soiled paper, coconut shells and any other waste which is bio-degradable in nature)
3. **Bio-medical waste** shall consist of any waste, which is generated during the diagnosis, treatment or immunization of human beings or animals or in research activities pertaining thereto or in the production or testing of biological materials from an institution which includes but not limiting to hospital, nursing home, clinic, dispensary, veterinary institution, animal house, pathological laboratory, blood bank etc. This waste shall be further categorized into the following:
 - (1) **Human anatomical waste** consisting of human tissues, organs, body parts
 - (2) **Animal waste**(animal tissues, organs, body parts carcasses, bleeding parts, fluid, blood and experimental animals used in research, waste generated by veterinary hospitals colleges, discharge from hospitals, animal houses)
 - (3) **Microbiology & biotechnology waste** (wastes from laboratory cultures, stocks or specimens of micro-organisms live or attenuated vaccines, human and animal cell culture used in research and infectious agents from

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research and industrial laboratories, wastes from production of biological, toxins, dishes and devices used for transfer of cultures)

- (4) **Waste sharps:** (needles, syringes, scalpels, blades, glass, etc. that may cause puncture and cuts. This includes both used and unused sharps)
 - (5) **Discarded Medicines and Cytotoxic drugs**(wastes comprising of outdated, contaminated and discarded medicines)
 - (6) **Solid waste**(Items contaminated with blood, and body fluids including cotton, dressings, soiled plaster casts, lines, beddings, other material contaminated with blood)
 - (7) **Solid waste** (wastes generated from disposable items other than the waste sharps such as tubes, catheters, intravenous sets etc.).
 - (8) **Liquid waste**(waste generated from medical/pathological laboratory and washing, cleaning, house-keeping and disinfecting activities)
 - (9) **Incineration ash** (ash from incineration of any bio-medical waste)
 - (10) **Chemical waste**(chemicals used in production of biological, chemicals used in disinfection and as insecticides, etc.)
4. **Bulk garden and horticulture waste** shall consist of bulk waste from parks, gardens, traffic islands etc. and includes grass clippings, weeds, woody ‘brown’ carbon-rich material such as pruning, branches, twigs, wood chipping, straw or dead leaves and tree trimmings, which cannot be accommodated in the daily collection system for bio-degradable waste.
5. **Bulky waste** shall consist of commercial/residential waste which, by virtue of its mass, shape, size or quantity is, in the opinion of the The Surat Municipal Corporation, inconvenient to remove in the routine door to door services provided by the The Surat Municipal Corporation.

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6. Commercial waste shall consist of wastes generated from offices, wholesale and retail stores, markets, warehouses and other commercial establishments engaged in any commercial activities. These wastes include garbage and rubbish.

7. Commercial/Household Hazardous waste shall consist of the following:

(1)

Household cleaners:

- Abrasive powders
- Aerosol Cans
- Ammonia and ammonia based cleaners
- Chlorine bleaches
- Drain Openers
- Furniture Polish
- Glass cleaners
- Oven cleaner
- Shoe polish
- Silver polish
- Spot removers
- Toilet bowl cleaners
- Upholstery and carpet cleaners

(2)

Personal care products:

- Medicated shampoos
- Nail Polish Remover
- All cosmetic Items

(3)

Automotive products:

- Brake and Transmission Fluids
- Car Batteries
- Fuels such as spent diesel, kerosene and gasoline
- Waste Engine and Lubricating Oils
- Oil Filters and Car Care Products and Consumables

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(4)

Paint products:

- Enamel
- Oil based, Latex or Water Based Paints
- Paint Solvents and Thinners
- Oils, Glues and their empty containers

(5)

Miscellaneous products:

- Batteries from flash lights and button cells
- Photographic Chemicals
- Acid used for toilet cleaning
- Pesticides, Herbicides and Ant, Cockroach and Mosquito Killers and their empty cans
- Chemical Fertilizers
- Incandescent Light Bulbs, All types of Tube lights, Compact Fluorescent Lamps (CFLs), LED bulbs and tubes, Sodium and Mercury Vapor Lamps and any type of lighting devices not specified above
- Styrofoam and soft foam packaging from new equipment including thermocol material
- Injection Needles and Syringes; sharps etc. after mutilating them
- Discarded and Outdated Medicines including liquids and tablets
- Thermometers and mercury containing products
- Sanitary Napkins, Towels, Disposable Diapers and incontinence pads (duly packed in polythene bags before disposal)

8. Construction and Demolition waste (C & D waste) shall consist of waste materials generated by the construction, refurbishment, repairs and demolition of houses, commercial buildings and other structures. It shall mainly consists of the following:

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(1) Major components (cement concrete, bricks, cement plaster, plaster of paris, steel (from R.C.C, door/window frames, roofing support, railings of staircases etc), rubble, stone (marble, granite, sandstone etc), timber/wood (especially demolition of old buildings, roofing materials)

(2) Minor components (conduits(iron, plastic),pipes (GI, iron, plastic),electrical and plumbing fixtures, panels(wooden, laminated), other waste (glazed tiles, glass panes etc)

9. Dead animals shall consist of dead animals that die naturally or are accidentally killed. It shall not include carcass and animal parts from slaughter houses

10. Domestic Sewage shall consist of human excreta and waterborne waste from the preparation and consumption of food and drink, dishwashing, bathing, showering and general household cleaning and laundry, except waterborne waste from a self-service Laundromat;

11. Slaughter house/mutton/chicken waste shall consist of the waste generated at slaughter houses, meat and chicken stalls and outlets.

12. E-waste shall consist the following electrical and electronic equipment as listed in Schedule I of the E-Waste Management and Handling Rules, 2011 as may be amended from time to time, whole or in part or rejects from their manufacturing and repair process, which are intended to be discarded:

(1) Information Technology and Telecommunication Equipment

- Centralized Data Processing
- Mainframes, Mini computers
- Personal Computing
- Personal Computers (Central processing unit with input/output devices)
- Laptop Computers (Central processing unit with input/output devices)
- Notebook computers
- Notepad computers

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- Printers including cartridges
- Copying Equipment
- Electrical and Electronic typewriters
- User terminals and systems
- Facsimile
- Telex
- Telephones
- Pay telephones
- Cordless telephones
- Cellular telephones
- Answering systems

(2) Consumer Electrical and Electronics

- Television sets (including sets based on Liquid Crystal Display and Light Emitting Diode Technology), refrigerators, washing machines, air conditioners(excluding centralized air condition plants)

(3) Miscellaneous Home Appliances

- Tube lights and accessories and supporting items
- Electrical Wires
- Switch boards and accessories
- MCBs, OCBs, Relays etc.
- All other types of electrical and electronic goods

13. Garbage/Hotel Kitchen and Other Kitchen Food Waste shall consist of non vegetarian food items and vegetable wastes resulting from the handling, storage, and sale, preparation, cooking and serving of such foods.

14. Garden waste shall consist of waste generated as a result of normal domestic gardening activities, including grass cuttings, leaves, plants, flowers and other similar small and light organic matter, but does not include tree branches with a diameter thicker than 40

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mm at any point of its length, bulky waste, building waste or any waste generated as a result of garden service activities;

- 15. Hazardous wastes** shall consist of any waste which by reason of any of its physical, chemical, reactive, toxic, flammable, explosive or corrosive characteristics causes danger or likely to cause danger to health or environment, whether alone or when in contact with other wastes or substances. It shall also include the hazardous waste referred to in Rule 3 (I) of the Hazardous wastes (Management, Handling and Transboundary Movement) Rules, 2008 published by the Central Government under Environment (Protection) Act 1986
- 16. Household/Residential waste** shall consist of the wastes generated from single and multi-family household units as a consequence of household activities such as cooking, cleaning, repairs, hobbies, decoration, empty containers, packaging, clothing, books, writing papers, newspapers, furnishings etc.;
- 17. Industrial solid and liquid wastes** shall consist of discarded non hazardous solid materials of manufacturing processes and industrial operations covering a vast range of substances which are unique to each industry. It shall also include the solid wastes from small industrial plants and ash from power plants and carcasses and animal parts from slaughter houses which are frequently disposed off at municipal landfills. It also includes liquid effluents generated from any type of hazardous or non hazardous industry and gets mixed with the normal sewage or is disposed off in open lands or other water sources.
- 18. Inert solid waste** shall consist of any non hazardous solid waste or remnant of processing whose physical, chemical and biological properties make it suitable for sanitary land filling;
- 19. Institutional wastes** shall consist of wastes arising from institutions such as schools, colleges, public libraries, universities, research organizations etc.

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- 20. Liquid waste** shall consist of sewage liquid waste (Black water generated from toilets) and septage waste from septic tanks as well as sullage or grey water generated from kitchen washings, cloths and utensil washings, bathing etc.
- 21. Municipal solid waste** shall consist of commercial, residential and other waste generated within the limits of The Surat Municipal Corporations either in solid or semi-solid form excluding industrial hazardous waste and it also includes treated bio-medical waste;
- 22. Municipal wastes** shall consists of waste resulting from municipal activities and services and also includes wastes thrown on public places such as street waste, dead animals, marketwaste etc.
- 23. Recyclable waste/Dry Waste** shall consist of following wastes generated within the limits of The Surat Municipal Corporations.
- (1) **Paper products-** Newspaper, computer printouts, writing paper, envelopes, car park coupons, brochures or pamphlets, magazines, books, cardboard and paper packaging (such as cereal boxes and drink cartons) paper food wrappers and other paper products
 - (2) **Metal products-** Cans or containers made of metal such as soft drink cans, milk powder tins and food cans.
 - (3) **Plastic & rubber products-** Bottles or containers made of plastic such as detergent containers, milk containers, mineral water bottles, soft drink bottles, juice bottles, plastic bags, plastic packaging and all other plastic products.
 - (4) **Glass products-** Jars, bottles, window glass, porcelain, ceramic and fish tanks but excluding light bulbs.
 - (5) Any other material which is recyclable in nature
 - (6) Construction and Demolition Waste (C&D Waste)
 - (7) All types of E – Wastes

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- 24. Septage** waste shall consist of septic tank sludge that is a combination of raw primary sludge and an aerobically produced raw sludge and which has an offensive odour, appearance and contains significant levels of grease, grit, hair, debris and pathogenic microorganisms. This waste shall be further categorized into the following:
- (1) Domestic septage
 - (2) Industrial septage
 - (3) Grease septage
- 25. Sewage solid waste** shall consist of the solid by-products derived from the treatment of organic sludge from both raw and treated sewage
- 26. Sewage Liquid waste** shall consist of sewage generated from households, commercial establishments, institutions or public toilets and will include gaseous emissions and effluents.
- 27. Street sweeping** shall consist of wastes collected from streets, walkways, alleys, parks and vacant lots
- 28. Utility Waste** shall consist of the waste from public infrastructure projects like construction of roads, bridges, toll booths etc. carried out by central or state Government contractors/agencies/agents/individuals
- 29. Plastic Waste** shall consist of any plastic products such as carry bags, pouches or multilayered packaging, which have been discarded after use or after its indented life is over;
- 30. Radio-Active Material/Substance** shall consist of any waste material containing radio nuclides in quantities or concentrations as prescribed by the competent authority by notification in the official gazette;
- 31. Automobile Waste** shall consists of wastes generated from automobile workshops, garages, repairers on street, small mechanic shops, etc. and shall include all the types of wastes generated from above activities including tyres, tubes, batteries, 2/3/4 wheeler vehicle components, waste clothes, used oils, greases and any such wastes generated from above activities.

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32. Textile/Chindi Waste shall consists of unusable cloth waste generated from the textile manufacturing, storage, whole sale and retail sale, trading, of all types of textiles, including their end products or intermediate products which are not useful and is generated as waste.

Reference:

- CPHEEO Manual on Municipal Solid Waste Management, 2000