

## KAM rule 07 Disposal of (hazardous) waste

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## 1. Changes with respect to the previous version

Page 8 under 9.e Disposal of CMR substances: the GHS hazard symbol has been changed to the CLP hazard symbol and the hazard class (carcinogenic substances / mutagenic substances / reproductive toxicants) has been added.

Appendix 1: category VI, subcategory 11, the GHS hazard symbol has been changed to the CLP hazard symbol

Appendix 2 page 5: category VI, subcategory 11, the GHS hazard symbol has been changed to the CLP hazard symbol and the hazard class (carcinogenic substances / mutagenic substances / reproductive toxicants) has been added.

Appendix 5: added "For the disposal of peroxide-forming substances, expert advice must be sought from the ADR Safety Advisor"

Appendix 6: added "(not limited to the list below)" and "For the disposal of peroxide-forming substances, expert advice must be sought from the ADR Safety Advisor"

Appendix 7: added "(not limited to)"

## 2. Introduction

The great diversity of activities at the Utrecht Science Park Bilthoven (USPB) has resulted in the release of many different waste materials.

In the context of environmental legislation and good environmental care, waste materials need to be separated as well as possible. Proper separation ensures that waste materials can be reused, recycled or incinerated.

### Purpose

The safe and (environmentally) responsible collection and disposal of industrial and hazardous waste at the USPB.

### Delineation

The disposal of microbiological and radioactive contaminated waste falls outside the scope of this KAM rule.

For microbiological (contaminated) waste, see [KAM rule 08 'Disposal of biological materials'](#). For radioactive (contaminated) waste, see the radiation protection regulation of your organisation.

## 3. Responsibilities

The organisations are responsible for the appointment of or a contract with an ADR safety advisor and for the observance of this KAM rule by their employees.

Every employee is obliged to separate waste and to keep the quantity of (hazardous) waste as small as possible. This can be done for example by keeping the volume of (hazard) substances and samples used as small as possible, and dealing with the material consciously and sparingly.

## 4. Waste products

The 'Landelijk Afvalbeheerplan' ([LAP3](#)) contains the policy for waste prevention and waste management for all waste materials (collection, recycling, incineration and dumping).

[Appendix 5 of LAP3](#) contains the waste flows that need to be kept separate, because it is undesirable to mix them, either with each other or with other waste materials and/or non-waste materials.

Whether or not something is hazardous waste is defined by the 'Europese afvalstoffenlijst' ([EURAL](#)).

This 'Europese afvalstoffenlijst' harmonises the distinction between hazardous and non-hazardous waste in the European Union and links it to the European regulations for hazardous materials and preparations.

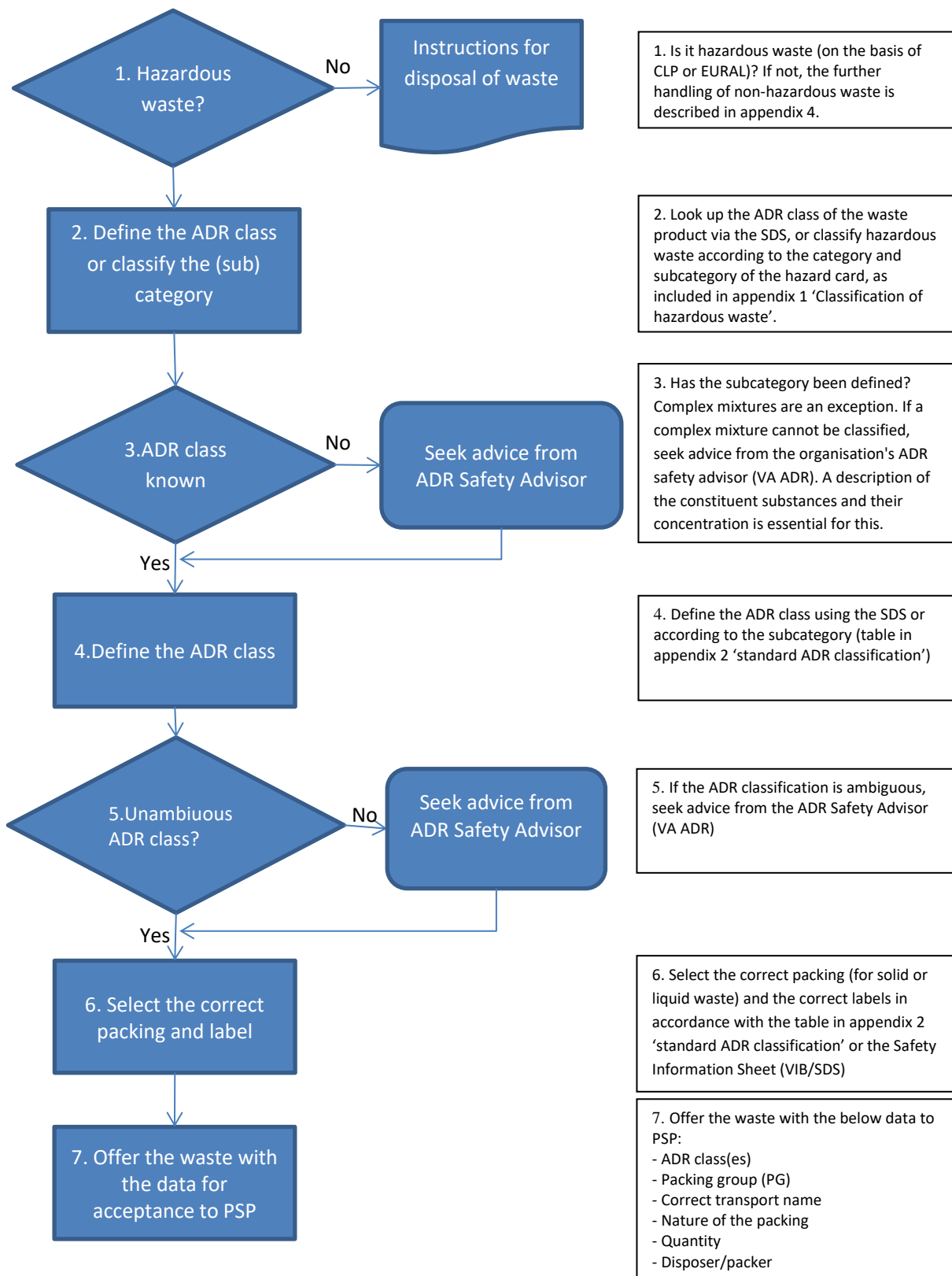
In principle, industrial waste (non-hazardous waste) includes waste that is also released in household situations. Examples such as paper and glass waste, bulky waste, old refrigerators (white goods) and old electronics (brown goods).

Hazardous waste is primarily released in production facilities and laboratories, but they can also be released with office activities.

## 5. Waste disposal

The 'Landelijk Afvalbeheerplan' ([LAP3](#)) contains the management policy for all waste to which the Environmental Protection Act is applicable. The policy for the different waste products is further detailed in the 85 [sector plans of LAP3](#). The starting point is that companies are obliged to separate waste products, to keep and dispose of them separately, unless this cannot be reasonably demanded of them.

The flow chart below indicates the steps that are taken for USPB waste. The steps are further elaborated on in the various different chapters.



## 6. Disposal of industrial waste

At the USPB, the collection of non-hazardous waste is also subject to legal obligations. All organisations at the USPB have to comply with this.

### **Commonly occurring non-hazardous industrial waste at the USPB**

Residual waste (= bulky waste)	grey container with grey lid
Paper & cardboard	blue or grey container with blue lid
Paper confidential	aluminium security container
Glass (household)	grey or yellow container with yellow lid
Glass (clean laboratory)	grey or yellow container with yellow lid
GFT/VGF (veg., fruit and garden refuse)	green container with green lid
Plastic, Metal and Drinks packaging (PMD)	grey container with beige lid
Biological waste without risk ( <u>not</u> fluid!)	grey container with orange lid
Chemical waste without risk	grey container with green lid
Autoclaved waste	red container with red lid
Flat glass	on request
Electronics waste (so-called grey and brown goods)	on request
Cooling and freeing equipment (so-called white goods)	on request
Pallets	on request
Timber waste	on request
Old metal	on request

For the disposal of each category of non-hazardous waste, separate relevant containers can be ordered via [SelfService](#) (see appendix 4) or contact the PSP Logistics Centre.

**Attention: Also with renovation and construction activities, the organisation is obliged to separate and dispose of the Building and Demolition Waste (BSA) (see appendix 4)**

## 7. Disposal of hazardous waste, with the exception of chemicals

The collection of hazardous waste is subject to legal obligations. The organisations on the USPB have to comply with this.

The types (categories) of hazardous waste that can occur and that need to be packaged, labelled, transported and disposed of in a legally prescribed, safe and responsible manner are discussed.

Companies are obliged to separate hazardous waste, to keep it separate and dispose of it separately. In the '[Handreiking Europese afvalstoffenlijst, bijlage 5 \(Ministerie van VROM 2001\)](#)', hazardous waste is indicated by an asterisk.

Primarily, hazardous waste is created as a consequence of laboratory and production activities. This waste must be stored and subsequently disposed of.

### **Commonly occurring hazardous waste on the USPB**

For biological waste see [KAM rule 08 'Disposal of biological waste'](#). With (hazardous) biological waste, also consider HEPA filters (from e.g. (micro) biological spaces, air-handling units (AHUs) and microbiological safety cabinets.

### **Hazardous waste from laboratories/production facilities**

Articles contaminated with laboratory chemicals  
Empty packaging of solvents/chemicals  
Air filters (extraction fume cupboards)  
Oil-containing waste (solid)  
Medicines  
Aerosols  
Lead batteries  
Small chemical waste from offices  
Fluorescent tubes  
Coolant  
Gas cylinders

### **Examples of other hazardous waste**

printer cartridges  
Tipp-ex and thinner  
ink  
drum kits (from laser printers)  
toner (from the copier and printers)  
batteries  
adhesives and sealants  
energy-efficient lamps  
cleaning agents  
paint products  
oils and fats  
aerosols  
cassette tapes and video tapes  
diskettes

**For the disposal of a number of the above categories, special containers can be ordered via [SelfService](#) or you can contact the PSP Logistics Centre (see attachment 4).**

**IMPORTANT: Hazardous waste may not be disposed of or discharged through the sewer.**

**According to the 'Wet algemene bepalingen omgevingsrecht (Wabo)', the 'Wet milieubeheer (Wm)' and the 'Europese Afvalstoffenlijst (EURAL)', no hazardous waste whatsoever originating from laboratories or production areas may be discharged via the sewer (for more details, see [KAM rule 35 Requirements for discharge of hazardous substances and mixtures to sewers](#)).**

## **8. Disposal of chemicals**

Each organisation is required by law to dispose of hazardous waste (chemicals or waste flows from processes that contain chemicals) in suitable packaging, with a correct ADR label and UN number, stating the packing group, transport name and quantity.

Only then may the hazardous material be transferred to PSP.

Before PSP can remove the packaged hazardous waste from the site, the packaging, labelling and documentation must comply with the rules laid down in the ADR/VLG.

## 9. Defining the ADR class

### a. The disposal of chemicals/substances in the original packaging

The ADR class of a hazardous substance is always stated on the Material Safety Data Sheet (MSDS). A label with the relevant ADR class must always be affixed to the packaging. The original packaging may be opened, provided the disposer has ensured that the packaging exclusively contains the original substance.

### b. The disposal of hazardous chemicals/substances using a collection container

In a laboratory/production environment, equivalent hazardous waste may be combined. A category arrangement is used for this.

The hazardous waste is subdivided into six categories, according to the nature of their origin. These six categories are in turn subdivided into subcategories depending on their specific properties.

The categorisation in the various categories and subcategories are further detailed in the waste card in appendix 1 'Categorisation of hazardous waste' and the associated appendix 1a 'Explanation of the classification of hazardous waste' with [this KAM rule](#).

Appendix 2 'Standard ADR classification' indicates the (standard) ADR classification for the various categories and subcategories. This defines the ADR label and UN number under which unknown mixtures may be removed. The [DGS Portal](#) is a handy tool for looking up UN numbers (the username and password are available from PSP Logistics Centre or Stichting-Alt).

If in doubt about the ADR class of UN number, contact PSP and/or the ADR safety advisor. For the classification of hazardous substances in ADR classes, also refer to Appendix 1 with [KAM rule 03 'Hazardous substances'](#).

### c. The disposal of hazardous chemicals/substances not in the original packaging

If the hazardous substance is not disposed of in the original packaging, the ADR class can be defined by defining the category and subcategory (see appendix 2 with [this KAM rule](#)), or the ADR class can be looked up on the product's Material Safety Data Sheet (MSDS). If in doubt, consult the PSP and/or the safety advisor to define the packaging and ADR label to be used for disposing of the substance.

### d. Disposal of empty contaminated chemicals packaging

9.d.1 If the empty packaging still contains residues of the chemical substance, then the 'empty' packaging is disposed of as under **9 a. The disposal of chemicals/substances in the original packaging**.

9.d.2 If the substance in the empty packaging has been evaporated or rinsed so that the empty and clean packaging certainly no longer contains any residues of the chemical substance in question, then the empty and clean packaging, that has been closed with a cap or lid, may be disposed of using a grey container with green lid (Non-hazardous chemical waste) as indicated under **6 Disposal of industrial waste**

**NB: The liquid that was used to rinse the packaging must be disposed of in accordance with 9.b or 9.c. Always evaporate in a fume cupboard (minimum of 16 hours).**

**See also appendix 5 'peroxide-forming chemicals', appendix 6 'Potentially explosive substances' and appendix 7 'dangerous combinations of chemicals'.**

**e. Disposal of CMR substances**

Substances that are carcinogenic, mutagenic or toxic for reproduction (CMR substances), do not fall under the ADR if no other hazardous substance is present.

In order to indicate the hazard during transport on the USPB when the CMR substance is not mixed with a hazardous substance that is subject to the ADR, the waste container with the CMR substance must be provided with the following CLP hazard symbol + corresponding hazard class (carcinogens / mutagens / reproductive toxicants (see appendix 2 with [this KAM rule](#)).



For CMR substances, see also [KAM rule 03 'Hazardous substances'](#).

**10. Packing hazardous waste**

Hazardous waste must be transferred to PSP in suitable packaging (with a correct ADR label and UN number). Most substances (except the ADR classes 1, 2, 5.2, 6.2 and 7) are categorised in accordance with the ADR in packing groups (PG) based on the hazard during transport. For the correct packing group categorisation, see appendix 2 with [this KAM rule](#).

Waste containers are available from PSP for liquid and solid wastes.

All containers/jerrycans/drums are provided with a UN approval number and may contain substances from packing groups II and III. If there is any doubt about whether the substance should still be classified and transported under packing group I, contact PSP and/or the ADR safety advisor.

**For the disposal of chemicals, the above special containers can be ordered via [SelfService](#) or you can contact the PSP Logistics Centre (see attachment 4).**

**If in doubt, always contact the PSP Logistics Centre and/or the ADR safety advisor.**

**IMPORTANT: All containers may only be filled for 90% of the total volume.**

**Containers with hazardous waste must be stored in accordance with the requirements of the latest version of [PGS15](#).**

**11. Reporting hazardous waste**

Waste containers (filled to a maximum of 90%! See appendix 3) are reported digitally via [SelfService](#) or via PSP Logistics Centre (see attachment 4). The containers are put in the location agreed with PSP on the agreed day, and subsequently collected by PSP.

Avoid storage in the laboratory or production area as much as possible and report a full waste container as soon as possible to [SelfService](#) or PSP Logistics Centre. Empty containers and labels can be requested there. Chemical waste storage is included in the maximum quantity of chemicals that may be kept in a cupboard or space, as described in [KAM rule 03 Hazardous substances](#).

**Attention: Overfilled, leaky or insufficiently labelled containers/packaging will not be collected!**

**A leak from a waste container or a spill of hazardous (waste) substances must always be reported via [KAM rule 15m Reporting \(near\) environmental incidents](#).**

Acceptance criteria based on the ADR are applicable to the disposal to the various packed hazardous waste substances. These acceptance criteria are included in appendix 3 with [this KAM rule](#).



## Abbreviations and terminology

### Abbreviations

<b>ADR</b>	European Agreement concerning the International Carriage of Dangerous Goods by Road
<b>CLP</b>	Classification, Labelling and Packaging
<b>LAP</b>	'Landelijk afvalbeheerplan'
<b>MSDS</b>	Material Safety Data Sheet
<b>PG</b>	Packing group
<b>PSP</b>	Poonawalla Science Park B.V.
<b>USPB</b>	Utrecht Science Park Bilthoven
<b>VA ADR</b>	ADR Safety advisor
<b>VG</b>	<i>Verpakkingsgroep</i> (see PG)
<b>MSDS</b>	Safety data sheet of the substance
<b>VLG</b>	Regulation on the overland transport of dangerous substances

### Terminology

<b>ADR</b>	The pan-European treaty for the international carriage of dangerous goods on the road. The ADR has been implemented in Dutch legislation in the Dutch Carriage of Dangerous Goods on the Road Act (WVGS) and the Regulation on the overland transport of dangerous substances (VLG).
<b>Consignor</b>	The 'Consignor' of USPB waste is PSP. The 'Consignor' must be able to rely on the information as submitted by the 'Packer'.
<b>Waste with exceptional hazards</b>	Hazardous waste (category VI) for which specific hazards apply, such as gas cylinders, pathogen-containing waste, radioactive waste etc.
<b>Special waste</b>	Hazardous waste (category V), for which specific disposal regulations apply, such as chemical residues, medicines, batteries etc.
<b>CLP Regulation</b>	Regulation (EC) No. 1272/2008 on the classification, labelling and packaging of chemical substances and mixtures
<b>Packaging</b>	Packaging material for the substance, such as the glass, plastic or metal packaging of chemicals.
<b>EURAL</b>	European Waste Catalogue, which classified (hazardous) waste in EURAL codes.
<b>Hazardous waste</b>	Waste substances, mixtures or solutions of waste substances that are particularly harmful to humans and the environment due to their specific properties.
<b>H statements</b>	Hazard statements. See appendices and references
<b>P statements</b>	Precautionary statements. See appendices and references
<b>UN number</b>	The substance identification number; a four-digit number that identifies a hazardous substance during transport, in accordance with United Nations specifications.
<b>Packer</b>	The 'Packer' of the hazardous waste is the laboratory/the production area of the organisation on the USPB where the waste originates. The 'Packer' supplies the waste with the correct information to the 'Consignor'.
<b>Safety advisor</b>	A mandatory appointed official for organisations on the USPB who packs hazardous substances (waste) for transport on the road (to the waste processor). The safety advisor monitors the ADR tasks.
<b>WIVA container</b>	Blue waste container with yellow lid

## Appendices and references

### Appendices to KAM rule 07:

- 1 Categorisation of hazardous waste
- 1a Explanation of the classification of hazardous waste
- 2 Standard ADR classification
- 3 ADR acceptance criteria
- 4 Disposal of waste materials at the USPB
- 5 Peroxide-forming chemicals
- 6 Potentially explosive substances
- 7 Dangerous combinations of chemicals

### *References to web pages:*

- SelfService: <http://www.usp-bilthoven.nl/diensten-services>
- H and P statements: [http://ec.europa.eu/taxation\\_customs/dds2/SAMANCTA/NL/Safety/HP\\_NL.htm](http://ec.europa.eu/taxation_customs/dds2/SAMANCTA/NL/Safety/HP_NL.htm)

### *Reference to rules and regulations and guidelines:*

- Regulation on the overland transport of dangerous substances (VLG): <http://wetten.overheid.nl/BWBR0010054/>
- European Waste Catalogue EWC: <https://www.rijksoverheid.nl/documenten/brochures/2010/11/23/europese-afvalstoffenlijst-eural>
- National waste management plan, LAP3: <https://lap3.nl/>
- Series of publications on hazardous substances PGS15, latest version: <http://www.publicatiereeksgevaarlijkstoffennl/publicaties/PGS15.html>

### *References to connected KAM rules:*

- [KAM rule 03 Hazardous substances](#)
- [KAM rule 08 Disposal of biological waste](#)
- [KAM rule 09 Gas cylinders in working spaces](#)
- [KAM rule 15m Reporting \(near\) environmental incidents](#)
- [KAM rule 16 Risk statement](#)
- [KAM rule 35 Disposal requirements hazardous waste and preparations via the sewer](#)

*The organisations' ADR responsibilities:*

Within the framework of chapter 1.4 of the ADR, the organisations (incl. laboratories) have a statutory task as 'packer'. Article 1.4.3.2 describes this task as follows:

1.4.3.2 Packer

In the context of 1.4.1, the Packer shall comply with in particular:

- a) the requirements concerning packing conditions, or mixed packing conditions and,
- b) when he prepares packages for carriage, the requirements concerning marking and labelling of packages.

Pursuant to article 1.4.2.1.2 of the ADR, the Consignor, in this case the PSP, must take appropriate measures to guarantee that the shipment complies with the requirements of the ADR. According to article 1.4.2.1.3, the Consignor can in this respect rely on the information and data that are made available to him by other involved parties, among others the organisations in their office of 'Packer'.

Moreover, when acting as Packer, the organisation must also appoint a safety advisor who monitors the ADR tasks.

1.8.3.1 Safety advisor

Each undertaking, the activities of which include the transport, or the related loading, unloading, filling or packing of dangerous goods by rail shall appoint one or more safety advisors for the transport of dangerous goods, responsible for helping to prevent the risks inherent in such activities with regard to persons, property and the environment.