



university of  
 groningen

faculty of science  
 and engineering

# Hazardous waste acceptance conditions

Faculty of Science and Engineering (FSE)

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# 1 Introduction

This document is intended to serve as guidelines for processing hazardous waste within the Faculty of Science and Engineering (FSE), with the exception of Pharmacy at Antonius Deusinglaan 1. There are three locations where hazardous waste collection is required: the Linnaeusborg, the Physics and Chemistry building at Nijenborgh 4 (NB4) and the Energy Academy. The disposal methods vary per location. This document describes the acceptance conditions that must be satisfied in order to have waste collected by or handed in to the Logistics Department.

## 1.1 Which waste products are hazardous?

Hazardous substances are classified as such if they represent a certain risk, for example because they are flammable, spontaneously combustible, oxidizing, corrosive or toxic. (See Appendix I: *Hazardous waste symbols (old and new systems)*). These risks are listed on the hazard labels on the packaging or on the Material Safety Data Sheet (MSDS) provided by the supplier of the chemicals.

Other materials are classified as hazardous waste products if they have been in contact with substances that entail specific risks.

Radioactive waste is processed through a different procedure and is not covered by these hazardous waste conditions. For more information, please contact [s.t.bosman@rug.nl](mailto:s.t.bosman@rug.nl) 050 3633855.

If you want to know what to do with your normal waste, please visit the website of the University Services Department (FSE):

<https://myuniversity.rug.nl/infonet/medewerkers/faciliteiten-voorzieningen/pdc/fwn/waste-material/>

Chapter 2 (*Acceptance conditions for hazardous waste*) describes in detail which substances are hazardous and how to package and dispose of them.

In the event that the Faculty generates waste streams that are not included in these regulations, please contact the Logistics Department: 050 3633855, [s.t.bosman@rug.nl](mailto:s.t.bosman@rug.nl).

## 1.2 Differences between Nijenborgh 4, the Linnaeusborg and the Energy Academy

There are a number of differences with regard to the collection of hazardous waste at Nijenborgh 4 (NB4) and the Linnaeusborg. They are listed in the following overview.

<b>Subject</b>	<b>NB4 and the Energy Academy</b>	<b>Linnaeusborg</b>
<i>Collection</i>	To be handed in by the client	Collected from the waste corners by the Logistics Department
<i>Time</i>	Tuesdays between 9 a.m. and 12 noon	Mondays between 3 and 4 p.m.

## 2 Acceptance conditions for hazardous waste

The following acceptance conditions apply to all hazardous waste products offered for disposal:

- Waste is collected once a week. In the Linnaeusborg, it is collected from the fireproof cupboards and waste corners at 2 p.m. every Monday. NB4 and Energy Academy waste can be brought to room 5116.0001A on Tuesdays between 9 a.m. and 12 noon.
- Transport of hazardous waste from NB4 and the Energy Academy.
  1. Hazardous waste can be transported through the corridors and in the lifts on a trolley.
  2. When using lifts, always transport hazardous waste separately from people.
  3. Never touch containers of hazardous waste without gloves.
  4. If a container displays signs of swelling, **do not** transport it but immediately call 8050 (the alarm number) and describe *the location of the container, the waste stream and the name of the responsible employee.*
- There is a long list of different waste streams to be taken into account. An overview can be found in Appendix IV. Hazardous waste must be packed in standard UN-certified packaging. Packaging material may be used up to 5 years after the UN certification date (Appendix VI explains the UN mark on the packaging).  
Any other packaging may only be used in consultation with and with the permission of the Logistics Department. Correct, UN-certified packaging material is available from the Logistics Department, tel. 050-3634102, email [logistics@rug.nl](mailto:logistics@rug.nl).
- This does not apply to radioactive materials.
- Packaging must be labelled with correct, legible information:  
For 5 and 10-litre jerry cans:  
Components, P number, project code, department and date.  
For drums with lids, WIVA containers, MediBins and needle boxes:  
Description of the contents, P number, project code, department and date.  
Appropriate labels are available from the Logistics Department, tel. 050-3634102, email [logistics@rug.nl](mailto:logistics@rug.nl).
- All packaging for transport must be provided with a label for the relevant waste stream (see Appendix V) and an ADR label if applicable.  
Appropriate labels are available from the Logistics Department, tel. 050-3634102, email [logistics@rug.nl](mailto:logistics@rug.nl).
- All packaging must be sealed with an original lid. The outside of the packaging must be clean and dry.
- No packaging may be filled more than 90% (see Appendix VII for an example) and all must be adequately sealed.
- If packaging is reused, the old labels must be removed or made completely illegible and unrecognizable. Reused packaging must also be UN-certified and it may only be used for up to 5 years after the UN certification date.  
**N.B.** The GROS sticker must still be checked out at the Store.
- Packaging containing hazardous waste may not exceed a total weight of 25 kg.
- Hazardous waste in any other packaging will not be accepted and you will have to dispose of it yourself. Packaging with an expired UN certification date will not be accepted either.
- Hazardous waste will only be accepted if the contents of the packaging are known.
- Empty packaging material may not contain any residues.

## 2.1 Liquid hazardous waste

Liquid hazardous waste is collected in jerry cans in line with the decision tree (see Appendix II).

The use of waste categories has been discontinued (such as Category III: Halogen-poor organic solvent). The new procedure involves the use of waste streams.

The decision tree works as follows:

- Measure the pH of the solution (e.g. dichloromethane, pH ~4-5).
- Find the pH in the first column (dichloromethane, pH ~4-5).
- Check the second column, which in this case indicates that dichloromethane is a halogen-rich fluid.
- Read the third column (remaining in the same pH range). In this case (halogen-rich fluids), the third column will be empty.
- Now read the fourth column on the same line. This column indicates the following for this dichloromethane: RU007 Solvents, Halogen-rich. This is the appropriate waste stream for this fluid.

This means you will need the following labels:

- waste stream label W.HW.C-001CJ (includes UN2929)
- ADR label 6.1(3)
- label for entering data such as P number, project number and content

General Decision tree for Hazardous liquid waste

	Type of waste stream	Name of waste stream	UN-number	Hazard class	Waste stream label	
pH < 4	Organic load > 1%	Organische zuren/oplosmiddel mengsel	2924	3 (8)	W.HW.C-000FB	
	Inorganic	Nitrate / Nitric Acid >1%	Salpeterzuur tot 15%	2031	8	W.HW.S-00240
		Other acids < 15%	Anorganische zuren	3264	8	W.HW.S-00304
		Perchloric acid > 15%	Perchlorzuur	1873	5.1 (8)	W.HW.C-00628
pH 4 - 8	Organic <1%	Laagcalorische vloeistoffen		ADR Free	W.HW.S-00135	
	Volatile flammable components* >1% and minimum 80% water	Waterige oplossingen uit lab kl.3	1992	3 (6.1)	W.HW.C-00753	
	Halogen-rich liquids, max 20% water	Oplosmiddelen Halogeen rijk	2929	6.1(3)	W.HW.S-001CJ	
	Flammable toxic liquids	Oplosmiddel Brandbaar Giftig	1992	3 (6.1)	W.HW.C-002E5	
	Volatile flammable non-toxic liquids	Oplosmiddel Halogeen arm	1993	3	W.HW.S-00212	
pH > 8	Organic	Bijtende basische organische vloeistoffen	3267	8 + MG***	W.HW.C-02257	
	Inorganic	contains Ammonia	2672	8	W.HW.S-00026	
	Inorganic	Anorganische basen	1719	8	W.HW.S-00178	

There are waste streams for both liquid waste and solid waste. Each waste stream is identified by a waste stream number comprising a descriptive code and a W-HW-S code or W-HW-C code (article number). The descriptive code starts with RU followed by 3 digits (e.g. RU007). This is an internal code that can be used to request new labels. An overview of all waste streams can be found in Appendix IV.

Waste products that fall under the same waste stream may be combined. In some cases, waste products in the same waste stream may react with each other. Always be alert for this and dispose of such products in separate containers. *Appendix VIII (Dangerous combinations of hazardous substances)* contains an overview of dangerous combinations.

### 3 Waste streams

#### RU001 ORGANIC ACIDS/SOLVENT MIXTURES

##### SPECIFIC REQUIREMENTS

Liquid organic acids/solvent mixtures (50/50) with flashpoint > 23°C

- sulphur content < 2%
- fluorine content < 0.5%
- chlorine content < 1%
- bromine content < 0.5%
- iodine content < 0.5%
- cadmium < 50 mg/kg
- mercury < 5 mg/kg
- other heavy metals (total content) < 1%

*Metals:*

chromium, cobalt, manganese, zinc, copper < 1%

molybdenum, nickel, vanadium, tungsten < 1%

arsenic, beryllium, cadmium, lead < 1%

phosphorus, selenium, silicon, thallium, tin, silver < 1%

**None:** PCBs/PCTs, asbestos, dioxins, foul-smelling and nausea-inducing substances, pesticides, aluminium and magnesium powder, gas cylinders, phosphorus, pyrophoric substances, batteries, explosive and potentially explosive substances (picric acid, etc.), carbides, peroxides

*Packaging:*

The waste must be disposed of in a 5 or 10-litre UN-certified jerry can with the appropriate labels completely filled in. The outside of the drums must be clean and dry. Jerry cans must not be filled more than 90% and must be properly secured. The maximum net weight is 25 kg per package.

*Labels*

1. RU001 Organische zuren/oplosmiddel mengsel
2. Article: W.HW.C-000FB  
Waste stream number: 01CH8YoFo98A
3. ADR label 3(8)



4. Label information to be completed: components, P number, project code, department and date

*Disposal*

In the Linnaeusborg, full jerry cans must be placed on the bottom shelf of the fireproof cupboard – all jerry cans present at 2 p.m. on Monday will be collected that week. New packaging/containers will be provided during the next Logistics round. If there is not enough packaging available, please contact the Logistics Department, tel. 050-3634102, email [logistics@rug.nl](mailto:logistics@rug.nl).

In NB4 and the Energy Academy, containers must be brought to the Logistics Department, room 5116-0001A, on Tuesdays between 9 a.m. and 12 noon. Replacements can be obtained from the Logistics Department Store.

## RU002 NITRIC ACID < 15%

### SPECIFIC REQUIREMENTS

Composition:

- nitric acid CAS [7697-37-2]
- water >

**The following substances are excluded:**

- waste products with a temperature of > 40°C (cooling can lead to crystallization during the transport and delivery of the waste)
- waste products with a flammable gas concentration > 5% of the LEL (lower explosion level)
- waste products with a flashpoint < 55°C
- waste products that cause harmful concentrations of noxious fumes (e.g. bromine, phenol, NO<sub>x</sub>, HCN (hydrogen cyanide) and others)
- easily decomposable/oxidizing substances (e.g. perchloric acid, peroxides, some nitrates or nitrate-containing materials, chlorates and others)

#### *Packaging*

The waste must be disposed of in a 5 or 10-litre UN-certified jerry can with the appropriate labels completely filled in. The outside of the drums must be clean and dry. Jerry cans must not be filled more than 90% and must be properly secured. The maximum net weight is 25 kg per package.

#### *Labels*

1. RU002 Salpeterzuur (tot 15%)
2. Article: W.HW.S-00240  
Waste stream number: 01CH8Y0F091
3. ADR label 8



4. Label information to be completed: components, P number, project code, department and date

#### *Disposal*

In the Linnaeusborg, full jerry cans must be placed on the bottom shelf of the fireproof cupboard – all jerry cans present at 2 p.m. on Monday will be collected that week. New packaging/containers will be provided during the next Logistics round. If there is not enough packaging available, please contact the Logistics Department, tel. 050-3634102, email [logistics@rug.nl](mailto:logistics@rug.nl).

In NB4 and the Energy Academy, containers must be brought to the Logistics Department, room 5116-0001A, on Tuesdays between 9 a.m. and 12 noon. Replacements can be obtained from the Logistics Department Store.

## RU003 ANORGANIC ACIDS

### SPECIFIC REQUIREMENTS

- water 84-100%
- max. acid concentration of 15%

#### The following substances are excluded:

- organic acids (e.g. formic acid, acetic acid, etc.)
- nitric acid
- oxidizing substances
- waste products that cause odour nuisance (for example mercaptans, thiophenes, organic amines, etc.)
- waste products with a temperature of  $> 40^{\circ}\text{C}$  (cooling can lead to crystallization during the transport and delivery of the waste)
- waste products with a flammable gas concentration  $> 5\%$  of the LEL (lower explosion level)
- waste products with a flashpoint  $< 55^{\circ}\text{C}$
- waste products that cause harmful concentrations of noxious fumes (e.g. bromine, phenol,  $\text{NO}_x$ , HCN (hydrogen cyanide) and others)
- easily decomposable/oxidizing substances (e.g. perchloric acid, peroxides, some nitrates or nitrate-containing materials, chlorates and others)

#### Packaging

The waste must be disposed of in a 5 or 10-litre UN-certified jerry can with the appropriate labels completely filled in. The outside of the drums must be clean and dry. Jerry cans must not be filled more than 90% and must be properly secured. The maximum net weight is 25 kg per package.

#### Labels

1. RU003 Anorganische zuren  
Article: W.HW.S-00304  
Waste stream number: 01CH8Y06BE71
2. ADR label 8



3. Label information to be completed: components, P number, project code, department and date

#### Disposal

In the Linnaeusborg, full jerry cans must be placed on the bottom shelf of the fireproof cupboard – all jerry cans present at 2 p.m. on Monday will be collected that week. New packaging/containers will be provided during the next Logistics round. If there is not enough packaging available, please contact the Logistics Department, tel. 050-3634102, email [logistics@rug.nl](mailto:logistics@rug.nl).

In NB4 and the Energy Academy, containers must be brought to the Logistics Department, room 5116-0001A, on Tuesdays between 9 a.m. and 12 noon. Replacements can be obtained from the Logistics Department Store.

## RU004 PERCHLORIC ACID 15-72%

**Perchloric acid solutions with a concentration  $\geq 72\%$  may not be transported!!!**

### SPECIFIC REQUIREMENTS

Composition:

- perchloric acid CAS [7601-90-3] 15 < 72%
- water > 28%
- in accordance with the composition and other data reported by the client

Other requirements:

**The following substances are excluded:**

- easily decomposable substances

### Packaging

The waste must be disposed of in a 5 or 10-litre UN-certified jerry can with the appropriate labels completely filled in. The outside of the drums must be clean and dry. Jerry cans must not be filled more than 90% and must be properly secured. The maximum net weight is 25 kg per package.

### Labels

1. RU004 Perchlorzuur 15-72%  
Article: W.HW.C-00628  
Waste stream number: 01CH8Y0F0919
2. ADR label 5.1(8)



3. Label information to be completed: components, P number, project code, department and date

### Disposal

In the Linnaeusborg, full jerry cans must be placed on the bottom shelf of the fireproof cupboard – all jerry cans present at 2 p.m. on Monday will be collected that week. New packaging/containers will be provided during the next Logistics round. If there is not enough packaging available, please contact the Logistics Department, tel. 050-3634102, email [logistics@rug.nl](mailto:logistics@rug.nl).

In NB4 and the Energy Academy, containers must be brought to the Logistics Department, room 5116-0001A, on Tuesdays between 9 a.m. and 12 noon. Replacements can be obtained from the Logistics Department Store.

## RU005 LOW-CALORIFIC LIQUIDS

### SPECIFIC REQUIREMENTS

Composition:

- water > 80 %
- volatile, noticeable component < 1%

#### **Other requirements:**

- sediment < 5 %
- floating layer < 2%
- viscosity < 70 cPs
- calorific value < 13.5 MJ/kg
- chlorine < 1%
- bromine < 0.5%
- iodine < 0.1%
- fluorine < 0.5%
- sulphur < 1%
- total Cd and Tl < 6 ppm
- total heavy metals < 0.5%
- mercury < 5 ppm
- flashpoint > 60°C
- pH > 4-8

#### **The following substances are excluded:**

- PCBs/PCTs
- dioxins
- other CMR substances
- nausea-inducing substances
- reactive substances or components

#### *Packaging*

The waste must be disposed of in a UN-certified black 60-litre drum with lid or a UN-certified red/white 6 or 20-litre drum with lid with the appropriate labels completely filled in. The outside of the drums must be clean and dry. The containers must not be filled more than 90% and must be properly secured. The maximum net weight is 25 kg per package.

#### *Labels*

1. RU005 Laagcalorische vloeistoffen  
Article: W.HW.S-00135  
Waste stream number: 01CH8Y06BE72
2. ADR-exempt
3. Label information to be completed: components, P number, project code, department and date

#### *Disposal*

In the Linnaeusborg, full jerry cans must be placed on the bottom shelf of the fireproof cupboard – all jerry cans present at 2 p.m. on Monday will be collected that week. New packaging/containers will be provided during the next Logistics round. If there is not enough packaging available, please contact the Logistics Department, tel. 050-3634102, email [logistics@rug.nl](mailto:logistics@rug.nl).

In NB4 and the Energy Academy, containers must be brought to the Logistics Department, room 5116-0001A, on Tuesdays between 9 a.m. and 12 noon. Replacements can be obtained from the Logistics Department Store.

## RU006 AQUEOUS SOLUTIONS FROM LAB ADR KL3

### SPECIFIC REQUIREMENTS

#### Composition:

- solvents < 20%
- water > 80 %
- floating layer < 2%
- viscosity < 190 cPs
- calorific value < 11.5 MJ/kg
- chlorine < 1%
- bromine < 0.5%
- iodine < 0.1%
- fluorine < 0.5%
- sulphur < 1%
- total Cd and Tl < 6 ppm
- total heavy metals < 0.5%
- flashpoint > 60°C
- pH > 4-8
- mercury < 0.01 ppm
- asbestos (not detectable)
- dioxins (not detectable)
- PCBs/PCTs (not detectable)

#### The following substances are excluded:

- pesticides
- substances with a boiling point below 40°C
- substances with a low odour threshold
- substances that contain organic peroxides

#### Packaging

The waste must be disposed of in a 5 or 10-litre UN-certified jerry can with the appropriate labels completely filled in. The outside of the drums must be clean and dry. Jerry cans must not be filled more than 90% and must be properly secured. The maximum net weight is 25 kg per package.

#### Labels

1. RU006 Waterige oplossing uit lab. Kl3  
Article: W.HW.C-00753  
Waste stream number: 01CH8Y0F6170
2. ADR label 3(6.1)



3. Label information to be completed: components, P number, project code, department and date

*Disposal*

In the Linnaeusborg, full jerry cans must be placed on the bottom shelf of the fireproof cupboard – all jerry cans present at 2 p.m. on Monday will be collected that week. New packaging/containers will be provided during the next Logistics round. If there is not enough packaging available, please contact the Logistics Department, tel. 050-3634102, email [logistics@rug.nl](mailto:logistics@rug.nl).

In NB4 and the Energy Academy, containers must be brought to the Logistics Department, room 5116-0001A, on Tuesdays between 9 a.m. and 12 noon. Replacements can be obtained from the Logistics Department Store.

## RU007 HALOGEN-RICH ORGANIC LIQUIDS

### SPECIFIC REQUIREMENTS

Composition:

- chlorine hydrocarbons
  - water < 20%
- Other requirements:
- pH 4-8

**The following substances are excluded:**

- substances with a boiling point below 40°C
- PCBs
- mercury
- substances with a low odour threshold
- substances that contain organic peroxides
- waste that contains monomers
- substances that contain hard particles
- packaging > 10 l

#### *Packaging*

The waste must be disposed of in a 5 or 10-litre UN-certified jerry can with the appropriate labels completely filled in. The outside of the drums must be clean and dry. Jerry cans must not be filled more than 90% and must be properly secured. The maximum net weight is 25 kg per package.

#### *Labels*

1. RU007 Halogeenrijke organische vloeistof  
Article: W.HW.C-00753  
Waste stream number: 01CH8Y0F6170
2. ADR label 6.1(3)



3. Label information to be completed: components, P number, project code, department and date

#### *Disposal*

In the Linnaeusborg, full jerry cans must be placed on the bottom shelf of the fireproof cupboard – all jerry cans present at 2 p.m. on Monday will be collected that week. New packaging/containers will be provided during the next Logistics round. If there is not enough packaging available, please contact the Logistics Department, tel. 050-3634102, email [logistics@rug.nl](mailto:logistics@rug.nl).

In NB4 and the Energy Academy, containers must be brought to the Logistics Department, room 5116-0001A, on Tuesdays between 9 a.m. and 12 noon. Replacements can be obtained from the Logistics Department Store.

## RU008 SOLVENTS, TOXIC, HALOGEN-FREE

### SPECIFIC REQUIREMENTS

Composition:

- benzene, toluene, methanol, acetonitrile, etc. 100%
- sulphur < 1%
- sodium, potassium (separate) < 1%
- mercury < 5 ppm
- delivery temperature < 30°C

#### **The following substances are excluded:**

PCBs/PCTs, asbestos, dioxins, foul-smelling and nausea-inducing substances, pesticides, aluminium and magnesium powder, gas cylinders, phosphorus, pyrophoric substances, batteries, explosive and potentially explosive substances (picric acid, etc. carbides, peroxides)

#### *Packaging*

The waste must be disposed of in a 5 or 10-litre UN-certified jerry can with the appropriate labels completely filled in. The outside of the drums must be clean and dry. Jerry cans must not be filled more than 90% and must be properly secured. The maximum net weight is 25 kg per package.

#### *Labels*

1. RU008 Oplosmiddel, giftig, halogeen vrij  
Article: W.HW.C-002<sup>E5</sup>  
Waste stream number: 01CH8YoF0989
2. ADR label 3(6.1)



3. Label information to be completed: components, P number, project code, department and date

#### *Disposal*

In the Linnaeusborg, full jerry cans must be placed on the bottom shelf of the fireproof cupboard – all jerry cans present at 2 p.m. on Monday will be collected that week. New packaging/containers will be provided during the next Logistics round. If there is not enough packaging available, please contact the Logistics Department, tel. 050-3634102, email [logistics@rug.nl](mailto:logistics@rug.nl).

In NB4 and the Energy Academy, containers must be brought to the Logistics Department, room 5116-0001A, on Tuesdays between 9 a.m. and 12 noon. Replacements can be obtained from the Logistics Department Store.

## RU009 LOW-HALOGEN SOLVENTS

### SPECIFIC REQUIREMENTS

#### Composition:

- hydrocarbons 65-100%
  - water 0-20%
  - dry matter content (DM) 0-15%
- Other requirements:
- viscosity < 100 cPs
  - chlorine < 1%
  - calorific value > 25 MJ/kg
  - pH 4-8
  - boiling point > 40°C
  - vapour pressure > 500 hPa (500 mbar at 20°C)

#### The following substances are excluded:

- nausea-inducing substances, reactive substances or components, excise goods
- organic peroxides, monomers, explosive substances, PCBs, dioxins, furans
- heavy metals (As, Co, Cr, Cu, Hg, Ni, Pb, Sb, Se, Sn, Te, V, Zn, Cd, Ti)
- substances with a legal limit value (long-term exposure – systemic effects inhalation) < 1 ppm
- unknown substances

#### Packaging

The waste must be disposed of in a 5 or 10-litre UN-certified jerry can with the appropriate labels completely filled in. The outside of the drums must be clean and dry. Jerry cans must not be filled more than 90% and must be properly secured. The maximum net weight is 25 kg per package.

#### Labels

1. RU009 Oplosmiddelen Halogeenarm  
Article: W.HW.S-00212  
Waste stream number: 01CH8Y06BE73
2. ADR label 3



3. Label information to be completed: components, P number, project code, department and date

#### Disposal

In the Linnaeusborg, full jerry cans must be placed on the bottom shelf of the fireproof cupboard – all jerry cans present at 2 p.m. on Monday will be collected that week. New packaging/containers will be provided during the next Logistics round. If there is not enough packaging available, please contact the Logistics Department, tel. 050-3634102, email [logistics@rug.nl](mailto:logistics@rug.nl).

In NB4 and the Energy Academy, containers must be brought to the Logistics Department, room 5116-0001A, on Tuesdays between 9 a.m. and 12 noon. Replacements can be obtained from the Logistics Department Store.

## RU010 CORROSIVE LIQUIDS

### SPECIFIC REQUIREMENTS

Composition:

corrosive liquids < 100%

(e.g. solvents, adhesives, detergents, disinfectants, etc.)

Other requirements/standard composition:

- cadmium < 50 ppm
- mercury < 10 ppm
- pH > 8

**The following substances are excluded:**

- sediment > 10%

#### *Packaging*

The waste must be disposed of in a 5 or 10-litre UN-certified jerry can with the appropriate labels completely filled in. The outside of the drums must be clean and dry. Jerry cans must not be filled more than 90% and must be properly secured. The maximum net weight is 25 kg per package.

#### *Labels*

1. RU010 Bijtende vloeistof  
Article: W.HW.C-02954  
Waste stream number: 01CH8Y0F0918
2. ADR label 8 (MG)



3. Label information to be completed: components, P number, project code, department and date

#### *Disposal*

In the Linnaeusborg, full jerry cans must be placed on the bottom shelf of the fireproof cupboard – all jerry cans present at 2 p.m. on Monday will be collected that week. New packaging/containers will be provided during the next Logistics round. If there is not enough packaging available, please contact the Logistics Department, tel. 050-3634102, email [logistics@rug.nl](mailto:logistics@rug.nl).

In NB4 and the Energy Academy, containers must be brought to the Logistics Department, room 5116-0001A, on Tuesdays between 9 a.m. and 12 noon. Replacements can be obtained from the Logistics Department Store.

## RU011 AMMONIA, AQUEOUS SOLUTION < 25%

### SPECIFIC REQUIREMENTS

#### Composition:

- ammonia CAS [1336-21-6] 0-25%
- water > 75 %
- heavy metals (not detectable)
- cyanide (not detectable)

#### Packaging

The waste must be disposed of in a 5 or 10-litre UN-certified jerry can with the appropriate labels completely filled in. The outside of the drums must be clean and dry. Jerry cans must not be filled more than 90% and must be properly secured. The maximum net weight is 25 kg per package.

#### Labels

1. RU011 Ammonia  
Article: W.HW.S-00026  
Waste stream number: 01CH8Y06BE60
2. ADR label 8



3. Label information to be completed: components, P number, project code, department and date

#### Disposal

In the Linnaeusborg, full jerry cans must be placed on the bottom shelf of the fireproof cupboard – all jerry cans present at 2 p.m. on Monday will be collected that week. New packaging/containers will be provided during the next Logistics round. If there is not enough packaging available, please contact the Logistics Department, tel. 050-3634102, email [logistics@rug.nl](mailto:logistics@rug.nl).

In NB4 and the Energy Academy, containers must be brought to the Logistics Department, room 5116-0001A, on Tuesdays between 9 a.m. and 12 noon. Replacements can be obtained from the Logistics Department Store.

## RU012 INORGANIC ALKALIS

**Alkalis containing cyanide and organic alkalis are excluded.**  
These waste streams must be requested separately.

### SPECIFIC REQUIREMENTS

Composition:

- sodium hydroxide
- potassium hydroxide 0-15%
- calcium hydroxide
- water 81-100%

**The following substances are excluded:**

- cyanide
- sodium hypochlorite
- organic alkalis
- oxidizing substances
- ammonia
- waste products that cause odour nuisance (for example mercaptans, thiophenes, organic amines, etc.)
- waste products with a temperature of  $> 40^{\circ}\text{C}$  (cooling can lead to crystallization during the transport and delivery of the waste)
- waste products with a density  $> 1400 \text{ kg/m}^3$  (when delivered in bulk) substances with a density  $> 1400 \text{ kg/m}^3$  may only be disposed of in UN-certified IBCs or containers
- waste products with a flammable gas concentration  $> 5\%$  of the LEL (lower explosion level)
- waste products with a flashpoint  $< 55^{\circ}\text{C}$
- waste products that cause harmful concentrations of noxious fumes (e.g. bromine, phenol,  $\text{NO}_x$ , HCN (hydrogen cyanide) and others)
- easily decomposable/oxidizing substances (e.g. perchloric acid, peroxides, some nitrates or nitrate-containing materials, chlorates and others)

### Packaging

The waste must be disposed of in a 5 or 10-litre UN-certified jerry can with the appropriate labels completely filled in. The outside of the drums must be clean and dry. Jerry cans must not be filled more than 90% and must be properly secured. The maximum net weight is 25 kg per package.

### Labels

1. RU012 Anorganische basen  
Article: W.HW.S-00178  
Waste stream number: 01CH8Y06BE65
2. ADR label 8



3. Label information to be completed: components, P number, project code, department and date

*Disposal*

In the Linnaeusborg, full jerry cans must be placed on the bottom shelf of the fireproof cupboard – all jerry cans present at 2 p.m. on Monday will be collected that week. New packaging/containers will be provided during the next Logistics round. If there is not enough packaging available, please contact the Logistics Department, tel. 050-3634102, email [logistics@rug.nl](mailto:logistics@rug.nl).

In NB4 and the Energy Academy, containers must be brought to the Logistics Department, room 5116-0001A, on Tuesdays between 9 a.m. and 12 noon. Replacements can be obtained from the Logistics Department Store.

## RU013 WASTE OIL

### SPECIFIC REQUIREMENTS

The original packaging must be in good condition, i.e. without leaks and undamaged.

- waste oil > 95%
- waste oil solely includes lubricants or hydraulic fluids with or without water, sediment, gas oil, diesel oil and light and heavy fuel oil
- waste oil must have an organic halogen content (measured as chlorine equivalents) below 100 mg/kg
- waste oil must have a water content below 5%
- waste oil must have a PCB content of less than 0.5 mg/kg per congener of 28, 52, 101, 118, 138, 153 or 180
- waste oil must have a flashpoint higher than 60°C
- sediment content < 1 vol. %
- waste oil does not include drilling, grinding, cutting and rolling oils or emulsions of these substances

#### *Packaging*

The waste must be disposed of in a 5 or 10-litre UN-certified jerry can with the appropriate labels completely filled in. The outside of the drums must be clean and dry. Jerry cans must not be filled more than 90% and must be properly secured. The maximum net weight is 25 kg per package.

#### *Labels*

1. RU013 Afgewerkte olie  
Article: W.HW.S-00008  
Waste stream number: 01CH8Y06BE64
2. ADR-exempt
3. Label information to be completed: components, P number, project code, department and date

#### *Disposal*

In the Linnaeusborg, full jerry cans must be placed on the bottom shelf of the fireproof cupboard – all jerry cans present at 2 p.m. on Monday will be collected that week. New packaging/containers will be provided during the next Logistics round. If there is not enough packaging available, please contact the Logistics Department, tel. 050-3634102, email [logistics@rug.nl](mailto:logistics@rug.nl).

In NB4 and the Energy Academy, containers must be brought to the Logistics Department, room 5116-0001A, on Tuesdays between 9 a.m. and 12 noon. Replacements can be obtained from the Logistics Department Store.

## RU014 COOLANT, MONOETHYLENE GLYCOL

### SPECIFIC REQUIREMENTS

The following waste products may **not** be processed in this waste stream:

- drilling, cutting, grinding, or rolling oils (often white in colour)
- brake fluid (often brown in colour)

**Coolant is often bright blue/green or pink coloured!**

Composition:

- monoethylene glycol > 30%
- water < 70%
- oil < 4%

Other requirements:

- sediment < 1%
- chlorine (not detectable)
- sulphur (not detectable)
- fluorine (not detectable)
- blue/green or pink colour
- no PCBs
- flashpoint > 60°C

### *Packaging*

The waste must be disposed of in a 5 or 10-litre UN-certified jerry can with the appropriate labels completely filled in. The outside of the drums must be clean and dry. Jerry cans must not be filled more than 90% and must be properly secured. The maximum net weight is 25 kg per package.

### *Labels*

1. RU014 Coolant, monoethylene glycol  
Article: W.HW.S-00336  
Waste stream number: 01CH8Y06BE75
2. ADR-exempt
3. Label information to be completed: components, P number, project code, department and date

### *Disposal*

In the Linnaeusborg, full jerry cans must be placed on the bottom shelf of the fireproof cupboard – all jerry cans present at 2 p.m. on Monday will be collected that week. New packaging/containers will be provided during the next Logistics round. If there is not enough packaging available, please contact the Logistics Department, tel. 050-3634102, email [logistics@rug.nl](mailto:logistics@rug.nl).

In NB4 and the Energy Academy, containers must be brought to the Logistics Department, room 5116-0001A, on Tuesdays between 9 a.m. and 12 noon. Replacements can be obtained from the Logistics Department Store.

## RU015 LABORATORY GLASSWARE, EMPTY

### SPECIFIC REQUIREMENTS

Composition:

glass 99.9%

product residues 0.1%

The following substances are excluded:

- borosilicate glass
- flat glass
- CMR substances
- nausea-inducing substances
- reactive substances or components

#### *Labels*

Attached by staff of the Logistics Department

#### *Disposal*

Contaminated glass is collected in red 120-litre containers, which can be found in the waste corners in the Linnaeusborg. Appendix X (*Location of waste material in the Linnaeusborg*) provides an overview of where to dispose of contaminated glass in the Linnaeusborg. If the containers are full, please report this to the Logistics Department, tel. 050-3634102, email [logistics@rug.nl](mailto:logistics@rug.nl).

In NB4, glass containers can be found in the hall on every floor.

## RU016 SCINTILLATION VIALS

### SPECIFIC REQUIREMENTS

Composition:  
scintillation liquid 100%

Other requirements:

- chlorine < 1%
- sulphur < 1%
- cadmium < 50 ppm
- mercury < 10 ppm
- pH 4-12
- thermal degradability < 900°C

#### *Packaging*

The waste must be disposed of in a UN-certified black 60-litre drum with lid or a UN-certified red/white 6 or 20-litre drum with lid with the appropriate labels completely filled in. The outside of the drums must be clean and dry. The containers must not be filled more than 90% and must be properly secured. The maximum net weight is 25 kg per package.

#### *Labels*

1. RU016 Telpotjes  
Article: W.HW.C-001CI  
Waste stream number: 01CH8Y073AD2
2. ADR-exempt
3. Label information to be completed: components, P number, project code, department and date

#### *Disposal*

In the Linnaeusborg, full jerry cans must be placed on the bottom shelf of the fireproof cupboard – all jerry cans present at 2 p.m. on Monday will be collected that week. New packaging/containers will be provided during the next Logistics round. If there is not enough packaging available, please contact the Logistics Department, tel. 050-3634102, email [logistics@rug.nl](mailto:logistics@rug.nl).

In NB4 and the Energy Academy, containers must be brought to the Logistics Department, room 5116-0001A, on Tuesdays between 9 a.m. and 12 noon. Replacements can be obtained from the Logistics Department Store.

## RU017 HAZARDOUS OFFICE WASTE (excluding batteries)

### SPECIFIC REQUIREMENTS

The following waste products may be disposed of as office waste:

- toner powder reservoirs
- computer reels or tapes
- correction fluid bottles
- thinner jars
- markers and pens
- stamp boxes
- rolls of ink/printer ribbons
- rolls of typewriter ribbons
- toner cartridges
- inkjet cartridges

Other requirements:

- item size < 10 l
- metal < 5%

### **The following substances are excluded:**

- spray cans
- batteries
- free liquid
- loose powder (including toner powder )
- dusty waste

### *Labels*

Attached by staff of the Logistics Department

### *Packaging and disposal*

In the Linnaeusborg, office waste must be placed in the grey containers with black lids marked 'Office waste box' on the shelf in the waste corner. As soon as the container is full, it will be emptied by the Logistics Department.

If the containers have not been emptied, please contact the Logistics Department, tel. 050-3634102, email [logistics@rug.nl](mailto:logistics@rug.nl).

In NB4 and the Energy Academy, office waste can be brought to the Logistics Department Store desk during the Store's opening hours. Office waste can also be brought to the Logistics Department, room 5116-0001A, on Tuesdays between 9 a.m. and 12 noon (the hazardous waste collection day).

## RU018 METALLIC MERCURY

### SPECIFIC REQUIREMENTS

Only packages containing pure metallic mercury, i.e. no other objects or contaminants will be accepted.

#### *Packaging*

The waste must be packaged and disposed of in a UN-certified black 60-litre drum with lid and inner receptacle, or a UN-certified red/white 6 or 20-litre drum with lid with the appropriate labels completely filled in. The outside of the drums must be clean and dry. The containers must not be filled more than 90% and must be properly secured. The maximum net weight is 25 kg per package.

#### *Labels*

1. RU018 Kwik metalisch  
Article: W.HW.S-00128  
Waste stream number: 01CH8Y06BE6F
2. ADR label 8(6.1)



3. Label information to be completed: components, P number, project code, department and date

#### *Disposal*

In the Linnaeusborg, full containers must be placed on the shelf in the waste corner – all containers present at 2 p.m. on Monday will be collected that week.

New packaging/containers will be provided during the next Logistics round. If there is not enough packaging available, please contact the Logistics Department, tel. 050-3634102, email [logistics@rug.nl](mailto:logistics@rug.nl).

In NB4 and the Energy Academy, containers must be brought to the Logistics Department, room 5116-0001A, on Tuesdays between 9 a.m. and 12 noon. Replacements can be obtained from the Logistics Department Store.

## RU019 MERCURY-CONTAINING OBJECTS

### SPECIFIC REQUIREMENTS

Examples include mercury thermometers, switches, relays and barometers. Do not dispose of metallic mercury as a mercury-containing object.

#### *Packaging*

The waste must be disposed of in a UN-certified black 60-litre drum with lid or a UN-certified red/white 6 or 20-litre drum with lid with the appropriate labels completely filled in. The outside of the drums must be clean and dry. The containers must not be filled more than 90% and must be properly secured. The maximum net weight is 25 kg per package.

#### *Labels*

1. RU019 Kwikhoudend afval  
Article: W.HW.S-00132  
Waste stream number: 01CH8Y0BAF64
2. ADR label 8(6.1)



3. Label information to be completed: components, P number, project code, department and date

#### *Disposal*

In the Linnaeusborg, full containers must be placed on the shelf in the waste corner – all containers present at 2 p.m. on Monday will be collected that week.

New packaging/containers will be provided during the next Logistics round. If there is not enough packaging available, please contact the Logistics Department, tel. 050-3634102, email [logistics@rug.nl](mailto:logistics@rug.nl).

In NB4 and the Energy Academy, containers must be brought to the Logistics Department, room 5116-0001A, on Tuesdays between 9 a.m. and 12 noon. Replacements can be obtained from the Logistics Department Store.

## RU020 LABORATORY CHEMICALS

### SPECIFIC REQUIREMENTS

This includes all packaging contaminated with chemical residues.

#### *Labels*

Attached by staff of the Logistics Department

#### *Packaging and disposal*

When dealing with packaging contaminated with liquid chemical residue, please check whether there is a disposal container for the relevant waste stream first. Use a new container if necessary.

If it concerns a solid, please consider whether it can be dissolved in a suitable solvent and then disposed of in the appropriate waste stream.

In the Linnaeusborg, this packaging must be placed in the drip tray on the top shelf of the fireproof cupboard in the Logistics Corner.

Packaging contaminated with residues must be reported to the hazardous substances and waste officer (Stijntje Bosman, Logistics Department, [S.T.Bosman@rug.nl](mailto:S.T.Bosman@rug.nl)) before it is placed in the Logistics Corner.

When handing in these residues, please prepare an accompanying list with the following information:

names of the chemicals

CAS no.

quantity

P-number

project number

As soon as the drip tray is full, it will be emptied by the Logistics Department.

In NB4, this packaging can be handed in to the Store every day between 9 a.m. and 1 p.m.

In the Energy Academy, the packaging can be brought to the Logistics Department, room 5116-0010, every day between 9 a.m. and 1 p.m.

## RU021 EMPTY PLASTIC PACKAGING < 60 l

### SPECIFIC REQUIREMENTS

Only jerry cans < 60 l that have contained substances of class 3, 4.1, 8 or 9.  
The packaging must be completely empty (scraped clean) and covered with a lid!!

#### **The following substances are excluded:**

- explosives, gases, substances that react with water (ADR 4.3) and oxidizing substances (ADR 5.1 and 5.2)
- toxic substances (ADR 6.1), substances classified in packing group I or assigned a 'o' in column (7a) of table A of Chapter 3.2 substances classified as desensitized explosive substances in class 3 or class 4.1
- substances classified as self-reactive substances in class 4.1
- asbestos (UN numbers 2590 and 2212), polychlorinated biphenyls (UN numbers 2315 and 3432) and polyhalogenated biphenyls or polyhalogenated terphenyls (UN numbers 3151 and 3152)

#### *Labels*

Attached by staff of the Logistics Department

#### *Packaging and disposal*

The outside of the packaging must be clean and dry and the lid must be tightly secured. Please use a suitable replacement lid or cover the opening with parafilm if there is no original lid available.

In the Linnaeusborg, the empty packaging must be placed in the drip tray on the top shelf of the fireproof cupboard in the Logistics Corner. As soon as the tray is full, it will be emptied by the Logistics Department.

In NB4 and the Energy Academy, the empty packaging can be handed in to the Store every day between 9 a.m. and 1 p.m.

## **RU022 Lead Batteries**

### **SPECIFIC REQUIREMENTS**

- The lead batteries must be free of other waste products.
- Nickel-cadmium batteries must be disposed of separately from lead batteries.
- The battery tray may not contain any free liquid.

Other requirements:

Never throw batteries.

No UNCOVERED battery terminals: MAKE SURE TO TAPE OVER ALL BATTERY TERMINALS

#### *Labels*

Attached by staff of the Logistics Department

In the Linnaeusborg, batteries may be placed in the drip tray on the top shelf of the fireproof cupboard in the Logistics Corner.

As soon as the tray is full, it will be emptied by the Logistics Department.

If the tray has not been emptied, please contact the Logistics Department, tel. 050-3634102, email [logistiekbeheer.nb4@rug.nl](mailto:logistiekbeheer.nb4@rug.nl).

In NB4 and the Energy Academy, lead batteries can be handed in to the Logistics Department, room 5116-0001A, on Tuesdays between 9 a.m. and 12 noon (the hazardous waste collection day).

## **RU023 MEDICINES/COSMETICS**

### **SPECIFIC REQUIREMENTS**

Medicines and cosmetics in consumer packaging and products that have passed their expiry date.

Liquid medicines are subject to a maximum package size:

- max. 50 ml for medicines diluted with organic substances (alcohol, etc.)
- max. 1000 ml for medicines diluted with water (cough medicine, lens fluids, etc.)

The waste must not contain or comprise:

- any free liquid
- any loose powder
- any chemicals or raw materials used in the production of medicines or cosmetics
- syringes fitted with hypodermic needles
- hypodermic needles
- iodine
- mercury thermometers
- spray cans

Medicines and cosmetics may be disposed of in mixed form.

#### *Labels*

Attached by staff of the Logistics Department

#### *Packaging and disposal*

In the Linnaeusborg, this packaging must be placed in the drip tray on the top shelf of the fireproof cupboard in the Logistics Corner.

In NB4 and the Energy Academy, the packaging can be handed in to the Store every day between 9 a.m. and 1 p.m.

## **RU024 OIL-CONTAINING WASTE**

(towels/absorbent granules contaminated with oil, EXCLUDING oil filters)

### **SPECIFIC REQUIREMENTS**

The following waste products may be disposed of as oil-containing waste:

- cleaning cloths and gloves contaminated with oil or fat (no solvents)
- absorption material contaminated with oil or fat (no solvents)
- oil tins, oil/antifreeze containers (max. volume 2 l); completely empty and without lid
- v-belts < 60 cm
- oil containment booms < 60 cm
- air filters
- spark plugs

Other requirements:  
flashpoint > 60°C

### **Excluded waste**

- unsaturated, drying natural oils are excluded because of the risk of smouldering and igniting (e.g. linseed oil, tung oil, thistle oil (safflower oil), soybean oil, wheatgerm oil, fish oil, vegetable oil, sunflower oil, corn oil, sesame oil, rapeseed oil, citrus oil, olive oil, peanut oil, coconut oil and castor oil)
- substances with a low odour threshold
- free liquids or free fat
- spray cans
- hydraulic hoses/v-belts > 60 cm or other materials longer than 60 cm

### *Packaging*

The waste must be disposed of in a 5 or 10-litre UN-certified jerry can with the appropriate labels completely filled in. The outside of the drums must be clean and dry. Jerry cans must not be filled more than 90% and must be properly secured. The maximum net weight is 25 kg per package.

### *Labels*

1. RU024 Oliehoudend afval  
Article: W.HW.S-00204  
Waste stream number: 01CH8Y06C1CE
2. ADR-exempt
3. Label information to be completed: components, P number, project code, department and date

### *Disposal*

In the Linnaeusborg, full jerry cans must be placed on the bottom shelf of the fireproof cupboard – all jerry cans present at 2 p.m. on Monday will be collected that week. New packaging/containers will be provided during the next Logistics round. If there is not enough packaging available, please contact the Logistics Department, tel. 050-3634102, email [logistics@rug.nl](mailto:logistics@rug.nl).

In NB4 and the Energy Academy, containers must be brought to the Logistics Department, room 5116-0001A, on Tuesdays between 9 a.m. and 12 noon. Replacements can be obtained from the Logistics Department Store.

## **RU025 WASTE CONTAMINATED WITH PAINT, INK, OR GLUE**

(No cleaning cloths containing solvents)

### **SPECIFIC REQUIREMENTS**

#### Composition:

Solid waste such as brushes, paper, cardboard, wood, cleaning cloths and plastic contaminated with completely hardened paint, ink, glue or resin, equivalent to a single layer (max. thickness 5 mm).

#### Other requirements:

The waste may not contain solvents: **CLEANING CLOTHS WITH SOLVENTS** must be processed separately in line with ADR legislation.

- weight per unit of waste < 5 kg
- maximum dimensions < 50 x 50 x 50 cm
- flashpoint > 100°C
- pH 5-9
- silicone < 1%
- sulphur < 4 %
- organic chlorine < 4%
- organic fluorine < 0.1%
- bromine and iodine (total content) < 0.1%
- glass < 20%
- tin/metals < 5%

All waste must be disposed of free of dust and covered; the waste may not give off dust during handling or processing.

#### **The following substances are excluded:**

- CMR substances
- nausea-inducing substances
- reactive substances or components

#### *Packaging*

The waste must be disposed of in a UN-certified black 60-litre drum with lid or a UN-certified red/white 6 or 20-litre drum with lid with the appropriate labels completely filled in. The outside of the drums must be clean and dry. The containers must not be filled more than 90% and must be properly secured. The maximum net weight is 25 kg per package.

#### *Labels*

1. RU025 Opruimafval met verf/inkt/lak/lijm  
Article: W.HW.S-00282  
Waste stream number: 01CH8Y0BE67
2. ADR-exempt
3. Label information to be completed: components, P number, project code, department and date

*Disposal*

In the Linnaeusborg, full containers must be placed on the shelf in the waste corner – all containers present at 2 p.m. on Monday will be collected that week.

New packaging/containers will be provided during the next Logistics round. If there is not enough packaging available, please contact the Logistics Department, tel. 050-3634102, email [logistics@rug.nl](mailto:logistics@rug.nl).

In NB4 and the Energy Academy, containers must be brought to the Logistics Department, room 5116-0001A, on Tuesdays between 9 a.m. and 12 noon. Replacements can be obtained from the Logistics Department Store.

# **RU026 GENERAL WASTE/FILTERS WITH CHEMICAL RESIDUES**

## **SPECIFIC REQUIREMENTS**

Composition:

- filters, cloths, absorption material 90%
  - chemical residues 10%
- Other requirements/standard composition:
- chlorine < 1%
  - sulphur < 1%
  - cadmium < 50 ppm
  - mercury < 10 ppm
  - pH 4-12
  - thermal degradability < 900°C

### **The following substances are excluded:**

- asbestos-containing waste (if asbestos > 100 mg/kg DS)
- specific hospital waste (SZA)
- condensers, transformers and/or oil containing PCBs/PCTs
- gas cylinders and gases
- pyrotechnic substances and substances prone to spontaneous combustion
- organic nitro-compounds
- chromium VI
- objects loaded with explosive substances and substances or articles used to produce explosions, fireworks, etc. or explosive substances n.e.g.
- potassium, sodium (metal)
- substances which form flammable gases in contact with water
- substances containing beryllium (if Be > 5%), substances containing selenium (if Se > 5%), waste containing arsenic (if As > 5%)
- inorganic acids
- metal objects larger than 5 cm or metal bolts
- easily decomposable substances
- fluorine, bromine, iodine
- outer packagings with waste/product residues

### *Packaging*

The waste must be disposed of in a UN-certified black 60-litre drum with lid or a UN-certified red/white 6 or 20-litre drum with lid with the appropriate labels completely filled in. The outside of the drums must be clean and dry. The containers must not be filled more than 90% and must be properly secured. The maximum net weight is 25 kg per package.

### *Labels*

1. RU026 Opruimafval/filters met chem.resten  
Article: W.HW.S-00335  
Waste stream number: 01CH8Y0725F3
2. ADR 4.1



3. Label information to be completed: components, P number, project code, department and date

*Disposal*

In the Linnaeusborg, full containers must be placed on the shelf in the waste corner – all containers present at 2 p.m. on Monday will be collected that week.

New packaging/containers will be provided during the next Logistics round. If there is not enough packaging available, please contact the Logistics Department, tel. 050-3634102, email [logistics@rug.nl](mailto:logistics@rug.nl).

In NB4 and the Energy Academy, containers must be brought to the Logistics Department, room 5116-0001A, on Tuesdays between 9 a.m. and 12 noon.

Replacements can be obtained from the Logistics Department Store.

## RU027 LUBRICATING GREASE

### SPECIFIC REQUIREMENTS

- waste products must be solid or semi-solid; liquid waste products will not be accepted
- powders that give off dust will not be accepted
- no hardeners or 2-component materials
- no heavy metals
- no solvents

### Other requirements:

- flashpoint > 61 °C
- chlorine < 1%
- sulphur < 0.5 %
- fluorine, bromine and iodine < 1000 ppm
- no PCBs/PCTs
- no mercury

### *Packaging*

The waste must be disposed of in a UN-certified black 60-litre drum with lid or a UN-certified red/white 6 or 20-litre drum with lid with the appropriate labels completely filled in. The outside of the drums must be clean and dry. The containers must not be filled more than 90% and must be properly secured. The maximum net weight is 25 kg per package.

### *Labels*

1. RU027 Smeervetten  
Article: W.HW.S-00246  
Waste stream number: 01CH8Y06BE66
2. ADR-exempt
3. Label information to be completed: components, P number, project code, department and date

### *Disposal*

In the Linnaeusborg, full containers must be placed on the shelf in the waste corner – all containers present at 2 p.m. on Monday will be collected that week.

In NB4 and the Energy Academy, the packaging can be handed in to the Store every day between 9 a.m. and 1 p.m.

## **RU28 SPRAY CANS**

### **SPECIFIC REQUIREMENTS**

- spray cans with a maximum content of 1000 ml
- spray cans must not contain CFCs (chlorofluorocarbons)
- only spray cans may be disposed of under this category
- the packaging must be filled with a material (e.g. an absorbent material) that will absorb any liquid that escapes during transport
- the packaging must be sufficiently ventilated to prevent the formation of a flammable atmosphere and pressure build-up

### **THE FOLLOWING PRODUCTS ARE PROHIBITED:**

- fire extinguishers, lighters, camping gas bottles/canisters and CO<sub>2</sub> cartridges

#### *Labels*

Attached by staff of the Logistics Department

#### *Packaging and disposal*

In the Linnaeusborg, this packaging must be placed in the drip tray on the top shelf of the fireproof cupboard in the Logistics Corner.

In NB4 and the Energy Academy, the packaging can be handed in to the Store every day between 9 a.m. and 1 p.m.

## **RU029 FLUORESCENT LAMPS, STRAIGHT**

### **SPECIFIC REQUIREMENTS**

- Types of fluorescent lighting tubes:
  - straight fluorescent lamps of various dimensions
  - round fluorescent lamps of various dimensions
  - other non-standard fluorescent lamp types with various dimensions
  - sodium-vapour lamps
  - energy-saving lamps
- Hand in fluorescent lamps without their individual cardboard packaging.
- Fluorescent lamps with broken glass will not be accepted.

### *Labels*

Attached by staff of the Logistics Department

### *Packaging and disposal*

In the Linnaeusborg, this packaging must be placed in the drip tray on the top shelf of the fireproof cupboard in the Logistics Corner.

In NB4 and the Energy Academy, the lamps can be handed in to the Store every day between 9 a.m. and 1 p.m.

## **RU030 RISKY MEDICAL WASTE / SPECIFIC HOSPITAL WASTE**

Concerning waste from obstetrics care and diagnosis, the treatment and prevention of diseases in HUMANS

### **SPECIFIC REQUIREMENTS**

Specific hospital waste refers to: 1

- Human anatomical remains and body parts produced during surgical and obstetric procedures, during an autopsy or during scientific research or education-related activities
- laboratory animals and body parts of these animals (unless these are to be destroyed)
- waste from microbiological laboratories contaminated with bacteria, viruses or fungi
- sharp objects, such as hypodermic needles, cut-off capillaries, scalpels, broken instruments and blood tubes
- blood, plasma and other semi-solid and liquid waste (e.g. wound fluid, drain fluid and pus) that is not dried up (and thus present in liquid form)
- cytostatics
- bedding waste from laboratory animals (if contaminated with germs described under Group A and B of the Control of Infectious Diseases and Investigation of Causes of Disease Act, or if the animals have been treated with medicines)
- waste from wards or rooms where patients are being nursed in isolation because of the risk of infection for hospital staff

The following substances may **not** be disposed of as specific hospital waste:

- paraffin-containing substances
- radioactive elements
- Only genetically modified organisms (GMOs)
- The waste may not contain any free liquids. If one of the waste products listed is in liquid form, this waste product must be absorbed by absorption material before being deposited in the drum.

Contaminated hospital waste includes the following waste products:

- Human anatomical remains and body parts produced during surgical and obstetric procedures, during an autopsy or during scientific research or education-related activities.
- Waste from wards/rooms where patients are being nursed in isolation because of the risk of infection for hospital staff.
- Waste from microbiological laboratories contaminated with bacteria, viruses or fungi.
- Sharp objects, such as hypodermic needles, cut-off capillaries, scalpels, broken instruments, glass blood tubes, etc.
- Do not place loose hypodermic needles or sharp objects in the drums/containers! Hypodermic needles must be placed in a needle container first. The needle container can then be placed in the drum/container.
- 'Large' amounts of blood, plasma and other semi-solid and liquid waste.
- Cytostatics.
- Liquids must be presented in amounts that do not exceed 1 litre, up to a maximum of 10% of the content of the plastic drum.

### *Packaging*

This waste must be disposed of in a 25 or 50-litre blue-yellow WIVA container or MediBin (supplied by the Logistics Department). The waste containers must be properly secured. The outside of the drums must be clean and dry. The containers must not be filled more than 90% and must be properly secured. The maximum net weight is 25 kg per package.

If there is not enough packaging available, please contact the Logistics Department, tel. 050-3634102, email [logistics@rug.nl](mailto:logistics@rug.nl).

### *Labels*

1. RU030 RMA/Specifiek Ziekenhuis Afval SZA  
Article: W.HW.S-00254  
Waste stream number: 01CH8YoF7438  
ADR 6.2



3. Label information to be completed: components, P number, project code, department and date

### *Disposal*

In the Linnaeusborg, full containers must be placed on the shelf in the waste corner – all containers present at 2 p.m. on Monday will be collected that week.

New packaging/containers will be provided during the next Logistics round. If there is not enough packaging available, please contact the Logistics Department, tel. 050-3634102, email [logistics@rug.nl](mailto:logistics@rug.nl).

In NB4 and the Energy Academy, containers must be brought to the Logistics Department, room 5116-0001A, on Tuesdays between 9 a.m. and 12 noon. Replacements can be obtained from the Logistics Department Store.

## **RU031 SPECIFIC HOSPITAL WASTE (SZA)**

Waste from examinations, diagnosis, and the treatment and prevention of diseases in ANIMALS

### **SPECIFIC REQUIREMENTS**

The following substances may **not** be disposed of as specific hospital waste:

- paraffinic substances
- genetically modified organisms (GMOs)

Contaminated hospital waste includes the following waste products:

- animal anatomical remains and body parts produced during surgical and obstetric procedures, during an autopsy or during scientific research or education-related activities
- laboratory animals and body parts of these animals (unless these are to be destroyed)
- bedding waste from laboratory animals (if contaminated with germs described under Group A and B of the Control of Infectious Diseases and Investigation of Causes of Disease Act, or if the animals have been treated with medicines)
- waste from microbiological laboratories contaminated with bacteria, viruses or fungi
- do not place loose hypodermic needles or sharp objects in the drums/containers! Hypodermic needles must be placed in a needle container first. The needle container can then be placed in the drum/container.
- blood, plasma and other semi-solid and liquid waste
- cytostatics

### **Liquid waste:**

Max. 1 litre of liquid per hospital waste container!!!

Preferably absorb liquid substances with an absorbent material and place this material in the hospital waste container.

### *Packaging*

This waste must be disposed of in a 25 or 50-litre blue-yellow WIVA container or MediBin (supplied by the Logistics Department). The waste containers must be properly secured. The outside of the drums must be clean and dry. The containers must not be filled more than 90% and must be properly secured. The maximum net weight is 25 kg per package.

If there is not enough packaging available, please contact the Logistics Department, tel. 050-3634102, email [logistics@rug.nl](mailto:logistics@rug.nl).

### *Labels*

1. RU031 Spec. Ziekenhuisafval (Eural = dieren)  
Article: W.HW.C-05073  
Waste stream number: 01CH8Y06BE68
2. ADR 6.2



3. Label information to be completed: components, P number, project code, department and date

*Disposal*

In the Linnaeusborg, full containers must be placed on the shelf in the waste corner – all containers present at 2 p.m. on Monday will be collected that week.

New packaging/containers will be provided during the next Logistics round. If there is not enough packaging available, please contact the Logistics Department, tel. 050-3634102, email [logistics@rug.nl](mailto:logistics@rug.nl).

In NB4 and the Energy Academy, containers must be brought to the Logistics Department, room 5116-0001A, on Tuesdays between 9 a.m. and 12 noon. Replacements can be obtained from the Logistics Department Store.

## **RU032 POLYMER WASTE**

### **SPECIFIC REQUIREMENTS**

Composition:

polymer waste 100%

Other requirements/standard composition:

- chlorine < 1%
- sulphur < 1%
- cadmium < 50 ppm
- mercury < 10 ppm
- pH 4-12
- thermal degradability < 900°C
- heavy metals normally found in paint

### **The following substances are excluded:**

- easily decomposable substances
- reactive substances or polymerizing substances
- fluorine
- PCBs/PCTs
- metal objects larger than 5 cm or metal bolts
- asbestos-containing waste
- gas cylinders, bottles, etc.
- pyrophoric substances
- organic nitro-compounds
- explosives, pyrotechnic substances, objects loaded with explosive substances, fireworks, etc.
- metallic sodium/potassium
- substances that may self-ignite
- substances that react strongly with water (i.e. sodium, metallic sodium, potassium)
- strong oxidants (i.e. peroxides, MDI, TDI)
- beryllium, selenium or arsenic-containing waste > 5%
- pesticides
- chromium VI
- specific hospital waste

### *Packaging*

The waste must be disposed of in a UN-certified black 60-litre drum with lid or a UN-certified red/white 6 or 20-litre drum with lid with the appropriate labels completely filled in. The outside of the drums must be clean and dry. The containers must not be filled more than 90% and must be properly secured. The maximum net weight is 25 kg per package.

### *Labels*

1. RU032 Polymeerafval  
Article: W.HW.C-001CH  
Waste stream number: 01CH8Y073AF1
2. ADR-exempt
3. Label information to be completed: components, P number, project code, department and date

*Disposal*

In the Linnaeusborg, full containers must be placed on the shelf in the waste corner – all containers present at 2 p.m. on Monday will be collected that week.

New packaging/containers will be provided during the next Logistics round. If there is not enough packaging available, please contact the Logistics Department, tel. 050-3634102, email [logistics@rug.nl](mailto:logistics@rug.nl).

In NB4 and the Energy Academy, containers must be brought to the Logistics Department, room 5116-0001A, on Tuesdays between 9 a.m. and 12 noon. Replacements can be obtained from the Logistics Department Store.

## RU033 PESTICIDES, solid toxic

### SPECIFIC REQUIREMENTS

Includes all pesticides in solid form in small packaging (small packaging has a volume of < 5 l).

#### The following substances are excluded:

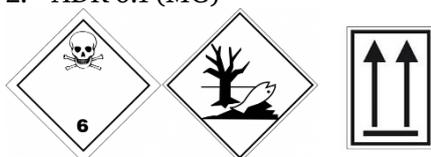
- organic silicon compounds
- reactive, strong or foul-smelling substances
- unknown substances
- solid metal parts
- spray cans
- substances intended for chemical or biological warfare
- explosives
- substances that react together may not be combined
- no filled metal inner packaging
- packaging with markings, labels, stickers or symbols that do not accurately describe the content

#### Packaging

The waste must be disposed of in a UN-certified black 60-litre drum with lid or a UN-certified red/white 6 or 20-litre drum with lid with the appropriate labels completely filled in. The outside of the drums must be clean and dry. The containers must not be filled more than 90% and must be properly secured. The liner must be < 5 l/kg. The lid must be facing upwards and the empty space must be filled up. The maximum net weight is 25 kg per package.

#### Labels

1. RU033 Pesticiden  
Article: W.HW.S-00040  
Waste stream number: 01CH8Y06BE63
2. ADR 6.1 (MG)



3. Label information to be completed: components, P number, project code, department and date

#### Disposal

In the Linnaeusborg, full containers must be placed on the shelf in the waste corner – all containers present at 2 p.m. on Monday will be collected that week.

New packaging/containers will be provided during the next Logistics round. If there is not enough packaging available, please contact the Logistics Department, tel. 050-3634102, email [logistics@rug.nl](mailto:logistics@rug.nl).

In NB4 and the Energy Academy, containers must be brought to the Logistics Department, room 5116-0001A, on Tuesdays between 9 a.m. and 12 noon. Replacements can be obtained from the Logistics Department Store.

## RU034 GLUE, RESIN, SEALANT (SOLID/SEMI-SOLID)

### SPECIFIC REQUIREMENTS

Composition:

glue, resin, sealant (solid/semi-solid) in small packaging (e.g. sealant cartridges, glue tubes) 100%

Other requirements:

- metal packaging max. 5%
- packaging < 5 kg, maximum content 10 l
- chlorine, bromine, iodine and fluorine **none**
- heavy metals **none**

The waste must not give off dust.

### The following substances are excluded:

- silicones
- hardeners (hardeners often contain organic peroxides (isocyanates))
- CMR substances
- nausea-inducing substances
- reactive substances or components

### Packaging

The waste must be disposed of in a UN-certified black 60-litre drum with lid or a UN-certified red/white 6 or 20-litre drum with lid with the appropriate labels completely filled in. The outside of the drums must be clean and dry. The containers must not be filled more than 90% and must be properly secured. The maximum net weight is 25 kg per package.

### Labels

1. RU034 Lijm/hars/kit (vast/pasteus)  
Article: W.HW.S-00172  
Waste stream number: 01CH8Y06BE61
2. ADR 4.1



3. Label information to be completed: components, P number, project code, department and date

### Disposal

In the Linnaeusborg, full containers must be placed on the shelf in the waste corner – all containers present at 2 p.m. on Monday will be collected that week.

New packaging/containers will be provided during the next Logistics round. If there is not enough packaging available, please contact the Logistics Department, tel. 050-3634102, email [logistics@rug.nl](mailto:logistics@rug.nl).

In NB4 and the Energy Academy, containers must be brought to the Logistics Department, room 5116-0001A, on Tuesdays between 9 a.m. and 12 noon.

Replacements can be obtained from the Logistics Department Store.

## **RU035 REFRIGERATORS (white goods)**

### **SPECIFIC REQUIREMENTS**

Refrigerators and the like for the consumer market.

These include:

1. fridges
2. freezers
3. air-conditioning units

Professional cooling equipment such as display counters, drink vending machines and large air-conditioning systems are not included.

The cooling equipment must be empty and clean and/or disinfected.

### *Labels*

Attached by staff of the Logistics Department

### *Disposal*

The In-house Services Department will dispose of fridges and freezers.

Each fridge or freezer must be supplied with a:

1. P-number
2. project number

In the Linnaeusborg you can contact Reception, tel. 050-3632021, email [receptie.lb@rug.nl](mailto:receptie.lb@rug.nl).

In NB4 and the Energy Academy you can contact Reception, tel. 050-3634133, email [receptie-nb4@rug.nl](mailto:receptie-nb4@rug.nl).

In the Energy Academy you can contact Reception, tel. 050-3634133, email [receptie.eae@rug.nl](mailto:receptie.eae@rug.nl).

## RU036 REFRIGERATORS (professional)

### **SPECIFIC REQUIREMENTS**

Cooling equipment for professional use.

These include:

1. display counters
2. drink vending machines
3. large air-conditioning units
4. cooling baths

Household cooling equipment such as fridges, freezers and consumer air-conditioning units are **not** included.

The cooling equipment must be empty and clean and/or disinfected.

### *Labels*

Attached by staff of the Logistics Department

### *Disposal*

The In-house Services Department will dispose of fridges and freezers.

Each fridge or freezer must be supplied with a:

1. P-number
2. project number

In the Linnaeusborg you can contact Reception, tel. 050-3632021, email [receptie.lb@rug.nl](mailto:receptie.lb@rug.nl).

In NB4 you can contact Reception, tel. 050-3634133, email [receptie-nb4@rug.nl](mailto:receptie-nb4@rug.nl).

In the Energy Academy you can contact Reception, tel. 050-3634133, email [receptie.eae@rug.nl](mailto:receptie.eae@rug.nl).

## RU037 GENETICALLY MODIFIED ORGANISMS (GMOs)

### SPECIFIC REQUIREMENTS

GMOs (genetically modified organisms) fall under a separate procedure.

Genetically modified microorganisms and genetically modified organisms that meet the definition of infectious substances and the criteria for classification in class 6.2 in accordance with 2.2.62 must be transported under UN number 3245 (depending on the situation).

The submitter must provide all containers with a label stating 'This product contains genetically modified organisms'.

#### Packaging

This waste must be disposed of in a 25 or 50-litre blue-yellow WIVA container or MediBin (supplied by the Logistics Department). The waste containers must be properly secured. The outside of the containers must be disinfected and dry. The containers must not be filled more than 90%. The maximum net weight is 25 kg per package.

#### Labels

1. RU037 Genetisch Gemodificeerd Organismen (GGO)  
Article: W.HW.S-00256  
Waste stream number: 01CH8Y0C25B2
2. ADR 9



3. Label information to be completed: components, P number, project code, department and date

#### Disposal

In Linnaeusborg, the full containers must be brought to the Logistics Department, room 5116-0001A (Nijenborgh 4), on Tuesdays between 9 a.m. and 12 noon. Transport the containers on a trolley and place the MediBin/WIVA container in a drip tray during transport.

Replacements can be obtained from the Logistics Department Store. If there is not enough packaging available, please contact the Logistics Department, tel. 050-3634102, email [logistics@rug.nl](mailto:logistics@rug.nl).

In NB4 and the Energy Academy, containers must be brought to the Logistics Department, room 5116-0001A, on Tuesdays between 9 a.m. and 12 noon. Replacements can be obtained from the Logistics Department Store.

## RU040 BATTERIES (dry)

### SPECIFIC REQUIREMENTS

Household batteries including disposable batteries/rechargeable batteries. Disposable batteries such as:

- zinc carbon
- alkaline
- lithium manganese oxide
- button cells

### NORMAL BATTERIES

- torch batteries and button cells
- both disposable and rechargeable batteries



### SPECIAL BATTERIES

- made-to-measure for a device
- are often battery packs (more powerful)



**Rechargeable batteries such as bicycle batteries:**

- nickel-cadmium (Ni-Cd)
- nickel-metal hydride (NiMH)
- lithium-ion
- lithium-iron-phosphate

**Dispose of damaged lithium batteries separately in a plastic bag or wrapped in foil and placed in a plastic drum with lid, and fill the drum with vermiculite or sand. The drum must be labelled 'DAMAGED/DEFECTIVE LITHIUM-ION BATTERIES'.**

A separate procedure applies to sealed dry batteries > 3 kg (e.g. lighthouse batteries). All batches of batteries (batteries in blister packs, bicycle batteries, powerbanks) in boxes or on pallets must be declared in advance.

Other requirements:

- Batteries may not be wet.
- Batteries may not contain liquid electrolyte.
- No liquid batteries.
- No lithium sulfoxide or lithium thionyl chloride batteries.
- Charged batteries must be disposed of in their original packaging (to prevent the risk of electrocution).
- No other waste products, such as paper, medicines, thermometers, etc., may be included.
- Be extra careful of disassembled batteries. These are batteries that were built into a device or that have had their original plastic or other casing removed. These batteries may still contain a charge and so pose an electrocution risk, including to you!
- Carefully tape over the terminals or cover with plastic (see photo).
- Place battery packs in a plastic bag after covering the terminals (see photo).
- Also tape over the terminals of all lithium batteries.
- The packaging must be labelled 'LITHIUM-ION BATTERIES FOR DISPOSAL'.
- To minimize the risk of electrocution, do not unpack expired batteries from the packaging.
- Store batteries indoors in a cool and dry place.
- Never use water in case of accidents involving batteries (use dry sand instead).





### *Packaging and disposal*

In the Linnaeusborg, batteries must be placed in the red containers with red lids marked 'Batteries' on the shelf in the waste corner. Lithium batteries up to about 9 x 7 x 7 cm may also be disposed of in these containers. Larger lithium batteries must be disposed of separately.

As soon as the container is full, it will be emptied by the Logistics Department.

If the containers have not been emptied, please contact the Logistics Department, tel. 050-3634102, email [logistiekbeheer.nb4@rug.nl](mailto:logistiekbeheer.nb4@rug.nl).

In NB4, batteries can be brought to the Logistics Department Store desk and placed in the blue bucket next to the desk. This bucket is only for batteries < 1 kg.

## RU041 EMPTY PAINT TINS

### SPECIFIC REQUIREMENTS

Composition:  
empty paint tins 100%

Other requirements:  
flashpoint > 100°C

Empty containers may be lightly contaminated with the following substances:

- bitumen, ink, sealant, resin, glue, polymers and paint
- the container must be leak-free and must not contain spray cans, cleaning cloths or filter mats
- the container may only have a layer of hardened substance
- the container may not contain liquid waste or powder
- the container may not contain solvents or highly flammable substances
- the paint may not contain halogens, heavy metals or sulphur
- chlorine, bromine, iodine and fluorine are halogens
- copper, lead, zinc, cadmium and nickel are heavy metals
- the container may not contain silicones
- packaging < 5 kg, maximum content 10 l
- the waste must not give off dust

### *Labels*

Attached by staff of the Logistics Department

### *Packaging and disposal*

The outside of the containers must be clean and dry.

In the Linnaeusborg, the empty packaging must be placed in the drip tray on the top shelf of the fireproof cupboard in the Logistics Corner. As soon as the container is full, it will be emptied by the Logistics Department.

In NB4 and the Energy Academy, the empty packaging can be handed in to the Store every day between 9 a.m. and 1 p.m.

## NEEDLES AND SHARP OBJECTS

This includes all used needles and other sharp objects, such as scalpels and razor blades, that have been contaminated.

**Excluded waste:** needles and other sharp objects contaminated with heavy metals or mercury.

### *Labels*

1. Waste stream number
2. Attached by staff of the Logistics Department
3. Label information to be completed: description of the contents, P number, project code, department and date

### *Packaging and disposal*

This waste must be disposed of in 6-litre needle boxes (supplied by the Logistics Department). If there is not enough packaging available, please contact the Logistics Department, tel. 050-3634102, email [logistiekbeheer.nb4@rug.nl](mailto:logistiekbeheer.nb4@rug.nl).

In the Linnaeusborg, full boxes must be placed on the shelf in the waste corner – all containers present at 2 p.m. on Monday will be collected that week.

In NB4, the containers must be brought to the Logistics Department, room 5116-0001A, on Tuesdays between 9 a.m. and 12 noon.

Replacements can be obtained from the Logistics Department Store.



# Appendices

## Acceptance Conditions for Hazardous Waste

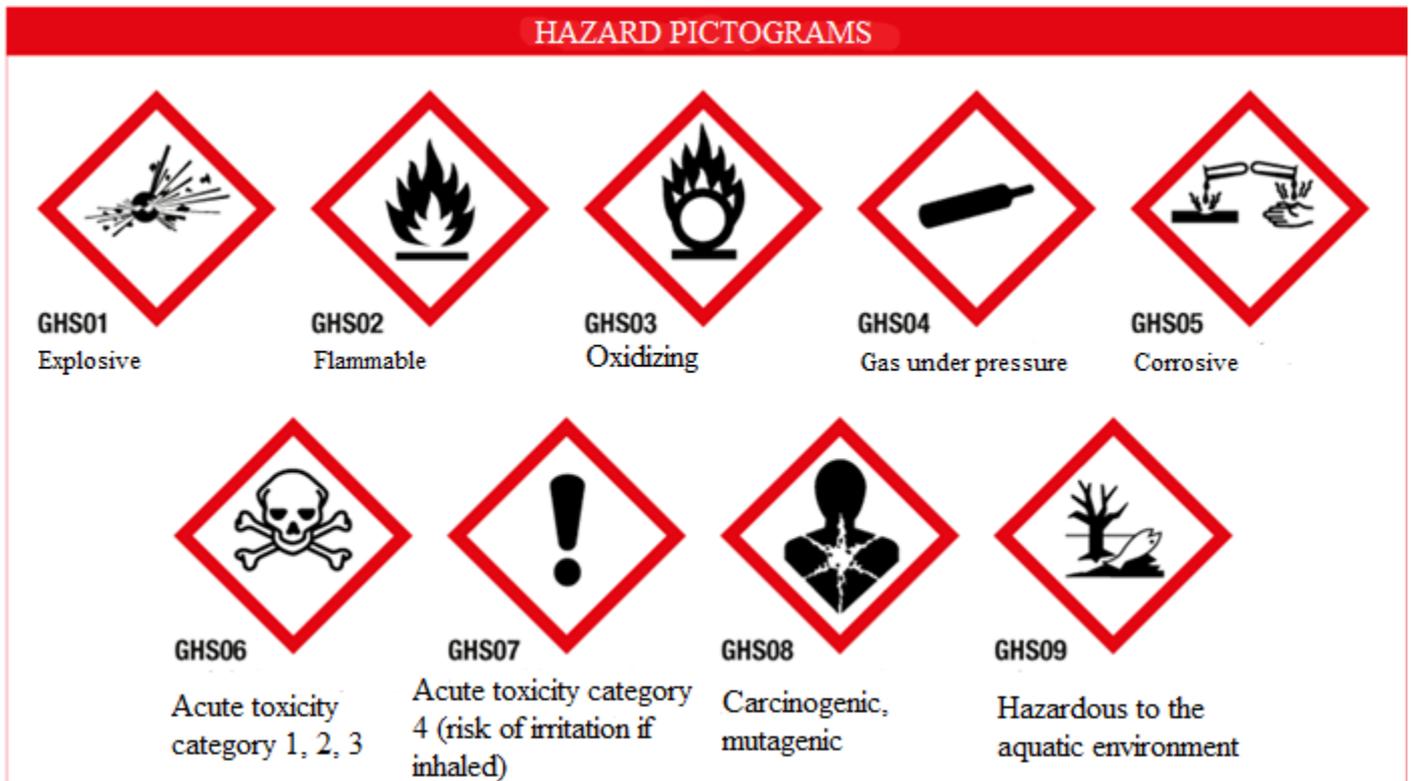
Faculty of Science and Engineering (FSE)

2018

## Appendix I: Hazard pictograms

Old pictograms (WMS)		New pictograms (CLP)	
	explosive		explosive
	oxidising		oxidising
	(highly) flammable		flammable
	toxic		toxic
	corrosive		corrosive
	harmful irritating		harmful irritating
	harmful for the environment		hazardous to the aquatic environment
			gas under pressure
			longer term health hazards

# Appendix I: Hazard pictograms



**GHS01 to GHS04:** physical/chemical hazard symbols

**GHS05 to GHS08:** health hazard symbols

**GHS09:** environmental hazard symbols

## Appendix II: General Decision tree for Hazardous liquid waste

Type of waste stream		Name of waste stream	UN-number	Hazard class	Waste stream label	
pH < 4	Organic load > 1%	Organische zuren/oplosmiddel mengsel	2924	3 (8)	W.HW.C-000FB	
	Inorganic	Nitrate / Nitric Acid >1%	Salpeterzuur tot 15%	2031	8	W.HW.S-00240
		Other acids < 15%	Anorganische zuren	3264	8	W.HW.S-00304
		Perchloric acid > 15%	Perchloorzuur	1873	5.1 (8)	W.HW.C-00628
Organic <1%	Laagcalorische vloeistoffen		<i>ADR Free</i>	W.HW.S-00135		
pH 4 - 8	Volatile flammable components* >1% and minimum 80% water	Waterige oplossingen uit lab kl.3	1992	3 (6.1)	W.HW.C-00753	
	Halogen-rich liquids, max 20% water	Oplosmiddelen Halogeen rijk	2929	6.1(3)	W.HW.C-001CJ	
	Flammable toxic liquids	Oplosmiddel Brandbaar Giftig	1992	3 (6.1)	W.HW.C-002E5	
	Volatile flammable non-toxic liquids	Oplosmiddel Halogeen arm	1993	3	W.HW.S-00212	
pH > 8	Organic	Bijtende basische organische vloeistoffen	3267	8 + MG***	W.HW.C-02257	
	Inorganic	contains Amminia	2672	8	W.HW.S-00026	
	Inorganic	Anorganische basen	1719	8	W.HW.S-00178	

flashpoint < 61°C \*\*\*MG = environmentally hazardous

The pH of the solution to be disposed is applied.

Look up column 2 and the corresponding result in column 3 (in the pH group!). Once you have found the right result, **Stop looking!**

**Packaging A:** Jerrycan (5L of 10L)



**Packaging B:** Black drum with lid



**Packaging C:** Barrel (6L of 20L)



**Packaging D:** WIVA/Medibin (50L)



**Packaging E:** Needle container (6L)



# Appendix IV: Overview of waste streams



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Article number	Waste description	Packaging (see Appendix III)	Waste stream number	ADR Label
W.HW.C-000FB	RU001 Organic acids/solvent mixtures	Packaging A	01CH8Y0F098A	3 + 8
W.HW.S-00240	RU002 Nitric acid (< 15%)	Packaging A	01CH8Y0F091A	8
W.HW.S-00304	RU003 Inorganic acids	Packaging A	01CH8Y06BE71	8
W.HW.C-00628	RU004 Perchloric acid 50-72%	Packaging A	01CH8Y0F0919	5.1 + 8
W.HW.S-00135	RU005 Low calirific liquids	Packaging A	01CH8Y06BE72	n/a
W.HW.C-00753	RU006 Aqueous solutions from lab k13	Packaging A	01CH8Y0F6170	3 + 6.1
W.HW.C-001CJ	RU007 Halogen-rich organic liquids	Packaging A	01CH8Y073AD1	6.1 + 3
W.HW.C-002E5	RU008 Solvent, toxic, halogen-free, mixture	Packaging A	01CH8Y0F0989	3 + 6.1
W.HW.S-00212	RU009 Solvent, halogen-poor	Packaging A	01CH8Y06BE73	3
W.HW.C-02954	RU010 Corrosive liquids	Packaging A	01CH8Y0F0918	8
W.HW.S-00026	RU011 Ammonia	Packaging A	01CH8Y06BE60	8
W.HW.S-00178	RU012 Inorganic alkalis	Packaging A	01CH8Y06BE65	8
W.HW.S-00008	RU013 Waste oil	Packaging A	01CH8Y06BE64	n/a
W.HW.S-00336	RU014 Coolant, monoethylene glycol	Packaging A	01CH8Y06BE75	n/a
W.HW.S-00136	RU015 Laboratory ware, empty	Wheeled container, 240 l, red	01CH8Y06C1E3	n/a
W.HW.C-001CI	RU016 Scintillation vials	Packaging B or C	01CH8Y073AD2	n/a
W.HW.S-00106	RU017 Office waste	Logistic corner or store	01CH8Y06BE6D	n/a
W.HW.S-00128	RU018 Metallic mercury	Packaging B or C	01CH8Y06BE6F	8 + 6.1
W.HW.S-00132	RU019 Mercury containing waste	Packaging B or C	01CH8Y0BAF64	8 + 6.1
W.HW.S-00140	RU020 Labchemicals	Packaging B or C	01CH8Y06BE6B	n/a
W.HW.S-00152	RU021 Empty plastic packaging (small)	Wheeled container, 240 l, red	01CH8Y06BE76	9
W.HW.S-00180	RU022 Lead batteries	Logistic corner or store	01CH8Y06BE62	8
W.HW.S-00184	RU023 Medicines/cosmetics	Packaging B or C	01CH8Y06C1E4	n/a
W.HW.S-00204	RU024 Oil containing waste (cloths/granules and such)	Packaging B or C	01CH8Y06C1CE	n/a
W.HW.S-00282	RU025 Waste contaminated with paint, inkt, lacquer or g	Packaging B or C	01CH8Y06BE67	n/a
W.HW.S-00335	RU026 General waste/filters with chemicals residues	Packaging B or C	01CH8Y0725F3	4.1
W.HW.S-00246	RU027 Lubricating grease	Packaging B or C	01CH8Y06BE66	n/a
W.HW.S-00261	RU028 Spray cans	Logistic corner or store	01CH8Y06BE70	LQ
W.HW.S-00150	RU029 Fluorescent lamps, straight	Inhouse Service department	01CH8Y06BE69	n/a
W.HW.S-00254	RU030 Hazardous material wast (RMA)/Specific hospital waste (SZA)	Packaging D	01CH8Y0F7438	6.2
W.HW.C-05073	RU031 Specific hospital waste (SZA) (Eural = Anymals)	Packaging D	01CH8Y06BE68	6.2
W.HW.C-001CH	RU032 Polymer waste	Packaging B or C	01CH8Y073AF1	n/a
W.HW.S-00040	RU033 Pesticides, solid toxic	Packaging B or C	01CH8Y06BE63	6.1
W.HW.S-00172	RU034 Glue/resin/sealant	Packaging B or C	01CH8Y06BE61	4.1
W.HW.S-00120	RU035 Refrigerators (white goods)	<a href="mailto:receptie.lb@rug.nl">receptie.lb@rug.nl</a> ; <a href="mailto:receptie.nb4@rug.nl">receptie.nb4@rug.nl</a> ; <a href="mailto:receptie.EAE@rug.nl">receptie.EAE@rug.nl</a>	01CH8Y06BE74	n/a
W.HW.C-09753	RU036 Refrigerators, professional	<a href="mailto:receptie.lb@rug.nl">receptie.lb@rug.nl</a> ; <a href="mailto:receptie.nb4@rug.nl">receptie.nb4@rug.nl</a> ; <a href="mailto:receptie.EAE@rug.nl">receptie.EAE@rug.nl</a>	01CH8Y0B929A	n/a
W.HW.S-00256	RU037 Genetical Gemodified Organisms (GMOs)	Packaging D	01CH8Y0C25B2	9
W.HW.S-00032	RU040 Batteries (dry)	Logistic corner or store	01CH8Y06BE6A	9A
W.HW.S-00315	RU041 Empty paint tins, ADR-exempt	Logistic corner or store	01CH8Y06BE6C	n/a
X	Needles and sharp objects	Packaging E	X	X

## Appendix V: Labelling

It is important to correctly label hazardous waste for disposal, because this is the only way to inform the Logistics Department of the contents of packaging. WIVA containers, MediBins, needle boxes and drums with lids must be provided with a label as illustrated in *Figure 1a*. Five and ten litre jerry cans must be provided with a label as illustrated in *Figure 1b*. The hazardous waste will only be disposed of if the label has been completely filled in.

Other labels may also be required for the transport of hazardous waste. These labels provide the waste stream number, a description of the waste stream number and indicate which ADR label is additionally required (if applicable). *Figure 2* is an example of a transport label with the notice 'Label: 8' printed below left. This means that ADR label 8 must be added to the packaging (see *Figure 3*).

Other symbols are used for storage and transport than those used for hazardous substances. Among others, the ADR guidelines apply to storage and transport. These guidelines describe nine classes and each class is divided into subgroups. Each subgroup has its own recognizable symbol and colour scheme (see *Figure 3*).

- Class 1: Explosive substances or objects
- Class 2: gases
- Class 3: Flammable liquids
- Class 4: Flammable solid substances
- Class 5: oxidizing substances
- Class 6: Toxic substances
- Class 7: Radioactive substances
- Class 8: Corrosive substances
- Class 9: Environmentally hazardous substances

**BESCHRIJVING INHOUD/ DESCRIPTION OF CONTENTS:**  
verontreinigde handdoekrol, handschoenen

**P-NUMMER/P-NUMBER:** p123456

**PROJECTCODE/PROJECT CODE:** 190 g07654

**AFDELING/DEPARTMENT:** Logistiek

**DATUM/DATE:** 31 december 2015

Figure 1a: label for WIVA containers, MediBins and needle boxes

**COMPONENT(E)N/ COMPONENT(S):**  
methanol, alcohol

**P-NUMMER/P-NUMBER:** p123456

**PROJECTCODE/PROJECT CODE:** 190 g07654

**AFDELING/DEPARTMENT:** Logistiek

**DATUM/DATE:** 31 december 2015

Figure 1b: label for 5 and 10 litre jerry cans

# Appendix V: Labelling (cont.)

Afalstroomnummer: 01CH8Y06BE71  
 Omschrijving:  
 CATI: Zure anorganische stoffen  
 in oplos

Productcode  
 W.H.W.S-00304  
 EURALCode      Orderdatum  
 060106\*      18.08.2015  
 Ordernummer  
 2953410 / 0009

Ontdoener / Plaats  
 Rijksuniversiteit Groningen  
 GRONINGEN

Plaatsingsadres:  
 Natuur-/Scheikunde  
 Nijenborgh 4  
 GRONINGEN  
 Bestemming  
 SITA EcoService Veendam

**UN 3264**

Etiketten: 8

  
 Gevaar

**GEVARENAANDUIDINGEN/  
 VEILIGHEIDSAANBEVELINGEN**

H314 Veroorzaakt ernstige brandwonden.  
 P305+P351+P338 BIJ CONTACT MET DE OGEN: voorzichtig afspoeien met water gedurende een aantal minuten; contactlenzen verwijderen, indien mogelijk; blijven spoelen.  
 P312 Bij onwel voelen een ANTIGIFCENTRUM/arts/... raadplegen.



Figure 2: Label for transport and drums with lids



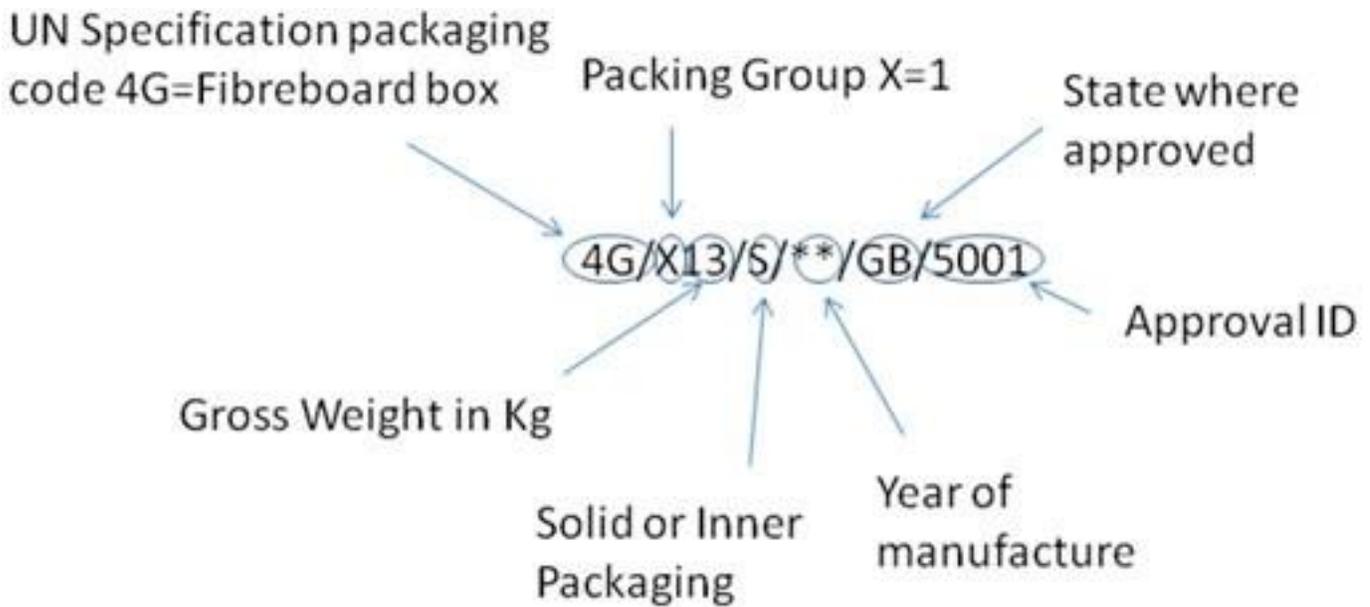
Figure 3: ADR labels

# Appendix VI: Filling jerry cans

Jerry cans must not be filled more than 90%:



## Appendix VII: Explanation of the UN mark



Appendix VIII: Hazardous reactions  
when using combinations of  
hazardous substance



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Acetic acid	<p>Chromic acid Nitric acid Alcohols Phenols perchloric acids Peroxides Permanganates Ammonia Chloroacetic acid</p>
Acetone	<p>Concentrated nitric acid +and sulphuric acid Nitric acid and acetic acid Hypobromite Chloroform Hydrogen peroxide</p>
Acetylene (ethyne)	<p>Chlorine Bromine Copper Fluorine Silver Mercury Iodene Copper and mercury salts Silver salts in Ammonia</p>
Activated carbon	<p>Hypochlorite Oxidizers Ammonium nitrate Chlorine monoxide</p>
Alkaline solutions	<p>Zinc</p>
Aluminium powder	<p>Water Chlorinated Hydrocarbons Halogens Prussic acid (hydrogen cyanide) Carbon monoxide</p>

Appendix VIII: Hazardous reactions  
when using combinations of  
hazardous substance



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Ammonia	Mercury Chlorine Hypochlorite Iodene Bromine Hydrofluoric acid anhydrous
Ammonium nitrate	Acids Metal powder Flammable liquids Chlorates Nitrites Sulphur Organic compounds in powder form Nitrates Sulphides
Aniline	Nitric acid Hydrogen peroxide Ozone Peroxides
Benzene	Sulphuric acid Manganites
Bromine	Ammonia Ethyne (acetylene) Butadiene Butane Methane Propane Hydrogen Carbides Turpentine Benzene Metal powder Hydrocarbons
Calcium carbide	Water Silver nitrate Peroxides
Carbon	See activated carbon
Carbon disulphite	Di-Ethylether Pottasium chloride Nitric acid Manganese chloride

Appendix VIII: Hazardous reactions  
when using combinations of  
hazardous substance



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Charcoal	See activated carbon
Chlorates	Ammonium salts Acids Metal powders Sulphur Organic substance in powders Cyanides Silversulphides Sulphides
Chlorine	Ammonia Ethyne (Acetylene) Butadiene Butane Methane Propane Hydrogen Carbides Turpentine Benzene Metal powder Hydrocarbons
Chlorine oxides	Ammonia Methane Phosphine $\text{PH}_3$ Hydrogen sulfide Mercury Organic substance Sucker Phosphides
Chloroacetic acid	Bismuth (alloy) Acetic acid anhydride Organic compounds
Chloroform	Acetone Potassium Sodium

## Appendix VIII: Hazardous reactions when using combinations of hazardous substance



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Chrome acids	Acetic acid Naphthalene Kampher Glycerol Turpentine Alcohols Pyridine Flammable liquids
Cumenehydro-peracids	Organic and inorganic acids Flammable liquids
Copper	Ethyne Hydrogen peroxide Chlorates Bromates Iodates
Cyanides	Acids
Ethanol	Manganites Oxidizing acids
Ethyne (acetylene)	See acetylene
Flammable Liquids	Ammonium nitrate Chromic acid Hydrogen peroxide Nitric acid Peroxides Halogens Barium oxide
Fluorine	Everything
Glacial acetic acid	See acetic acid
Glycerol	Manganese carbonate
Halogenated hydrocarbon	Aluminium powder Alkali metals Magnesium
Halamid (Chloramine-T)	Sodium sulfate
Hydrocarbons	Halogens Chromic acid Barium oxide Sodium peroxide

Appendix VIII: Hazardous reactions  
when using combinations of  
hazardous substance



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Hydrocyanic acid (Prussic acid)	Nitric acid Hydroxides Alkali metals Potassium nitrites Potassium chloride
Hydrogen fluoride	Ammonia (gas or liquid, anhydrous solutions) Phosphorous pentoxide
Hydrogen peroxide	Various metals Flammable liquids
Ioden	Ethyne Ammonia Hydrogen Phosphor
Magnesium powder	See aluminium powder
Mercury	Ethyne Oxalic acid Ammonia Fulmic acid Fulminates
Nitrates	Sulphur Carbon Organic compounds
Nitric acid	Acetic Acid Aniline Alcohols Thiophene Chromic Acid Prussic acid (Hydrocyanic acid) Carbon disulphite Flammable liquids Nitrobenzene Sulphates Thiosulphate
Nitrites	Ammonium nitrate Ammonium salts Cyanates
Nitrobenzene	Nitric acid
Organic Solvents	See flammable liquids



Appendix VIII: Hazardous reactions  
when using combinations of  
hazardous substance



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Oxalic acid	Mercury Silver Chlorates Hypochlorites
Perchloric acid	Acetic acid anhydride Bismuth (alloy) Alcohols Paper Wood Charcoal Diethylether Organic compounds
Perchlorates	Acids Sulphides Sulphites
Permanganates	Glycerol Benzaldehyde Ethyleneglycol Sulphuric acid Metal powders
Peroxides	Ethanol Methanol Glacial acetic acid Acetic acid anhydride Benzaldehyde Carbon disulphide Glycerol Ethyleneglycol Ethylacetate Methylacetate Furfural Aniline
Phosphorus (white/yellow)	Air Oxydes Hydroxides Ammonium nitrate Potassium permanganate Sulphur Silver nitrate

Appendix VIII: Hazardous reactions  
when using combinations of  
hazardous substance



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Picric acid	Heavy metals Salts
Pottasium	Bromine Chlorine Iodene Prussic acid (Hydrocyanic acid) Carbon monoxide Carbon dioxide Water Halogenated Hydrocarbon Cabon disulphide Carbon dioxide Water Halogenated hydrocarbon Hydrochloric acid Sulphuric acid Hydrogen fluoride Maleic anhydride Ethyne Silver halogens
Pottasium sulphide	Diazo compounds
Prussic acid (Hydrocyanic acid)	See hydrocyanic acid
Silver (metal)	Acetylene Oxalic acid Tartaric acid Fulmic acid Ammonium compounds
Sodium	Bromine Chlorine Iodene Prussic acid (Hydrocyanic acid) Carbon Monoxide Carbon dioxide Water Halogenated hydrocarbon Sulfuric acid Hydrochloric acid Hydrogen fluoride Maleic anhydride Ethyne Silver halogenen

Appendix VIII: Hazardous reactions  
when using combinations of  
harzardous substance



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Sulphuric acid

Chlorites  
Perchlorates  
Permanganates  
Carbides  
Fulminates  
Pricrates  
Metal powders

# Appendix X: Location of waste products in the Linnaeusborg

## How to use the Waste Corner:



Letter	What	Action	Frequency
A	Storage area for full black waste bin	Collected by the Logistics Department	Weekly on Mondays
B	Storage area for full MediBin/WIVA container; only hospital waste, not for GMOs	Collected by the Logistics Department	Weekly on Mondays
C	Storage area for office waste	When full, collected by the Logistics Department	Checked weekly on Mondays
D	Box for empty batteries	When full, collected by the Logistics Department	Checked weekly on Mondays
E	Container for clean glass	When full, collected by the Logistics Department	Weekly on Mondays
F	Container for contaminated glass	When full, collected by the Logistics Department	Checked daily
L	Container for autoclaved waste	When full, report to Reception 050- 3632021, <a href="mailto:receptie.lb@rug.nl">receptie.lb@rug.nl</a>	Daily, on demand
H	Container for used paper	When full, collected by the Cleaning service	Checked daily

## How to use the Logistics Corner:



Letter	What	Action	Frequency
A	Storage area for empty chemical packaging with GROS stickers	Collected by the Logistics Department	Daily, if full
B	Delivery point for chemicals	Delivered by the Logistics Department	Every day in the afternoon
C	Storage area for 10-litre chemical waste tanks	Collected by the Logistics Department	Weekly on Mondays
D	Delivery point for goods	Delivered by the Logistics Department	Every day in the afternoon
E	Delivery point for Chemicals stored frozen (around -20 °C )	Delivered by the Logistics Department	Every day in the afternoon
F	Delivery point for Chemicals stored at refrigerator temperature (between 4 and 8 °C)	Delivered by the Logistics Department	Every day in the afternoon
L	Outgoing mail for Bernoulliborg, Nijenborgh 9	Collected by the Logistics Department	Daily, between 1 and 2 p.m.
H	Outgoing mail for another RUG department	Collected by the Logistics Department	Daily, between 1 and 2 p.m.
I	Outgoing mail, domestic and foreign	Collected by the Logistics Department	Daily, between 1 and 2 p.m.
J	Incoming mail	Delivered by the Logistics Department	Daily, between 1 and 2 p.m.