

HAZARDOUS WASTE IDENTIFICATION GUIDE

ANNEX 3

*RECOMMENDATIONS FOR THE IDENTIFICATION, CLASSIFICATION AND SORTING
OF HAZARDOUS WASTE PRODUCED BY HOUSEHOLDS*

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1. Introduction

Hazardous waste produced by households includes a wide range of substances and mixtures with hazardous properties, which are generated in households as well as in gardens and garages. Commission Regulation (EU) No 1357/2014 of 18 December 2014 replacing Annex III to Directive 2008/98/EC of the European Parliament and of the Council on waste and repealing certain Directives ('Annex III to the WFD') sets out the properties that render the waste hazardous (*see Table 1*).

Table 1. Properties of waste which render it hazardous (according to Annex III of the WFD)

| Hazardous properties | |
|----------------------|--|
| HP 1 | Explosive |
| HP 2 | Oxidising |
| HP 3 | Flammable |
| HP 4 | Irritant – skin irritation and eye damage |
| HP 5 | Specific Target Organ Toxicity (STOT)/Aspiration Toxicity |
| HP 6 | Acute Toxicity |
| HP 7 | Carcinogenic |
| HP 8 | Corrosive |
| HP 9 | Infectious |
| HP 10 | Toxic for reproduction |
| HP 11 | Mutagenic |
| HP 12 | Release of an acute toxic gas |
| HP 13 | Sensitising |
| HP 14 | Ecotoxic |
| HP 15 | Waste capable of exhibiting a hazardous property listed above not directly displayed by the original waste |

Examples of hazardous waste produced by households are provided in Fig. 1.

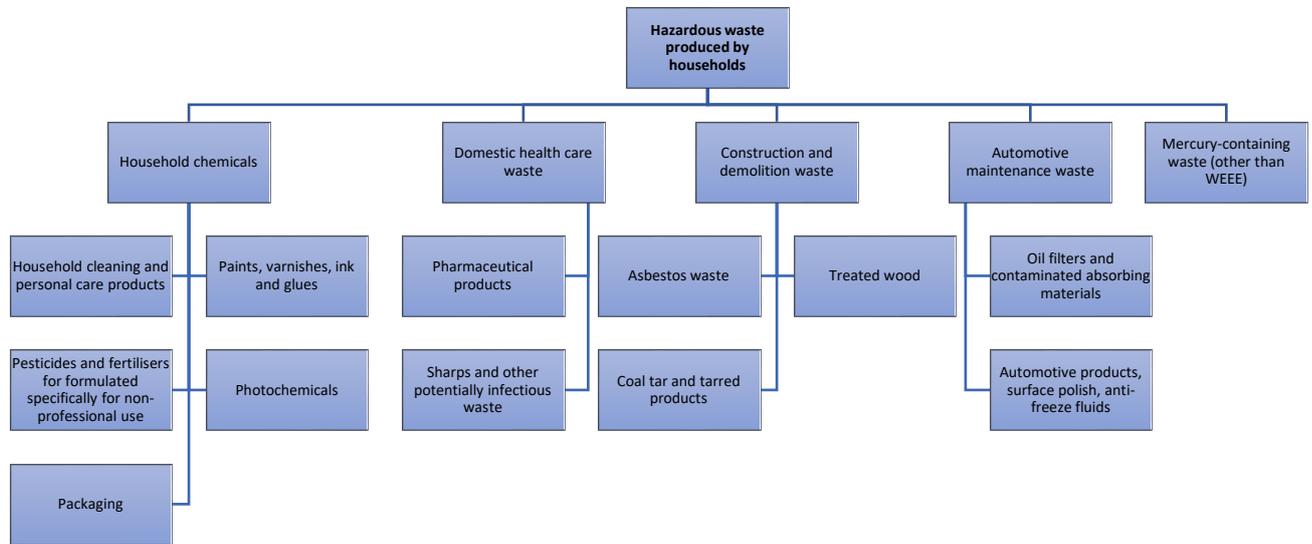


Fig.1. Types of hazardous waste produced by households. Source: Commission Notice 'Separate Collection of Household Hazardous Waste' (2020/C 375/01).

Hazardous waste produced by households can be identified and distinguished from non-hazardous waste by:

- the information on the manufacturer's packaging, based on hazard symbols (hazard pictograms);
- the hazardous properties of the products or their constituents;
- prior information, where it is known in advance that such products, articles, or substances are classified as hazardous and that their waste management must be separate from the total municipal waste stream.

Hazardous waste **MUST NOT** be disposed of/discarded in municipal waste bins and sewer system.

Hazardous waste produced by households must be delivered to municipal bulky waste collection sites (the addresses of these sites can be found on the websites of municipalities or administrators of their municipal waste management systems) or to the locations indicated by the municipality when the collection of hazardous and bulky waste is carried out by routine collections from residents. Residents must deliver the medicinal products to be destroyed free of charge to pharmacies, and veterinary medicinal products to be destroyed to veterinary pharmacies. WEEE may be delivered to collection sites for such waste (supermarkets or other distribution points, gas stations, post offices, service shops, educational establishments, etc.).

For bulky waste collection sites (BWCS), the information contained in these guidelines should be used to identify hazardous waste collected from the residents.

Below there is a description of the individual hazardous waste streams produced by households, properties that help to classify this waste under the hazardous waste streams, and recommendations for sorting this type of waste.

2. Household chemicals

This category includes various household chemicals and mixtures, including the packaging.

Household chemicals can be divided into low-risk substances, such as detergents and laundry materials, and more dangerous substances, such as chlorine bleach and peroxides, which are toxic (potentially harmful to humans and the environment) and corrosive.

Household chemicals have many different hazardous properties; therefore, it is necessary to assess the product label for the most important ones.

The population should note that waste with various hazardous properties, such as oxidizing, flammable, corrosive and toxic to humans and the environment, must be sorted and stored separately before being handed over to the waste manager or shipped to a bulky collection site.

It is important that waste with hazardous properties do not spill, leak, or otherwise contaminate other waste streams.

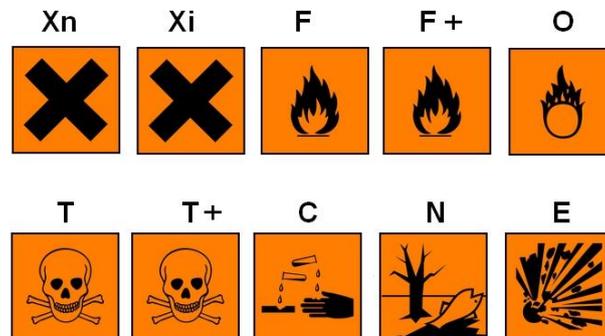
IMPORTANT! Hazardous chemicals and mixtures produced by households must not be disposed of in mixed municipal waste bins and discarded in sewer systems and must be handled separately.

Labelling

According to the information provided by the manufacturer, the various substances and mixtures with hazardous properties are marked with the following symbols (hazard pictograms):

| | | | | | |
|---|--|---|---|---|---|
|  | Exploding bomb (for explosion or reactivity hazards) |  | Flame (for fire hazards) |  | Flame over circle (for oxidizing hazards) |
|  | Gas cylinder (for gases under pressure) |  | Corrosion (for corrosive damage to metals, as well as skin, eyes) |  | Skull and Crossbones (can cause death or toxicity with short exposure to small amounts) |
|  | Health hazard (may cause or suspected of causing serious health effects) |  | Exclamation mark (may cause less serious health effects or damage the ozone layer*) |  | Environment* (may cause damage to the aquatic environment) |

In the case of substances and mixtures manufactured before 2015, the following hazard symbols may also be found on the packaging of the product:



2.1. Household cleaning and personal care products



Photo by the authors

Many residual or expired household cleaning and personal care products may become hazardous waste upon their disposal as they often contain solvents, acids, bases, abrasive materials, surfactants, brighteners, and other hazardous constituents.

For example, nail varnish consists of four main ingredients: polymers, solvents, plasticisers and pigments.

Household waste that is toxic (to humans and the environmental) covers detergents, disinfectants, and surface cleaners.

Corrosive waste consists of chlorine bleach, peroxides, and hypochlorites.

Flammable waste includes solvents such as acetone (nail polish remover), some sewerage cleaners, some floor and furniture varnishes and alcohols such as surgical spirit or methyl alcohol.

Management recommendations

Residues of household cleaning and personal hygiene products marked with hazard pictograms or hazard symbols, together with the original manufacturer packaging of, must be sorted separately as hazardous waste and delivered to BWCSs or locations designated by the municipality when the collection of hazardous waste is carried out by routine collections from residents.

*For handling **empty and nominally empty** packaging containing hazardous substances and mixtures, see 2.6.*

Code and name of the List of waste entry (for the BWCS staff)

Where packaging for cleaning and personal hygiene products (e.g. miscellaneous detergents, hair dyes, nail varnish, nail varnish removers, etc.) is marked with hazard symbols and contains residues of hazardous substances, it is classified according to the contents of the packaging under the appropriate List of waste codes, namely:

20 01 13* – solvents

20 01 14* – acids

20 01 29* – detergents containing hazardous substances.

As nail varnish consists of four main ingredients: polymers, solvents, plasticisers and pigments, nail varnish waste is classified under the waste code 20 01 13*. Hair dyes containing hazardous substances are assigned the waste code 20 01 29*.

2.2. Aerosol dispensers



Photo by the authors

In the context of hazardous waste produced by households, the term ‘aerosol’ refers to various spray products packaged in non-refillable pressure vessels. They include liquid and foam spray products used by household consumers.

Aerosol dispensers may contain residues of initial substances which may be hazardous, flammable (e.g. automotive products, insecticides, footwear care products, hair spray) or toxic (e.g. chlorinated solvent sprays or some cleaning agents). Aerosols also contain propellant, a gas that displaces the active substance of the aerosol (e.g. butane), which may be flammable. Very old aerosols may contain chlorofluorocarbons (CFCs) or fluorinated greenhouse gases (F-gases) that deplete the ozone layer and contribute to climate change. Therefore, the total amount of gas remaining in the dispensers may be high and, if they are not handled properly, may cause a fire or explosion.

Management recommendations

Aerosol dispensers containing residues of hazardous and non-hazardous substances: aerosol dispensers containing residues of substances in the original manufacturer packaging must be sorted separately as hazardous waste and delivered to BWCS or locations designated by the municipality when the collection of hazardous waste is carried out by routine collections from residents.

*For handling **empty aerosol dispensers**¹ that used to contain hazardous substances and mixtures, see 2.6.*

Code and name of the List of waste entry (for BWCS staff)

Aerosol dispensers containing residues of hazardous substances and **bearing** at least one hazard pictogram on their packaging are classified under the following code:

16 05 04* – gases in pressure containers (including halons) containing hazardous substances

Aerosol dispensers containing residues of any other substances and **not bearing** any hazard pictograms on their packaging are classified under the following code:

16 05 05* – gases in pressure containers other than those mentioned in 16 05 04.

*For handling **empty and nominally empty** packaging containing hazardous substances and mixtures, see 2.6.*

¹ An aerosol dispenser is considered empty when nothing comes out upon pushing the spray button.

2.3. *Paints, varnishes, ink, and glues*



Photos by the authors and www.15min.lt.

Paints are mixtures of solvents, pigments, minerals, resins, surfactants, and other additives.

Varnishes are mixtures of solvents, synthetic polymers, oils, resins, etc.

Ink may consist of solvents, pigments, resins, lubricants, surfactants, etc.

Adhesives are mixtures of solvents, thinners, softeners, fillers. Adhesives contain substances such as acetone, acrylic acid, phthalates, tars, etc.

Waste paints and solvents containing hazardous substances represent a substantial part of the hazardous waste produced by households. Paint and varnish formulations have changed significantly over the last few years by removing/reducing heavy metals and switching to water-based paints containing lower volatile organic compounds (VOCs) concentrations.

Although a substantial proportion of household paints, etc., may not be hazardous, they must be collected separately as spills may contaminate soil, sorting bins or other waste streams.

Hazardous paints and solvents are generally specialised, industrial, commercial, or older paints labelled as hazardous products. Spills of paint can cause long-term adverse effects on the aquatic environment. Paint cans can blow out after heating, causing the paint to leak or even explode.

Many solvent-based paint removers, paint thinners (e.g. turpentine) and wood preservatives are also flammable and toxic to humans and the environment.

The key risks arise from older paints and varnishes that may contain any flammable, harmful, toxic, and carcinogenic organic solvents.

Management recommendations

Residues of paints, varnishes, inks, and adhesives marked with hazard symbols and hazard pictograms, together with the original manufacturer packaging, must be sorted separately and delivered to BWCS or designated locations when the collection of hazardous waste is carried out by routine collections from residents.

IMPORTANT! It is prohibited to dispose/discard the residues of hazardous substances produced by households into sewer systems or bins for mixed municipal waste, mix them with each other, displace them into other containers or packaging, dilute them or otherwise alter their state. All hazardous substances must be in their original packaging, sealed to prevent spillage and/or dispersal.

Even nominally empty packaging of oils, paints, varnishes, inks, adhesives, solvents (i.e. materials used in construction and repair) is always treated as hazardous waste.

For handling empty and nominally empty packaging containing hazardous substances and mixtures, see 2.6.

Code and name of the List of waste entry (for BWCS staff)

20 01 27* – paint, inks, adhesives, and resins containing hazardous substances

2.4. Pesticides and fertilisers for formulated specifically for non-professional use



Photo by the authors

Pesticides (other than plant protection products) are chemical mixtures intended to protect plants or plant products against plan pest or prevent its effect. They are broken down by function into herbicides (for destroying harmful plants), fungicides (for treating fungal diseases in plants), insecticides (for destroying vermin), etc. Non-professional users can only purchase and use products for recreational gardening, specifically designed for non-professional users. It is prohibited for the retail user of plant protection products to use plant protection products for professional use.

Horticultural chemicals generally do not react but may be toxic to humans and the environment, or oxidising. Fertilisers are oxidising substances and may be explosive if they are exposed to a heat source, and toxic if they come into contact with the skin and eyes, or upon inhaling toxic vapours. Some pesticides can be persistent and bio-accumulative and can be toxic if ingested, as well as irritating to eyes and skin.

Management recommendations

Residues of pesticides and fertilisers marked with hazard symbols and hazard pictograms, together with the original manufacturer packaging, must be sorted separately and delivered to BWCSs or the locations designated by municipalities when the collection of hazardous waste is carried out by routine collections from residents.

IMPORTANT! It is prohibited to dispose/discard the residues of pesticides and fertilisers produced by households into sewer systems or bins for mixed municipal waste, mix them with each other, displace them into other containers or packaging, dilute them or otherwise alter their state. All hazardous substances must be in their original packaging, sealed to prevent spillage and dispersal.

*For handling **empty and nominally empty** packaging containing pesticides or fertilisers, see 2.6*

Code and name of the List of waste entry (for the BWCS staff)

20 01 19* – pesticides

2.5. Photochemicals



Photo source: www.fototechnika.lt

With the introduction of digital photography, this category of hazardous waste has been reduced, but some households still develop films and prints photos using massive quantities of hazardous chemicals. Liquid waste from photochemicals contains hydro-quinine, sodium sulphite, silver, mercuric chloride, cadmium, ferrocyanide, acids and formaldehyde. These are found in process bath wastes, colour developer wastes, bleach, fixer, and fixer wastes.

Management recommendations

Residues of photochemicals marked with hazard symbols and hazard pictograms, together with the original manufacturer packaging, must be sorted separately and delivered to BWCS or the locations designated by municipalities when the collection of hazardous waste is carried out by routine collections from residents. All hazardous substances and mixtures must be in their original packaging and sealed to prevent spillage.

IMPORTANT! The old photochemicals must be packed in sealed containers or packaging (preferably with the name of the waste) and delivered to BWCS or the locations designated by municipalities when the collection of hazardous waste is carried out by routine collections from residents.

*For handling **empty and nominally empty** packaging containing photochemicals, see 2.6.*

Code and name of the List of waste entry (for BWCS staff)

20 01 17* – photochemicals.

2.6. Packaging contaminated with hazardous substances

For a proper sorting of the packaging of hazardous substances and mixtures produced by households, it is important to determine when the packaging is considered to be ‘empty’, or rather ‘nominally empty’.



Fig. 2. Examples of packages are: (a) ‘nominally empty’ packaging and (b) packaging containing residual materials (with contents) (photo sources: (a) <http://suespottedterracegarden.blogspot.com>, (b) <https://www.howtocleanstuff.net>).

When the packaging contains residual material that cannot be removed by normal standards (e.g. due to size of aperture or nature of material), then the waste should not be sorted and managed as packaging waste but as the residuals of certain substances (*see 2.1 to 2.5*).

The ‘nominally empty’ packaging means packaging that has been properly emptied (‘free of trickles’ such as leftover powder, sludge and drops; brush clean, spatula clean), except for unavoidable residues, without applying additional measures (such as heating). The packaging is considered to have been properly emptied if in the case of a renewed attempt of emptying, such as inverting the packaging no longer drops or solid remains are released.

Management recommendations

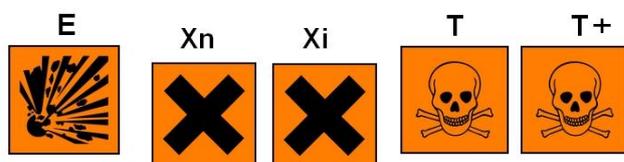
Packaging waste containing residues of hazardous substances and mixtures (such as those listed in the preceding sections) is considered as hazardous waste and must not be disposed of/discarded in sewerage or mixed municipal waste bins. It must be collected separately and delivered to BWCSs, or the locations designated by municipalities when the collection of hazardous waste is carried out by routine collections from residents. All hazardous substances and mixtures must be in their original packaging and sealed to prevent spillage.

IMPORTANT! The following packaging that is nominally empty should be **ALWAYS classified as hazardous waste**:

- 1) where **explosive, hazardous to health or acutely toxic substances have been packaged** and/or where it is marked with appropriate hazard pictograms:



In the case of household chemicals or mixtures manufactured before 2015, the following hazard symbols may also be found on the packaging of the product:



- 2) nominally empty packaging from **oil and paints, varnishes, adhesives, solvents, inks, and similar materials used in construction and repair**, as this packaging cannot be rinsed and discarded into the sewerage system, leaving the packaging internally covered with hazardous substances. In addition, BWCS staff are not able to inspect, e.g. the packaging of non-hazardous paints for other hazardous liquids that could have been store therein.

All the above-mentioned nominally empty packaging must be sorted as hazardous waste and delivered to BWCSs, or the locations designated by municipalities when the collection of hazardous waste is carried out by routine collections from residents.

IMPORTANT! It is prohibited to wash, rinse, and dispose of household-generated packaging of **oils and paints, varnishes, inks, adhesives, solvents, etc. used for construction and repair**

works, and packaging marked with hazard pictograms  into sewerage systems or bins for mixed municipal waste.

Only **nominally empty and dry packaging** of organic, water-based, or other **non-hazardous** paints, primers, fillers, etc., which is not marked with any hazard pictograms, signal words or hazard statements may be exempted from this ban exemption, provided that other hazardous substances have not been stored in such packaging either. Such packaging waste can be classified as non-hazardous packaging waste and sorted by material from which it is produced, e.g. plastic, paper, metal, or glass packaging.

Any other packaging that used to contain other hazardous substances and mixtures, which is nominally empty and free of residues inside and not contaminated externally, may be classified as non-hazardous packaging waste, and sorted by material from which it is produced, e.g. plastic, paper, metal, or glass packaging.

Nominally empty packaging of **laundry materials, detergents, washing liquids, scrubs**, i.e. any household chemicals that enter the sewerage system under usual circumstances, should be used to the fullest extent possible, leaving no residues. It is recommended to clean and/or rinse this packaging. Removing residual hazardous substances will reduce the quantities of hazardous packaging and result in empty packaging that can be sorted as non-hazardous waste in glass, plastic, paper, and metal bins.

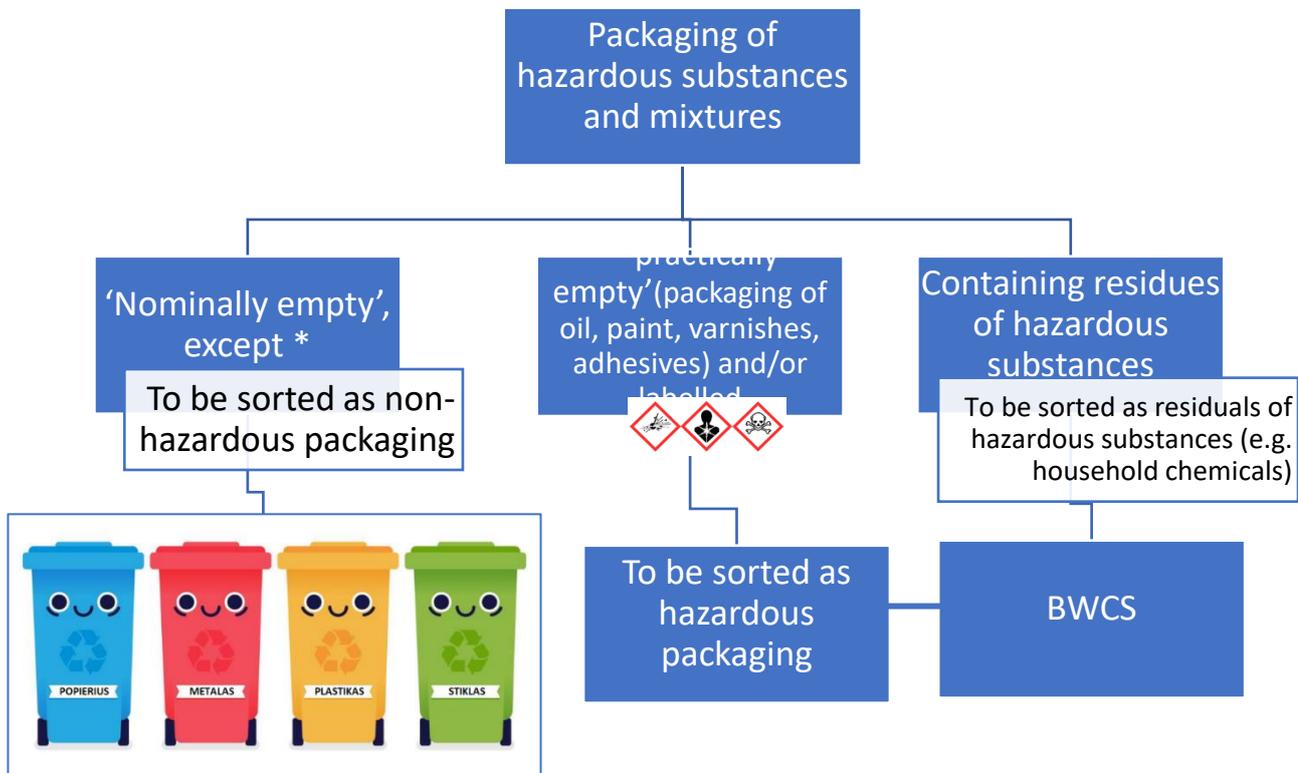


Fig. 3. Sorting of packaging of hazardous substances and mixtures

Code and name of the List of waste entry (for the BWCS staff)

The following List of waste codes must be used for the packaging that is classified as hazardous:

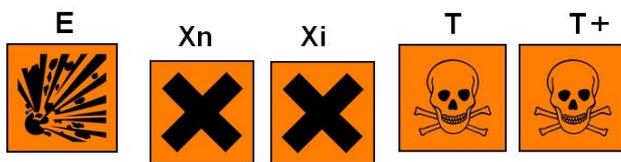
- 15 01 10* – packaging containing residues of or contaminated by hazardous substances
- 15 01 11* – metallic packaging containing a dangerous solid porous matrix (for example asbestos), including empty pressure containers.

The following is ALWAYS hazardous packaging:

- packaging of oil and paints, varnishes, adhesives, solvents, ink, etc. used in construction and repair;
- metallic packaging which contains a dangerous solid porous matrix (e.g. asbestos in old fireproof packaging material), including empty pressure containers;
- nominally empty packaging is in all cases considered as hazardous waste if it used to contain explosive substances, substances hazardous to health or substances causing acute toxicity, and is marked with adequate hazard pictograms:



In the case of household chemicals or mixtures manufactured before 2015, the following hazard symbols may also be found on the packaging of the product:



3. Domestic health care waste

3.1. Medicinal products



Photo source: www.vlmedicina.lt

In households, there is a wide range of medicines, such as analgesics, antibiotics, hormone substitutes, oral chemotherapy medicines and antidepressants, with a considerable proportion of them becoming waste.

Separate collection of waste medicinal products is important regardless of whether specific products are classified as hazardous or non-hazardous waste, as they can be released from households to the environment.

Management recommendations

In accordance with the Law on Pharmacy of the Republic of Lithuania², medicinal products that are intended to be destroyed are collected from the residents in pharmacies free of charge. Veterinary pharmacies must accept veterinary medicinal products for destruction from the residents free of charge.

It is IMPORTANT to note that food supplements are not medicinal products and are classified as foodstuff. Food supplements are disposed of with mixed municipal waste (or food waste if there is separate sorting and collection of food waste), by separating the packaging. Packaging from food supplements is sorted as non-hazardous packaging and discarded into sorting bins for paper, plastic, or glass, respectively.

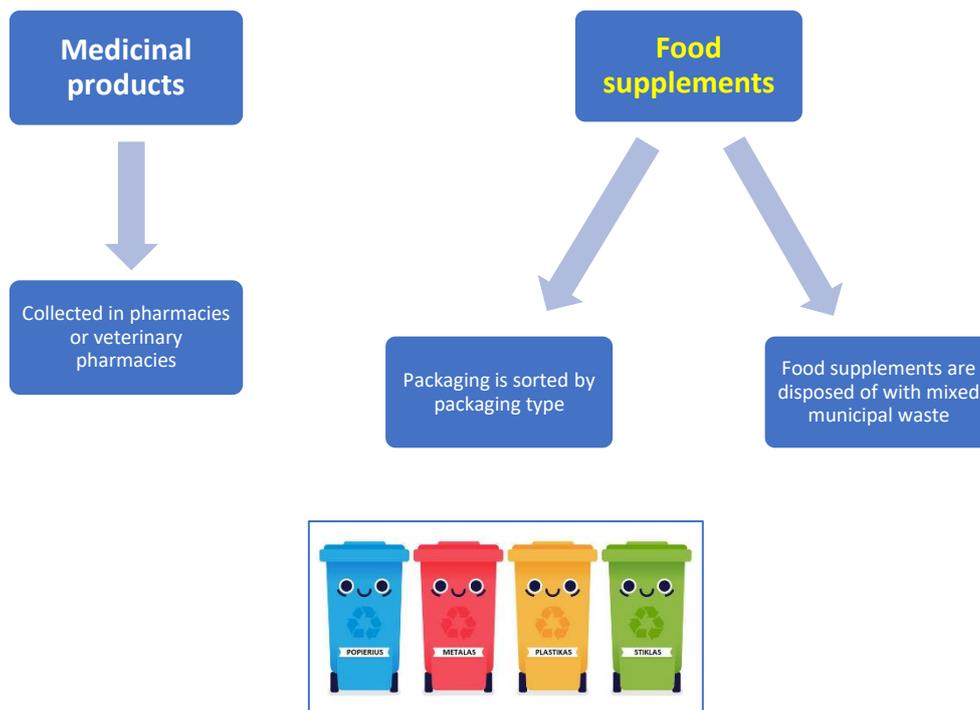


Fig. 4. Sorting of medicinal products and food supplements.

IMPORTANT! Medicinal products must be in their original packaging, sealed to prevent spillage and/or dispersal.

Code and name of the List of waste (for pharmacy staff)

² Law No X-709 on Pharmacy of 22 June 2006 (consolidated version as of 1 January 2022).

Only cytotoxic and cytostatic medicinal products for treating cancers are classified as hazardous medicinal product waste. The following waste code must be assigned to this group of medicinal products:

20 01 31* – cytotoxic and cytostatic medicines;

all other medicinal products waste is classified under the waste code:

20 01 32* – medicines other than those mentioned in 20 01 31

3.2. Sharps and other potentially infectious waste



Photo source: www.delfi.lt

Infectious waste is waste containing viable micro-organisms or their toxins which are known or reliably believed to cause disease in man or other living organisms. This type of waste is usually generated in hospitals, laboratories, and related health care institutions. However, similar waste can also result from self-treatment and home care not involving health care professionals. This may include needles used by patients to treat certain disorders, including diabetes, as well as used self-testing diagnostic tools for the treatment of infectious diseases, bandages, etc.

Management recommendations

Lithuanian Hygiene Standard HN 66:2013 ‘Safety Requirements for the Management of Medical Waste’ apply to waste generated in health care institutions, such as hospitals, laboratories, and veterinary clinics, but not to health care waste generated at home, for which generally no separate collection schemes exist other than that for used medicinal products (as described in 3.1).

Bandages, used syringes and other potentially infectious waste produced by households must be safely disposed of together with mixed municipal waste. Based on the recommendations of health care professionals, used syringes should be preferably disposed of together with the needle to avoid the risk of injury, placed in a sealed container (e.g. metal screw-in containers) and labelled as sharps. This container can be placed in a plastic garbage bag and only then

should be disposed of into the bin for mixed municipal waste. Some BWCSs accept used syringes as well; however, it is advisable to make sure whether the site accepts such waste before transporting used syringes to the BWCS.

Code and name of the List of waste entry

There is no specific waste code for separately collected infectious municipal waste. At present, the following waste code from the List of waste can be used for such waste produced by households:

20 03 01 – mixed municipal waste

4. Construction and demolition waste

4.1. *Asbestos waste*



Photo source: www.lrytas.lt

The term ‘asbestos’ describes a group of naturally occurring mineral silicate fibres of the serpentine and amphibole series. Asbestos is a hazardous mineral with a fibrous structure, producing severe, potentially fatal, long term health effects, including cancer, when inhaled. Asbestos is a substance classified as a category 1 carcinogen.

It was widely used for insulation and other purposes in the past, owing to its resistance to fire and heat. Although asbestos-containing products have been abandoned in Lithuania since 2005, asbestos is still present in many different materials and products with a long life cycle, such as: slate sheets for roofing; pressureless pipes for the installation of sewage network; thermal insulating materials in boiler rooms and thermal paths; raw materials for the manufacture of asbestos fabrics, non-combustible clothing and various screens; insulation of electric wires; raw materials for the manufacture of brake linings for motor vehicles, etc.

The list below includes more substances containing asbestos, sorted in descending order by hazardousness:

- insulating materials, including sprays, for pipes and boilers;

- fire-resistant insulating boards for door panels, partitions, ceiling panels, also used for insulation of hot-plates, ovens, and heaters;
- cable insulation or compressed gaskets for pipelines;
- profiled cement roofing sheets and tiles;
- cement pipes, flues, gutters, and water tanks;
- vinyl floor tiles and bitumen adhesives;
- textured coatings and paints containing asbestos;
- linoleum containing asbestos;
- • cast products such as tanks and reservoirs;
- bituminous coating and moisture resistant layers.

Management recommendations

Waste of construction and insulating materials produced in households, which may contain asbestos must be treated as hazardous waste: packed securely in sealed packaging (double plastic bags, plastic packaging, sealed containers, etc.) to prevent dust or hazard to human health and delivered to BWCS or handed over to other enterprises managing waste. Since asbestos has previously been used in the manufacture of brake linings for vehicles, such used brake linings can also be found in old garages.

Code and name of the List of waste entry (for BWCS staff)

Waste containing asbestos that may be produced by households because of demolition, repair, or renovation or due to disposal of certain (old) equipment and parts is classified under the following waste codes:

- 16 01 11* – brake blocks containing asbestos;
- 16 02 12* – discarded equipment containing free asbestos
- 17 06 01* – insulation materials containing asbestos
- 17 06 05* – construction materials containing asbestos (slate).

4.2. Treated wood



Photo source: www.ecobaltrecycling.lt and www.mediakatalogas.lt.

Wood waste is generated by household repair and renovation works involving structural and non-structural elements, for instance, window and door frames, separation walls and roof elements, wood from awnings, garden fences and other outdoor wooden structures. To prevent the wood from degrading it is impregnated with wood preservatives. Some widely used preservatives such as chromated copper arsenate (CCA), creosote and pentachlorophenol have been severely limited or banned. However, it is still necessary to safely dispose of wood treated with them, as such wood waste is hazardous.

Waste wooden furniture or other treated wood furnishings produced by households should also be classified as treated wood waste, but it is non-hazardous.

Management recommendations

All treated wood waste produced by households (window frames, doors, floors, furniture, fences, partitions, etc.) must be delivered to BWCSs or the locations designated by municipalities, where the collection of bulky waste is carried out by routine collections or handed over to enterprises managing such waste.

IMPORTANT! It is prohibited to incinerate treated wood waste produced by households (painted, varnished, impregnated, laminated wood, etc.) in stoves, boilers, fireplaces, and grills.

Code and name of the List of waste entry (for the BWCS staff)

Based on the experience of foreign countries, wood classified as hazardous wood waste produced by households includes the following products:

- railway sleepers, poles (formerly used and still illegally used for the construction of garden houses, arbours, saunas) that were or could be treated with creosote and arsenic salts (chromated copper arsenate (CCA), etc.);
- wooden floors or walls of storage rooms, garages, etc. that may be contaminated by mineral oils and other chemical substances.

The following hazardous waste code is assigned to the aforementioned wood waste that may be produced by households because of demolition, repair, or renovation:

20 01 37* – wood containing hazardous substances.

The following waste codes are used for non-hazardous treated wood waste:

17 02 01 – wood;

20 01 38 – wood other than that mentioned in 20 01 37.

4.3. Coal tar and tarred products



Photo sources: www.lrytas.lt and www.vz.lt

Coal tar was commonly used as a binder in road construction, prior to being superseded by bitumen. Also, wooden railway sleepers were treated with coal tar creosote, as a preservative, for many decades. Today the use of creosote to treat wood is highly restricted and regulated under Regulation (EC) No 1907/2006 (REACH), Annex XVII, entry 31.

Waste containing coal tar is classified as hazardous. The term ‘coal tar’ describes several complex substances derived from coal, which are classified as carcinogens of Category 1A in Annex VI to the CLP Regulation and which, according to Annex III of the WFD, classify as waste as hazardous if the concentration equals or exceeds 0.1%.

Used wooden railway sleepers are known to have been re-used in garden houses to stabilise walls or land. Coal tar can also be found in products like coal tarred board or roofing felt, which was used, e.g., as part of roofs at garden houses. Some may give rise to considerable amounts of hazardous waste when being repaired or replaced.

Management recommendations

If this type of hazardous waste is produced from handling of household or garden buildings and the landscape, it should either be brought to BWCS or to places designated by the municipality when the collection of hazardous and bulky waste is carried out by routine collections or handed over to enterprises managing such waste.

Code and name of the List of waste entry (for BWCS staff)

17 03 01* – bituminous mixtures containing coal tar

17 03 03* – coal tar and tarred products

20 01 37* – wood containing hazardous substances (*see 4.2*).

5. Automotive maintenance waste

5.1. *Oil, fuel filters and contaminated absorbing materials*



Photo source: www.delfi.lt

Oil and fuel filters from cars can become part of household waste when Do-It-Yourself motorists service their cars. These activities may also generate other oil-impregnated waste such cloths and gloves. Automotive fuel and oil filters contain metal and filter materials, oils, fuel residues. In separate collection of waste, used filters are suitable for recycling as they are made of steel. Any oil remaining in them may be regenerated by means of oil filter presses.

Management recommendations

Automotive oil, fuel filters and contaminated absorbing materials (wipes, clothing, etc.) are hazardous waste and must be sorted separately.

Automotive oil and fuel filters may be left in automotive service workshops when their services are used.

This type of waste can be delivered to authorised hazardous waste management companies whose addresses can be found on the websites of municipalities and the Ministry of Environment (*link to websites or lists*).

Automotive oil and fuel filters may be delivered to bulky waste collection sites (BWCS), or the locations designated by municipalities when the collection of hazardous waste is carried out by routine collections.

Code and name of the List of waste entry (for the BWCS staff)

16 01 07* – oil filters;

hazardous components other than those mentioned in 16 01 07 to 16 01 11 and 16 01 13 and 16 01 14 (fuel filters);

15 02 02* – absorbents, filter materials (including oil filters not otherwise specified), wiping cloths, protective clothing contaminated by hazardous substances.

5.2. Automotive maintenance agents, surface polishes and coolants



Photo source: www.traffic.lt and www.tepalubaze.lt

Many of the substances and mixtures used in cars, or for cleaning and maintaining them, are hazardous to human health and the environment. For example, the primary ingredient in coolants is ethylene glycol that is toxic to human health. Like other liquids in the car, coolants such as brake fluids or lubricating oil need to be changed periodically.

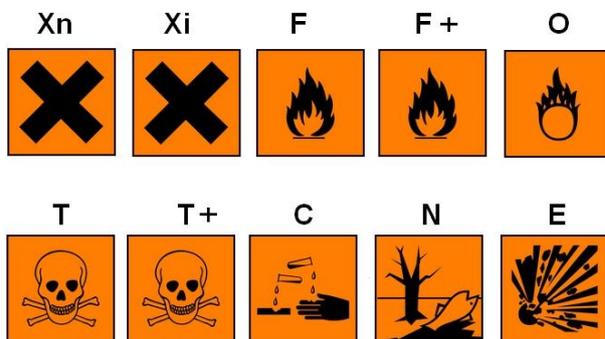
Separate collection facilitates the treatment of waste: used coolants can be recycled and their original characteristics restored. Ethylene glycol can be extracted and re-used in the plastics industry. Engine oil can be treated and regenerated to base oil or used as fuel.

Labelling

The hazard symbols (hazard pictograms) on the packaging assist in identifying whether the automotive maintenance agents have hazardous properties:

| | | | | | |
|---|--|---|---|---|---|
|  | Exploding bomb (for explosion or reactivity hazards) |  | Flame (for fire hazards) |  | Flame over circle (for oxidizing hazards) |
|  | Gas cylinder (for gases under pressure) |  | Corrosion (for corrosive damage to metals, as well as skin, eyes) |  | Skull and Crossbones (can cause death or toxicity with short exposure to small amounts) |
|  | Health hazard (may cause or suspected of causing serious health effects) |  | Exclamation mark (may cause less serious health effects or damage the ozone layer*) |  | Environment* (may cause damage to the aquatic environment) |

If automotive maintenance agents are manufactured before 2015, the following hazard symbols may also be found on the packaging of the product:



Management recommendations

Residues of automotive maintenance agents marked with hazard symbols and hazard pictograms, together with the original manufacturer packaging, must be sorted separately and delivered to BWCS or the locations designated by municipalities when the collection of hazardous waste is carried out by routine collections from residents. All hazardous substances and mixtures must be in their original packaging and sealed to prevent spillage.

IMPORTANT! The old automotive fluids (automotive maintenance waste) must be packed in sealed containers or packaging, without mixing them, and delivered to BWCS or the locations

designated by municipalities when the collection of hazardous waste is carried out by routine collections from residents.

*For handling **empty and nominally empty** packaging containing automotive maintenance agents, see 2.6.*

Code and name of the List of waste entry (for BWCS staff)

16 01 13* – brake fluids

16 01 14* – coolants containing hazardous substances

20 01 26* – oil and fat other than those mentioned in 20 01 25

6. Mercury-containing waste (other than WEEE)



Photo source: www.vnsc.lrv.lt and www.skelbiu.lt

Mercury is highly toxic to humans and animals when inhaled or ingested. It is also toxic to aquatic organisms. Mercury-containing waste produced by households includes old mercury batteries and mercury thermometers.

In EU, mercury was mainly used in sphygmomanometers, home barometers, fever thermometers and thermometers for laboratory and industrial applications. The placing on the market of mercury-containing measuring devices is currently banned under Regulation (EC) No 1907/2006

(REACH, Annex XVII, entry 18a) and the mercury use for equipment sold to the public (such as fever thermometers and barometers) ceased in 2009.

Products containing mercury for which export, import and production is prohibited from the dates set out in Annex II to Regulation (EU) 2017/852 (in most cases from 31 December 2018 and 31 December 2020 respectively): batteries and accumulators, certain electrical and electronic equipment (such as switches and relays, lamps), cosmetic products, pesticides (plant protection products), biocides and local antiseptics, measuring instruments, etc.

Management recommendations

If there are still residuals or mercury-containing products in the household, they must under no circumstances be disposed of in mixed municipal waste bins. Such waste must be sorted separately, securely packaged so as not to break or release mercury into the environment, delivered to BWCS or the locations designated by municipalities when the collection of hazardous waste is carried out by routine collections.

Code and name of the List of waste entry (for BWCS staff)

20 01 21* – fluorescent tubes and other mercury-containing waste

20 01 33 * – batteries and accumulators included in 16 06 01, 16 06 02 or 16 06 03 and unsorted batteries and accumulators containing these batteries

7. Waste electrical and electronic equipment (WEEE)



Management recommendations for residents

WEEE is treated in accordance with Directive 2012/19/EU of the European Parliament and of the Council *on waste electrical and electronic equipment*.

WEEE may never be disposed of with mixed waste, as shown by the strikethrough waste bin symbol shown above. The WEEE Directive aims to promote and regulate the collection, reuse, recycling, and recovery of waste electrical and electronic equipment.

IMPORTANT! Any electrical and electronic equipment generated by households, irrespective of its type, must be handed over to WEEE managers. There are several ways to do this:

- residents may supply WEEE free of charge at the point of sale where such EEE is traded;
- small WEEE (bulbs, kettles, toasters, mixers, telephones, etc.) may be left free of charge by residents in specialised WEEE bins at various locations;
- residents may deliver WEEE to specialised WEEE collectors free of charge;
- residents may deliver such waste free of charge to BWCS or the locations designated by municipalities when the collection of bulky hazardous waste is carried out by routine collections.

Code and name of the List of waste entry (for the BWCS staff)

Since these recommendations are designed to identify HAZARDOUS waste, the primary objective is to help assess and identify which WEEE should be classified as hazardous.

It should be noted that not all WEEE is hazardous, e.g. cookers and washing machines are non-hazardous, and refrigerators and freezers are hazardous waste due to coolant contained therein.

20 01 23* – discarded equipment containing chlorofluorocarbons (e.g. freezing equipment containing freon (refrigerators, freezers, etc.));

20 01 35* – discarded electrical and electronic equipment other than those mentioned in 20 01 21 and 20 01 23 containing hazardous components:

20 01 35 01* – temperature exchange equipment (e.g. freezing equipment not containing freon (refrigerators, freezers, etc.; air conditioning, dehumidifying (drying) equipment, heat pumps, other equipment containing refrigerant); radiators containing oil and other temperature exchange equipment);

20 01 35 02* – screens, monitors and equipment containing screens with a surface greater than 100 cm² (e.g. cathode ray tubes (CRT), LCD screens (commonly used on laptops, televisions, and computer monitors));

20 20 01 03* – lamps;

20 01 21* – fluorescent tubes and other mercury-containing waste;

20 01 35 04* – large equipment (any external dimension greater than 50 cm) (e.g. printing, copying equipment, etc.);

20 01 35 05* – small equipment (no external dimension greater than 50 cm) (e.g. smoke detectors, printers, old mobile phones, portable DVD players with LCD screens, etc.);

20 01 35 06* – small IT and telecommunications equipment (no external dimension greater than 50 cm).