

## Fragebogen zur Beförderung von Elektro- und Elektronik-Altgeräten

### A. Einführung

Die Gemeinsame Tagung befasste sich im Rahmen ihrer Sitzung im September 2014 auf Grundlage eines von Deutschland vorgelegten Dokumentes (INF. 12) mit der Beförderung von Elektro- und Elektronik-Altgeräten.

Nach der Richtlinie 2012/19/EU sind Elektro- und Elektronik-Altgeräte getrennt vom Siedlungsabfall zu sammeln, um sie einer ordnungsgemäßen Behandlung zur Vorbereitung zur Wiederverwendung oder in Form von Verwertungs- und Recyclingmaßnahmen zuzuführen. Die Gemeinsame Tagung stellte fest, dass die in diesem Rahmen beförderten Elektro- und Elektronik-Altgeräte gefährliche Güter, insbesondere Lithiumbatterien, enthalten können. Daher sollte über besondere Beförderungsbedingungen im RID/ADR/ADN oder über Freistellungen nachgedacht werden.

Vor Entscheidung über das weitere Vorgehen möchte die Gemeinsame Tagung eine Bestandsaufnahme aller Erfahrungen der Staaten vornehmen, die in diesem Bereich bereits Erfahrungen gesammelt haben. Deutschland wurde daher mit der Ausarbeitung eines Fragebogens beauftragt.

Die Delegationen werden gebeten, die nachfolgenden Fragen zu beantworten und bis zum 31. Januar 2014 an die deutsche Delegation (Email: [Ref-G24@bmvi.bund.de](mailto:Ref-G24@bmvi.bund.de)) zu übermitteln.

## B. Fragen

1. Werden Beförderungen von Elektro- und Elektronik-Altgeräten (EAG) als Gefahrgutbeförderungen durchgeführt? (Klasse 9 oder freigestellt gemäß SV 636)

Überwiegend nicht

2. Welche Behälter/Umschließungen werden benutzt?

	Sammlung	Beförderung
Verpackungen		
Großverpackungen		
IBC	X	X
Widerstandsfähige Außenverpackungen		
Gitterboxen, Verschlüge o.ä.	X	X
Spezielle Sammelcontainer		
Offene Container	X	X
Bedeckte Container	X	X
Geschlossene Container		
Offene Fahrzeuge		
Bedeckte Fahrzeuge		
Gedeckte Fahrzeuge		
Sonstiges	Lose auf Paletten	Lose auf Paletten

Weitere Anmerkungen:

Laut Tätigkeitsbericht 2013 der Elektroaltgeräte Koordinierungsstelle Austria GmbH EAG-müssen auf Sammelstellen mit Vollausrüstung folgende Behälter bereitgestellt werden:

Kategorie	Erforderliche Behälter
Elektro-Großgeräte	Wechselcontainer à 12m <sup>3</sup> und à 24m <sup>3</sup>
Kühlgeräte	Wechselcontainer à 24m <sup>3</sup>
Bildschirmgeräte	Gitterboxen ca. 3m <sup>3</sup> und Europaletten
Elektro-Kleingeräte	Gitterboxen
Gasentladungslampen	Rungenpaletten
Gerätealtbatterien	120l Deckelfass mit Spannring 220l Deckerfass mit Spannring

Die Sammelbehältnisse werden auch zur Beförderung verwendet. Der Transport erfolgt mit be-/gedeckten Fahrzeugen.

3. Durchführung der Sammlung

a) Welche Arten von Sammelstellen werden vorgehalten:

Sammelboxen/-container im öffentlichen Verkehrsraum	
Sammelstellen im Handel/bei Herstellern ohne Personal	
Sammelstellen im Handel/bei Herstellern mit Personal	x
Sammelstellen bei kommunalen Entsorgungsträgern ohne Personal	
Sammelstellen bei kommunalen Entsorgungsträgern mit Personal	x
Sammelstellen bei privaten Entsorgungsunternehmen ohne Personal	
Sammelstellen bei privaten Entsorgungsunternehmen mit Personal	x
Sonstiges	

Weitere Anmerkungen:

b) Welche Sortierung erfolgt oder wäre vor Beförderung möglich:

	Sortierung erfolgt	Sortierung möglich
Trennung von EAG mit und ohne Batterie		X
Trennung von EAG mit und ohne Kabel	Zum Teil	X
Sammlung und Beförderung in Sammelgruppen nach Richtlinie 2012/19/EU	Zum Teil	X
Trennung von EAG mit kleinen Batterien von EAG mit Batterien $\geq 500g/\geq 100Wh/\geq 2g$ Lithium		X
Sonstige		

Weitere Anmerkungen:

4. Beschreiben Sie den Ablauf der Sammlung/Beförderung unter Berücksichtigung der folgenden Schritte

a) vom Verbraucher zur Sammelstelle

Fragen: Abholung durch Entsorgungsunternehmen? Abgabe Verbraucher an Sammelstelle?

Seit August 2005 können alte, defekte oder nicht mehr gebrauchte Elektrogeräte unentgeltlich bei einer Sammelstelle in der Gemeinde oder, bei Neukauf eines ähnlichen Gerätes, auch beim Händler abgegeben werden. Beim Neukauf von Geräten müssen keine Entsorgungsgebühren oder Pfandbeiträge mehr bezahlt werden.

Dies gilt sowohl bei Kauf im Geschäft als auch bei Lieferung an die Wohnadresse, insbesondere bei Großgeräten wie Waschmaschinen, Kühlgeräte etc. Wenn beispielsweise die Wohnung des Konsumenten Erfüllungsort ist, muss der Händler auf Wunsch des Kunden das Altgerät ohne Zusatzkosten zurücknehmen. Auch Transportkosten für die zurückgenommenen Geräte dürfen nicht zusätzlich verrechnet werden.



Eine Ausnahme von dieser 1:1-Rücknahmepflicht besteht nur für Händler mit einer Verkaufsfläche von weniger als 150 m<sup>2</sup>, wenn der Kunde darüber im Geschäftslokal deutlich informiert wird (Hinweisschild).

Die Sammelstellen sind Händler, Bauhöfe, diese werden überwiegend von Privatpersonen benutzt, oder Sammelstellen eines Entsorgungsunternehmens, welche überwiegend von Betrieben genutzt werden. Die Privatpersonen transportieren die EAG überwiegend selbst, Betriebe lassen die EAG meist abholen.

b) von Sammelstelle zur Sammelstelle

Fragen: Zusammenfassung von mehreren Sammelpunkten? Wer betreibt Sammelstellen? Wer führt Transport durch?

Die Sammelstellen (Bauhöfe) werden überwiegend von den Gemeinden betrieben. Die Transporte werden größtenteils von Entsorgungsunternehmen durchgeführt.

Im Jahr 2013 waren 5 Sammel- und Verwertungssysteme in Österreich für den Bereich der Elektro- und Elektronik-Altgeräte mit Bescheid des Umweltministeriums genehmigt.

c) von Sammelstelle zur Erstbehandlungsanlage

Fragen: Wer führt Transport durch?

Die Transporte werden größtenteils von Entsorgungsunternehmen oder den Betreibern der Erstbehandlungsanlage durchgeführt.

d) von Erstbehandlungsanlage zur weiteren Behandlung/zur Entsorgung/zum Recycling

Fragen: Sind dann Batterien von EAG getrennt? Beschädigung der Batterien durch Behandlung?

Batterien sind nach der Erstbehandlungsanlage jedenfalls von EAG getrennt. Batterien werden manuell entfernt. Eine Beschädigung ist daher nicht anzunehmen.

5. Welche Informationen über den Anteil von Lithiumbatterien in EAG sind verfügbar?

Keine

6. Welche nationale Festlegungen/Studien zur Durchführen von Sammlungen und Beförderungen und deren Sicherheit liegen vor?

AWG 2002 § 28a; § 29 ff

EAG-VO

BatterienVO

AbfallbehandlungspflichtenVO

Studie: Wirksamkeit bestehender alternativer Sammelsysteme für Kleinst-EAG

## **Questionnaire on the carriage of waste electrical and electronic equipment**

### **A. Introduction**

In September 2014, the Joint Meeting dealt with the carriage of waste electrical and electronic equipment on the basis of a document presented by Germany (INF. 12).

In accordance with Directive 2012/19/EU, waste electrical and electronic equipment has to be collected separately from municipal waste so that it can be sent for correct treatment, i. e. the material can be prepared for re-use, or recovery and recycling measures can be performed. The Joint Meeting noted that the waste electrical and electronic equipment carried within this framework may comprise dangerous goods, in particular lithium batteries. For this reason, special conditions of carriage in RID/ADR/ADN or exemptions should be considered.

Before deciding on the further proceedings, the Joint Meeting wants to take stock of all experiences of the states that have already had experiences in this field. To this avail, Germany was asked to draw up a questionnaire.

The delegations are requested to answer the following questions and send their responses via e-mail until 31 January 2015 to the German delegation (e-mail: [Ref-G24@bmvi.bund.de](mailto:Ref-G24@bmvi.bund.de)).

## B. Questions Answered by Recupel

1. Is waste electrical and electronic equipment (WEEE) carried as dangerous goods? (Class 9 or exempt under SP 636)

Only WEEE containing Li-batteries is to be considered as dangerous goods.

In Belgium these appliances are collected via the collection stream 'OVE', which is a mixture of small appliances of the 10 European categories.

Actually this fraction is not yet carried as dangerous goods. Recupel has got a remark for that from the Belgian federal authorities. Some modifications have to be realised at the level of packaging. To do so Recupel has got time until 30/06/2015. From 1/7/2015 WEEE containing li-batteries (OVE-fraction) will be carried under the exemption of SP 636.

2. Which receptacles/containments are used?

	Collection	Carriage
Packagings	NO	NO
Large packagings	NO	NO
IBCs	NO	NO
Durable outer packagings	YES	YES
Wire-mesh boxes, crates, etc.	NO	NO
Special collection bins	NO	NO
Open containers	NO	NO
Sheeted containers	NO	NO
Closed containers	NO	NO
Open vehicles	NO	NO
Sheeted vehicles	NO	NO
Closed vehicles	NO	NO
Other	NO	NO

Further comments:

WEEE containing Lithium batties (fraction OVE) is collected and carried in a wooden boxpallet.

This boxpallet will be modified in order to be in line with the legislation : closed pallet, panels with plastic layer at the inside to prevent WEEE folling out of the receptacle, covering with a net/plastic cover during carriage and a sticker with the marking "lithium batteries for recycling"



3. Conduct of the collection

a) Which types of collection points are provided?

Collection bins in the public street environment	NO
Collection points in stores/at manufacturers without personnel	NO
Collection points in stores/at manufacturers with personnel	YES
Collection points at municipal disposal companies without personnel	NO
Collection points at municipal disposal companies with personnel	YES
Collection points at private disposal companies without personnel	NO
Collection points at private disposal companies with personnel	YES
Other	Re-use centers (with personnel)

Further comments:

No additional comments

b) Which type of sorting is performed or could be performed prior to carriage?

	Sorting is performed	Sorting could be performed
Separation between WEEE with and without battery	NO	NO
Separation between WEEE with and without cable	NO	NO
Collection and carriage in collection groups according to Directive 2012/19/EU	YES	YES
Separation between WEEE with small batteries and WEEE with batteries $\geq 500$ g/ $\geq 100$ Wh/ $\geq 2$ g lithium	NO	NO
Other	NO	NO

Further comments:

In Belgium sorting into 6 collection groups (Big white, Cooling and freezing, Tv screens and monitors, gas discharge lamps, smoke detectors and all other WEEE) is done by the consumer at the collection facilities. A sorting based on the presence of a (lithium)battery can only be done by professional, well trained, people. Considering the sorting possibility, Recupel has done some research on this topic. It was quite quickly clear that the presence of a battery in WEEE is not always obvious. And it is sometimes hard to find the information on the type of battery. Therefore Recupel decided not to separate WEEE with (lithium)batteries from WEEE without (lithium)batteries.

4. Describe the collection/carriage procedure taking the following steps into account:

a) From consumer to collection point

Questions: Collection by disposal company? Hand over to collection point by consumer?

Consumer hands over his WEEE to the collection point

b) From collection point to collection point

Questions: Consolidation of various collection points? Who operates the collection points? Who performs the carriage operations?

The Recupel network consists of 4 types of collections points : Retailers, Municipal container parcs (organised in inter-municipalities), re-use centers and private container parcs (scrap dealers)

When small quantities are collected (some boxes – in milkround) consolidation is don by the transport company on his consolidation point by order of Recupel.

Collection points that do have their own consolidation point, like inter-municipalities with several container parks or bigger retailers with several shops, organise the transport between the collection point and the consolidation point by themselves.

c) From collection point to primary treatment facility

Questions: Who performs the carriage operations?

From the consolidation point, whether it is the consolidation point of the transport company or a private consolidation point (municipality or retailer) WEEE is carried to the treatment operator (= first intermediate processing facility) in bulk (= trailer with 24 boxes). These carriage operations are performed by the contracting bulk transport company of Recupel.

d) from primary treatment facility to secondary treatment/disposal/recycling

Questions: Have batteries at this point been separated from the WEEE? Battery damages caused by treatment?

During the depollution step of the process, all kinds of batteries are manually removed from the WEEE by the treatment operator. Due to the fact that this handling is done by hand battery damages caused by treatment are rather unusual.

5. What information is available on the share of lithium batteries in WEEE?

Since 2014 Recupel measures the quantity of lithium batteries per transport (24boxes) by sampling. In average about 6kg of lithium batteries per transport (in average about 7500kg) were found, the minimum amount was less than a kilogram en the maximum amount about 18kg.

6. Which national specifications/studies on the conduct and safety of collections and carriage operations exist?

The Belgian solution, the modified boxpalet with covering, was worked out by Recupel in collaboration with and approved by the FOD mobiliteit, the Belgian authority responsible for ADR.





# Inzameling AEEA met Li-Batterijen

*16 juli 2014*

A large, light blue decorative graphic on the left side of the slide, consisting of a curved line that forms a partial circle, with a white electrical plug icon integrated into the curve.

*Els Verberckmoes  
Treatment Manager*

# Context

## Inzameling AEEA door Recupel

# Inzameling AEEA

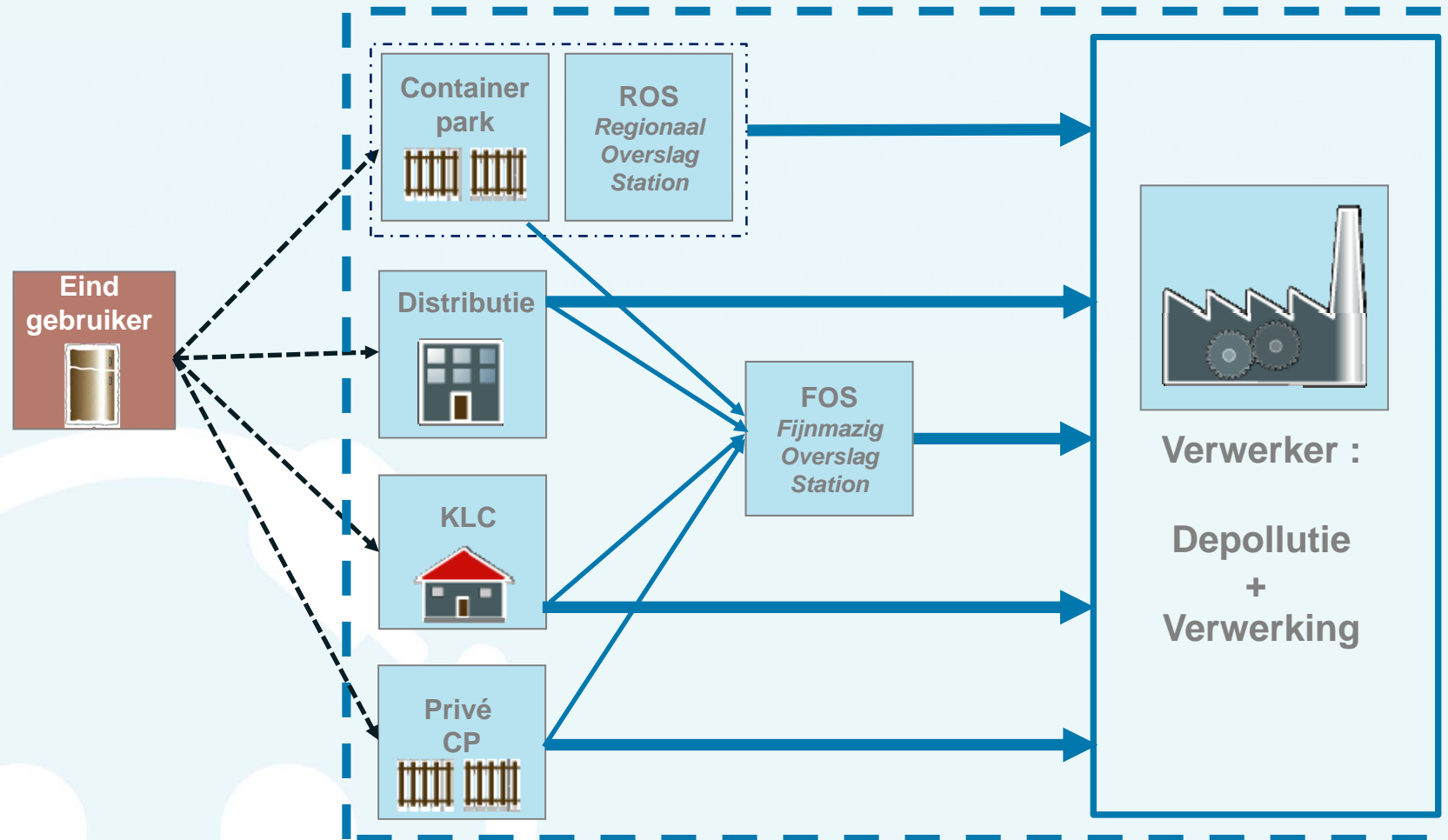
Sorteren in 6 fracties

1. Groot Wit (GW)
  2. Koel- en Vries (KV)
  3. Beeldbuizen (TVM)
  4. Overige toestellen (OVE)
  5. Gasontladingslampen (LMP)
  6. Rookmelders (RM)
- stuks/CON
- BOX

**Li - batterijen**



# Van Collectiepunt naar Verwerker

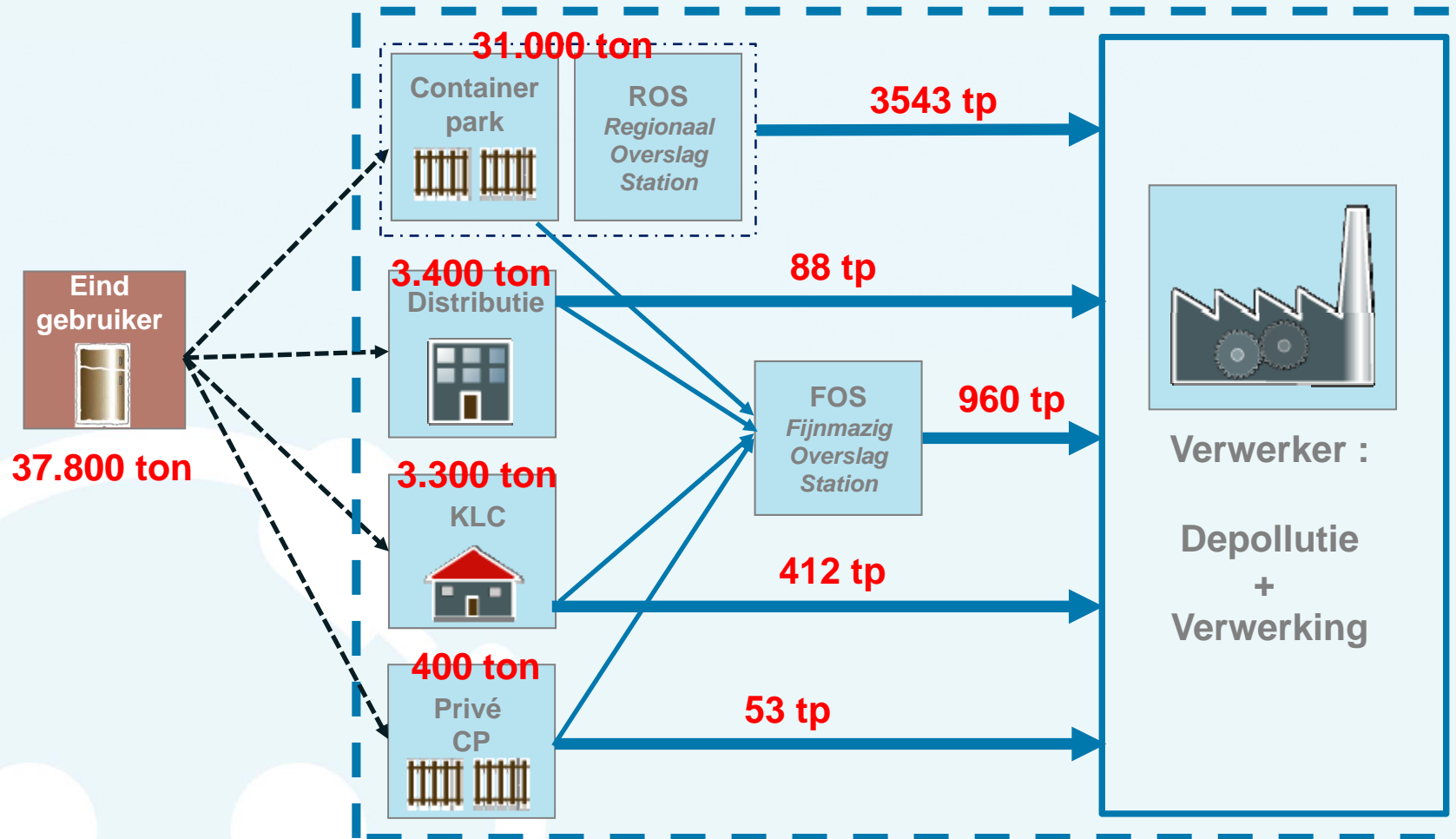


Recupel - netwerk

—————> Fijnmazig transport (stuks/box)  
—————> Bulktransport (2 con / 24 boxen)



# Volume OVE 2013



Recupel - netwerk

 Fijnmazig transport (stuks/box)  
 Bulktransport (2 con / 24 boxen)

# Probleemstelling



## Probleemstelling – BP 636 (ADR 2015)

BP 636b → vrijstelling van ADR onder voorwaarden :

- i. Voldoen aan **verpakkingsinstructie P909**  
(met uitzondering van de bijkomende vereisten (1) en (2))
- ii. **“Quality Assurance System”** in plaats om er zich van te vergewissen dat de gewichtslimiet van 333 kg lithium batterijen per transporteenheid niet overschreden wordt.
- iii. Recipiënt draagt **een label** met vermelding  
*“Lithium batteries for disposal” or lithium batteries for recycling*

# Probleemstelling – P 909 (ADR 2015)

## P909 (3) → Verpakkingsinstructie

(3) For cells or batteries contained in equipment, strong outer packagings constructed of suitable material, and of adequate strength and design in relation to the packaging capacity and its intended use, may be used. Packagings need not meet the requirements of 4.1.1.3. Large equipment may be offered for transport unpackaged or on pallets when the cells or batteries are afforded equivalent protection by the equipment in which they are contained.

- Voor Lithium batterijen in apparatuur : verpakking moet **niet** voldoen aan de eisen gesteld in 4.1.1.3. (UN-keurmerk)

- Definitie ‘**buitenverpakking**’:

beschermend omhulsel van een composietverpakking of van een samengestelde verpakking, met inbegrip van de absorberende en voor opvulling dienende materialen en alle andere elementen die nodig zijn om de binnenrecipiënten of binnenverpakkingen te omvatten en te beschermen



## Probleemstelling - Conclusie

ADR 2015 : vrijstelling van ADR vervoer (BP 636b)  
indien voldaan volgende voorwaarde :

Sampling

ii. een **Quality Assurance System**

aantonen < 333kg lithium batterijen per transport OVE

iii. een ~~label~~ "*Lithium batteries for recycling*" op verpakking

i. **P 909** : verpakking

Sticker

→ Huidige boxpallet **wordt niet-conform beschouwd** :

- Opening tussen de latten
- Bovenaan open



## Oplossing : IPP V3 + net



## Fragebogen zur Beförderung von Elektro- und Elektronik-Altgeräten

### Rückmeldung der Schweiz

Kontaktperson:

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#### A. Einführung

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Vor Entscheidung über das weitere Vorgehen möchte die Gemeinsame Tagung eine Bestandsaufnahme aller Erfahrungen der Staaten vornehmen, die in diesem Bereich bereits Erfahrungen gesammelt haben. Deutschland wurde daher mit der Ausarbeitung eines Fragebogens beauftragt.

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## B. Fragen

1. Werden Beförderungen von Elektro- und Elektronik-Altgeräten (EAG) als Gefahrgutbeförderungen durchgeführt? (Klasse 9 oder freigestellt gemäß SV 636)

Nein, keine Gefahrgutbeförderungen (mit Ausnahme von Lithium Batterien). Transporte gemäss Klasse 9 sowie Freigestellte Transporte gemäss SV 636 werden von den relevanten Rücknahmesystemen in der Schweiz<sup>1</sup> für EAG bisher nicht durchgeführt.

In den technischen Vorschriften von SENS und SWICO, die als Stand der Technik heute gelten, gibt es keine speziellen Anforderungen für den Transport ausser für Leuchtmitteln.

Auszug aus den Technischen Vorschriften SENS und Swico (siehe Download unter: <http://www.bafu.admin.ch/veva-inland/11827/11835/index.html?lang=de> )

### F.3 Transport

*F.3.1 Insbesondere der Verkehr mit Sonderabfällen ist reglementiert. Es gelten die einschlägigen Vorschriften der VeVA und ADR / SDR.*

*F.3.2 Der Transport von Leuchtmitteln hat derart zu erfolgen, dass diese durch Erschütterung und mechanische Einflüsse nicht beschädigt werden können. Stabförmige Leuchtmittel und andere Formen sind getrennt aufzubewahren. Die Leuchtmittelrecycler bestimmen in Absprache mit dem Kontrollorgan die geeigneten Behältnisse.*

2. Welche Behälter/Umschließungen werden benutzt?

	Sammlung	Beförderung
Verpackungen	keine Produkteverpackungen	dito
Großverpackungen	keine ADR Grossverpackungen	dito
IBC	nur ungeprüfte IBC	dito
Widerstandsfähige Außenverpackungen	SBB Holz-Paletten mit - Rahmen (siehe Foto 1 und Foto 2),	dito
Gitterboxen, Verschlüge o.ä.	faltbare Gitterboxen (siehe Foto 3)	dito
Spezielle Sammelcontainer	siehe "Sonstiges"	dito
Offene Container	5-40m3 Container (siehe Foto 4)	dito
Bedeckte Container	5-40m3 Container (siehe Foto 5)	dito
Geschlossene Container	5-40m3 Container	dito
Offene Fahrzeuge	Lastwagen und Anhängerzüge (für Paletten und Rahmen)	dito
Bedeckte Fahrzeuge	Lastwagen und Anhänger-	dito

<sup>1</sup> [www.swicorecycling.ch](http://www.swicorecycling.ch) , [www.sens.ch](http://www.sens.ch) , [www.inobat.ch](http://www.inobat.ch)



	züge (für Paletten und Rahmen)	
Gedekte Fahrzeuge	Lastwagen und Anhängerzüge (für Paletten und Rahmen)	dito
Sonstiges	Kunststoffboxen, Metallboxen, "Texaid" und andere	dito

Weitere Anmerkungen:

Siehe

Verpacken von Lithiumpolymer- und anderen (defekten) lithiumhaltigen Batterien und Akkus  
<http://www.inobat.ch/de/Batterierecycling/DokumenteDownloads.php?navid=1266092569372>

### 3. Durchführung der Sammlung

a) Welche Arten von Sammelstellen werden vorgehalten:

Sammelboxen/-container im öffentlichen Verkehrsraum	ja
Sammelstellen im Handel/bei Herstellern ohne Personal	ja, nur im Handel
Sammelstellen im Handel/bei Herstellern mit Personal	ja
Sammelstellen bei kommunalen Entsorgungsträgern ohne Personal	ja, aber selten da Systemanforderung Personal voraussetzt
Sammelstellen bei kommunalen Entsorgungsträgern mit Personal	ja
Sammelstellen bei privaten Entsorgungsunternehmen ohne Personal	ja, aber selten da Systemanforderung Personal voraussetzt
Sammelstellen bei privaten Entsorgungsunternehmen mit Personal	ja
Sonstiges	-

Weitere Anmerkungen:

Bei der Sammlung der Elektronik- und Elektroaltgeräte (EAG) ist es in der Regel nicht möglich sich über folgende Punkte zu informieren bzw. Aussagen darüber zu machen:

- Zustand der Batterien; ob DEFEKT oder INTAKT
- Bruttomasse der Batterien
- Nennenergie der Batterien

Da bei den EAG die Batterien eingebaut und häufig nicht von aussen sichtbar sind, können diese Angaben, falls überhaupt, nicht ohne aufwändige Demontage und sehr gut ausgebildetes Personal ermittelt werden.

b) Welche Sortierung erfolgt oder wäre vor Beförderung möglich:

	Sortierung erfolgt	Sortierung möglich
Trennung von EAG mit und ohne Batterie	nein	ja, aber bräuchte Ausbildung des Personals
Trennung von EAG mit und ohne Kabel	nein	nicht praktikabel
Sammlung und Beförderung in Sammelgruppen nach Richtlinie 2012/19/EU	Nein: Gesammelt und befördert wird nach den Vorgaben der Rücknahmesysteme Swico und Sens (Bildschirmgeräte, Elektrischen Kleingeräte, Elektronische Geräte, Haushaltsgrossgeräte, Kühlgeräte und Leuchtmittel).	
Trennung von EAG mit kleinen Batterien von EAG mit Batterien $\geq 500g/\geq 100Wh/\geq 2g$ Lithium	nein	nicht praktikabel
Sonstige		

Weitere Anmerkungen:

- z.Z. wird von den Systemen und den Sammelstellenbetreibern keine Sortierung gewünscht
- Falls Sammelstellen Erstbehandler würden, bräuchten sie eine entsprechende kantonale Betriebsbewilligung mit den entsprechenden VeVa Annahme- und Behandlungscodes.

4. Beschreiben Sie den Ablauf der Sammlung/Beförderung unter Berücksichtigung der folgenden Schritte

a) vom Verbraucher zur Sammelstelle

Fragen:

Abgabe Verbraucher an Sammelstelle? dies ist der Normalfall: die Abgabe erfolgt durch den Konsumenten an der Sammelstelle. In der Schweiz hat der Konsument die Wahl von über 6'000 Sammelstellen (630 in Anlagen und ca. 6'000 im Handel)!

Abholung durch Entsorgungsunternehmen? dies ist die Ausnahme: Abholeservice beim Konsumenten, die EAG werden direkt zum Recycler geleitet.

b) von Sammelstelle zur Sammelstelle

Fragen:

Zusammenfassung von mehreren Sammelpunkten? ja, die's gibt es im CH-System  
Wer betreibt Sammelstellen? Gemeinden, Handel und Private (Recycler, wohltätige Organisationen, etc.)

Wer führt Transport durch? in der CH keine Transportbewilligung notwendig. Es transportieren die Gemeinden, Recycler, Spediteure, der Handel und andere

c) von Sammelstelle zur Erstbehandlungsanlage (dies kann ein Zerlegebetrieb oder ein Recyclingbetrieb sein)

Fragen:

Wer führt Transport durch? wie unter b): Gemeinden, Recycler, Spediteure, der Handel und andere

d) von Erstbehandlungsanlage zur weiteren Behandlung/zur Entsorgung/zum Recycling

Fragen:

Sind dann Batterien von EAG getrennt? z.T. werden Batterien entfernt (entfrachtet), insbesondere wenn die Erstbehandlung in einem Zerlegebetrieb geschieht, wo die EAG schadstoffentfrachtet d.h. Batterien entnommen werden. (siehe Foto 6 und Foto 7)

Beschädigung der Batterien durch Behandlung? je Behandlungsverfahren ist eine Beschädigung nicht ausgeschlossen (z.B. Batterien nach dem Shredder / QZ entnommen werden)

5. Welche Informationen über den Anteil von Lithiumbatterien in EAG sind verfügbar?

Aktuell sind keine Informationen zu %-Gehalten von LIB in EAG verfügbar. Jedoch könnten über die Warenkorbanalysen zB von Swico solche Daten erhoben werden.

6. Welche nationale Festlegungen/Studien zur Durchführen von Sammlungen und Beförderungen und deren Sicherheit liegen vor?

Aktuell liegen keine diesbezüglichen Festlegungen / Studien vor.



**Foto 1: SBB Holz-Paletten mit -Rahmen, wie sie systemweit häufig verwendet werden, an einer Sens Sammelstelle.**



**Foto 2: SBB Holz-Paletten mit -Rahmen an einer Swico Sammelstelle. Bildschirmgeräte werden bereits getrennt gesammelt (links), um Beschädigungen und mögliche Freisetzung von Quecksilber zu vermeiden.**





**Foto 3: im Grosshandel verwendete faltbare Gitterboxen. Plastikfolien-Inliner werden nur z.T. verwendet**



**Foto 4: EAG die von grosser Höhe aus Sammelboxen in einen Transportcontainer umgeschüttet wurden. Es ist deutlich zu sehen, dass EAG aufplatzen und dabei können auch LIB herausgeschleudert und beschädigt werden**



**Foto 5: Schad- Stör- und Wertstoffentfrachtete EAG, die bei einem Zerlegebetrieb (Erstverarbeiter) für den Weitertransport an den Recycler in Container gesammelt werden. In diesem Fall sind Batterien als Gefahrstoffe bereits entnommen und die Sammlung / der Transport als Schüttgut anwendbar.**







**Foto 6: Immer häufiger finden sich RC-Spielzeuge mit grossen Energiespeicherkapazitäten im Schüttgut. Interessanterweise scheinen diese Abgeber sensibilisiert zu sein, denn in den allermeisten Fällen sind die Batteriepakete bereits entfernt.**



**Foto 7: Immer häufiger finden sich Batteriepakete aus RC-Spielzeugen mit grossen Energiespeicherkapazitäten separiert in den Inobat Sammelfässern. Diese gelangen von Abgebern so zu den Sammelstellen oder werden in Zerlegebetrieben so entfrachtet und gesammelt.**

## **Fragebogen zur Beförderung von Elektro- und Elektronik-Altgeräten**

### **A. Einführung**

Die Gemeinsame Tagung befasste sich im Rahmen ihrer Sitzung im September 2014 auf Grundlage eines von Deutschland vorgelegten Dokumentes (INF. 12) mit der Beförderung von Elektro- und Elektronik-Altgeräten.

Nach der Richtlinie 2012/19/EU sind Elektro- und Elektronik-Altgeräte getrennt vom Siedlungsabfall zu sammeln, um sie einer ordnungsgemäßen Behandlung zur Vorbereitung zur Wiederverwendung oder in Form von Verwertungs- und Recyclingmaßnahmen zuzuführen. Die Gemeinsame Tagung stellte fest, dass die in diesem Rahmen beförderten Elektro- und Elektronik-Altgeräte gefährliche Güter, insbesondere Lithiumbatterien, enthalten können. Daher sollte über besondere Beförderungsbedingungen im RID/ADR/ADN oder über Freistellungen nachgedacht werden.

Vor Entscheidung über das weitere Vorgehen möchte die Gemeinsame Tagung eine Bestandsaufnahme aller Erfahrungen der Staaten vornehmen, die in diesem Bereich bereits Erfahrungen gesammelt haben. Deutschland wurde daher mit der Ausarbeitung eines Fragebogens beauftragt.

Die Delegationen werden gebeten, die nachfolgenden Fragen zu beantworten und bis zum 31. Januar 2014 an die deutsche Delegation (Email: [Ref-G24@bmvi.bund.de](mailto:Ref-G24@bmvi.bund.de)) zu übermitteln.

ANTWORT DEUTSCHLAND

ANTWORT DEUTSCHLAND

**B. Fragen**

1. Werden Beförderungen von Elektro- und Elektronik-Altgeräten (EAG) als Gefahrgutbeförderungen durchgeführt? (Klasse 9 oder freigestellt gemäß SV 636)

In der Regel nein, nur separierte Batterien werden nach Gefahrgutrecht befördert.

2. Welche Behälter/Umschließungen werden benutzt?

	Sammlung	Beförderung
Verpackungen		
Großverpackungen		
IBC		
Widerstandsfähige Außenverpackungen		
Gitterboxen, Verschlüge o.ä.	x	x
Spezielle Sammelcontainer	x	
Offene Container	x	x
Bedeckte Container	x	x
Geschlossene Container	x	x
Offene Fahrzeuge		x
Bedeckte Fahrzeuge	x	x
Gedeckte Fahrzeuge	x	x
Sonstiges	Abfall- und Wertstoffbehälter (wie für sonstigen Müll)	Nur vereinzelt

Weitere Anmerkungen:

Ein Großteil der EAG werden in Containern (30m<sup>3</sup> bis 40m<sup>3</sup>) befördert.

3. Durchführung der Sammlung

a) Welche Arten von Sammelstellen werden vorgehalten:

Sammelboxen/-container im öffentlichen Verkehrsraum	X (Vorteil: Erhöhung Sammelquote)
Sammelstellen im Handel/bei Herstellern ohne Personal	x (Z.B. freiwillige Kleingerätesammlung über Mülltonnen)
Sammelstellen im Handel/bei Herstellern mit Personal	X (Z.B. Serviceleistung Handel, Baumärkte)
Sammelstellen bei kommunalen Entsorgungsträgern ohne Personal	X (Z.B. in Verwaltungsgebäuden, Rathäusern)
Sammelstellen bei kommunalen Entsorgungsträgern mit Personal	X (Recyclinghöfe, in jeder Kommune)
Sammelstellen bei privaten Entsorgungsunternehmen ohne Personal	X (nur gemäß Beauftragung durch den öffentlich-rechtlichen Entsorgungsträger, Handel oder Hersteller)
Sammelstellen bei privaten Entsorgungsunternehmen mit Personal	X (nur gemäß Beauftragung durch den

	öffentlich-rechtlichen Entsorgungsträger, Handel oder Hersteller)
Sonstiges	Sammelstellen bei Einfamilienhäusern oder Mehrfamilienhäusern (Pilotprojekte), Abholung bei Privathaushalten im Rahmen der Spermüllabfuhr

Weitere Anmerkungen:

b) Welche Sortierung erfolgt oder wäre vor Beförderung möglich:

	Sortierung erfolgt	Sortierung möglich
Trennung von EAG mit und ohne Batterie	Nein	Nur schwierig, einfache Erkennungsmerkmale sind nicht immer vorhanden*
Trennung von EAG mit und ohne Kabel	Nein	Ja, aber zusätzlicher Aufwand, ermöglicht keine klare Trennung zwischen Geräten mit und ohne LiBat*
Sammlung und Beförderung in Sammelgruppen nach Richtlinie 2012/19/EU	Bisher grundsätzlich Sammlung nach 5 Sammelgruppen, je nach Verwertung werden aber auch Sammelgruppen zusammengefasst	ja
Trennung von EAG mit kleinen Batterien von EAG mit Batterien $\geq 500g/\geq 100Wh/\geq 2g$ Lithium	Nein	Grds. nein, wenn nur mit besonders geschultem Personal oder wenn bei entsprechender Kennzeichnung der Geräte *
Sonstige	Z.T. werden leicht zu entfernende Batterien vor Zuführung in Sammelbehältnis entnommen	

Weitere Anmerkungen:

Neues Gesetz zur Umsetzung der Richtlinie 2012/19/EU in Vorbereitung. Derzeitige Sammlung erfolgt nach 5 Sammelgruppen, die wie folgt auf den Kategorien der Richtlinie 2002/96 beruhen:

- Sammelgruppe 1: Haushaltsgroßgeräte, automatische Ausgabegeräte (Kategorien 1, 10)
- Sammelgruppe 2: Kühlgeräte (Kategorie 1)
- Sammelgruppe 3: Informations- und Telekommunikationsgeräte, Geräte der Unterhaltungselektronik (Kategorien 3, 4)
- Sammelgruppe 4: Gasentladungslampen (Kategorie 5)
- Sammelgruppe 5: Haushaltskleingeräte, Beleuchtungskörper, elektrische und elektronische Werkzeuge, Spielzeuge, Sport- und Freizeitgeräte, Medizinprodukte, Überwachungs- und Kontrollinstrumente (Kategorien 2, 5, 6, 7, 8, 9)

\*Unterschiedliche Sichtweise der Betroffenen Kreise, kritisch v.a. bei Depotcontainern und Sammelstellen ohne Personal.

4. Beschreiben Sie den Ablauf der Sammlung/Beförderung unter Berücksichtigung der folgenden Schritte

a) vom Verbraucher zur Sammelstelle

Fragen: Abholung durch Entsorgungsunternehmen? Abgabe Verbraucher an Sammelstelle?

- Verbraucher hat immer die Möglichkeit, seine EAG am kommunalen Recyclinghof selbst abzugeben (Bringsystem)
- In einigen Kommunen zusätzlich Depotcontainer im öffentlichen Verkehrsraum (erweitertes Bringsystem), die Container werden durch kommunalen Entsorger/beauftragte Dritte geleert
- In vielen Kommunen Abholung im Rahmen der üblichen Sperrmüllabfuhr/ (insbesondere bei Großgeräten) oder sonstigen Abholungen (z.B. Schadstoffmobile)
- In einzelnen Kommunen (Pilotprojekte) zusätzliche Holsysteme, EAG werden bei den Haushalten in speziellen Wertstoffbehältern gesammelt und abgeholt

b) von Sammelstelle zur Sammelstelle

Fragen: Zusammenfassung von mehreren Sammelpunkten? Wer betreibt Sammelstellen? Wer führt Transport durch?

- Wenn Abgabe an (zentraler) Sammel-/Übergabestelle keine weitere Zusammenfassung, ansonsten Beförderung von Sammelstellen zu zentralen Stellen durch öffentlich-rechtliche Entsorgungsträger oder beauftragte Dritte (Logistikunternehmen, Entsorger)
- Sammelstellen werden von Vertreibern, Herstellern und öffentlich-rechtlichen Entsorgungsträgern (nach nationaler Vorschrift zuständig für Erfassung von EAG) betrieben, bei privaten Entsorgern Sammelstellen nur in deren Auftrag

c) von Sammelstelle zur Erstbehandlungsanlage

Fragen: Wer führt Transport durch?

- Abholung durch Hersteller oder vom Hersteller beauftragten Dritten
- Beförderung durch öffentlich-rechtlichen Entsorgungsträger oder beauftragte Dritte, in letzterem Fall ist häufig Erstbehandler Transporteur

d) von Erstbehandlungsanlage zur weiteren Behandlung/zur Entsorgung/zum Recycling

Fragen: Sind dann Batterien von EAG getrennt? Beschädigung der Batterien durch Behandlung?



- Batterien sind nicht immer entnommen, zum Teil auch Weitergabe an Folgebehandler (etwa wenn nur bestimmte EAG behandelt werden)

5. Welche Informationen über den Anteil von Lithiumbatterien in EAG sind verfügbar?

S. Anlage

- Abschätzung von ZVEI und Bitkom: Sammelgruppe 3 = 49,5 kg in 38m<sup>3</sup> Container, Sammelgruppe 5 = 42,5kg in 38m<sup>3</sup> Container
- Alternative Schätzung GRS: 72-79kg in Sammelgruppe 3 und 5 in 30m<sup>3</sup> Container

6. Welche nationale Festlegungen/Studien zur Durchführen von Sammlungen und Beförderungen und deren Sicherheit liegen vor?

- Unverpackte Beförderung von Elektroaltgeräten gemäß P 909 Abs. 3 wird unabhängig von der Größe der Geräte (Beschluss UNSETDG im Dezember 2014) akzeptiert

## **Questionnaire on the carriage of waste electrical and electronic equipment**

### **A. Introduction**

In September 2014, the Joint Meeting dealt with the carriage of waste electrical and electronic equipment on the basis of a document presented by Germany (INF. 12).

In accordance with Directive 2012/19/EU, waste electrical and electronic equipment has to be collected separately from municipal waste so that it can be sent for correct treatment, i. e. the material can be prepared for re-use, or recovery and recycling measures can be performed. The Joint Meeting noted that the waste electrical and electronic equipment carried within this framework may comprise dangerous goods, in particular lithium batteries. For this reason, special conditions of carriage in RID/ADR/ADN or exemptions should be considered.

Before deciding on the further proceedings, the Joint Meeting wants to take stock of all experiences of the states that have already had experiences in this field. To this avail, Germany was asked to draw up a questionnaire.

The delegations are requested to answer the following questions and send their responses via e-mail until 31 January 2015 to the German delegation (e-mail: [Ref-G24@bmvi.bund.de](mailto:Ref-G24@bmvi.bund.de)).

## B. Questions

1. Is waste electrical and electronic equipment (WEEE) carried as dangerous goods? (Class 9 or exempt under SP 636)

Only batteries are collected and carried as dangerous goods

2. Which receptacles/containments are used?

	Collection	Carriage
Packagings		
Large packagings		
IBCs		
Durable outer packagings		
Wire-mesh boxes, crates, etc.		
Special collection bins		
Open containers		
Sheeted containers		
Closed containers		
Open vehicles		
Sheeted vehicles		
Closed vehicles		X
Other: Batteries are collected in blue plastic barrels Electronic equipment are collected in wire-crates		

Further comments:

3. Conduct of the collection

a) Which types of collection points are provided?

Collection bins in the public street environment	X
Collection points in stores/at manufacturers without personnel	
Collection points in stores/at manufacturers with personnel	
Collection points at municipal disposal companies without personnel	
Collection points at municipal disposal companies with personnel	X
Collection points at private disposal companies without personnel	
Collection points at private disposal companies with personnel	
Other	

Further comments:

b) Which type of sorting is performed or could be performed prior to carriage?

	Sorting is performed	Sorting could be performed
Separation between WEEE with and without battery		X
Separation between WEEE with and without cable		X But we are not allowed to remove cables from WEEE.
Collection and carriage in collection groups according to Directive 2012/19/EU		
Separation between WEEE with small batteries and WEEE with batteries $\geq 500$ g/ $\geq 100$ Wh/ $\geq 2$ g lithium		X
Other		

Further comments: The consumers are asked to remove the batteries, before they throw the electronic equipment out at the recycling centres.

4. Describe the collection/carriage procedure taking the following steps into account:

a) From consumer to collection point

Questions: Collection by disposal company? Hand over to collection point by consumer?

The consumer is able to hand over batteries and WEEE to our recycling centres. If the consumer isn't able to drive to the recycling centres, they are able to order collection of WEEE at their residence, in addition the consumers are asked to remove the batteries from the electronic equipment before collection.

The consumer has the possibility to put batteries into a clear bag and put the bag on top of the waste bin, and then the dustman will take it with him when he/she empties the waste bin.

Furthermore some consumers have a red box for all types of hazardous waste including batteries, which will be collected on demand.

b) From collection point to collection point

Questions: Consolidation of various collection points? Who operates the collection points? Who performs the carriage operations?

[Name left out] operates the collection points in [name left out] municipality, and performs the carriage operations from consumer back to the recycling centres, this is when we talk collection at residence, collection from waste bin and collection of red boxes.

- c) From collection point to primary treatment facility  
Questions: Who performs the carriage operations?

[Name left out] performs the carriage operations on the batteries, small electronic devices is [name left out] and large electronic devices by [name left out]. The carriage takes place from the recycling centres to primary treatment  
The 3 above mention carriage performers, conducts the primary treatment.

- d) from primary treatment facility to secondary treatment/disposal/recycling  
Questions: Have batteries at this point been separated from the WEEE? Battery damages caused by treatment?

At [name left out] the batteries are sorted by type (lithium, cadmium ect.)

5. What information is available on the share of lithium batteries in WEEE?

In [name left out] we don't have any information material on lithium batteries in WEEE

6. Which national specifications/studies on the conduct and safety of collections and carriage operations exist?

## **Questionnaire on the carriage of waste electrical and electronic equipment**

### **A. Introduction**

In September 2014, the Joint Meeting dealt with the carriage of waste electrical and electronic equipment on the basis of a document presented by Germany (INF. 12).

In accordance with Directive 2012/19/EU, waste electrical and electronic equipment has to be collected separately from municipal waste so that it can be sent for correct treatment, i. e. the material can be prepared for re-use, or recovery and recycling measures can be performed. The Joint Meeting noted that the waste electrical and electronic equipment carried within this framework may comprise dangerous goods, in particular lithium batteries. For this reason, special conditions of carriage in RID/ADR/ADN or exemptions should be considered.

Before deciding on the further proceedings, the Joint Meeting wants to take stock of all experiences of the states that have already had experiences in this field. To this avail, Germany was asked to draw up a questionnaire.

The delegations are requested to answer the following questions and send their responses via e-mail until 31 January 2015 to the German delegation (e-mail: [Ref-G24@bmvi.bund.de](mailto:Ref-G24@bmvi.bund.de)).



## B. Questions

1. Is waste electrical and electronic equipment (WEEE) carried as dangerous goods? (Class 9 or exempt under SP 636)

In Denmark WEEE generally is not transported as class 9 and not necessarily according to exemption SP 636.

2. Which receptacles/containments are used?

	Collection	Carriage
Packagings		
Large packagings		
IBCs		
Durable outer packagings		
Wire-mesh boxes, crates, etc.	x	
Special collection bins		
Open containers		x
Sheeted containers		
Closed containers		
Open vehicles		
Sheeted vehicles		
Closed vehicles		
Other		

Further comments:

3. Conduct of the collection

- a) Which types of collection points are provided?

Collection bins in the public street environment	
Collection points in stores/at manufacturers without personnel	x
Collection points in stores/at manufacturers with personnel	
Collection points at municipal disposal companies without personnel	
Collection points at municipal disposal companies with personnel	x
Collection points at private disposal companies without personnel	
Collection points at private disposal companies with personnel	
Other	

Further comments:

Collecting from stores is organized by "elretur". elretur is a private association formed by producers and importers of electrical and electronic products. Their purpose is to handle "producer responsibility" [to take back WEEE] for the members in electrical and electronic

equipment (WEEE) and batteries.

elretur has approximately 1,000 member companies and is the collection of the vast majority of electronic waste in Denmark.

b) Which type of sorting is performed or could be performed prior to carriage?

	Sorting is performed	Sorting could be performed
Separation between WEEE with and without battery	X	
Separation between WEEE with and without cable	X	
Collection and carriage in collection groups according to Directive 2012/19/EU	X	
Separation between WEEE with small batteries and WEEE with batteries $\geq 500$ g/ $\geq 100$ Wh/ $\geq 2$ g lithium	-	-
Other		

Further comments:

4. Describe the collection/carriage procedure taking the following steps into account:

a) From consumer to collection point

Questions: Collection by disposal company? Hand over to collection point by consumer?

Danish consumers dispose WEEE at the local, municipal recycling station.

b) From collection point to collection point

Questions: Consolidation of various collection points? Who operates the collection points? Who performs the carriage operations?

The transport is performed by the private hauliers, with which the municipality or others have entered agreement on transport.

c) From collection point to primary treatment facility

Questions: Who performs the carriage operations?

The transport is performed by the private hauliers, with which the municipality has entered agreement on transport.

d) from primary treatment facility to secondary treatment/disposal/recycling

Questions: Have batteries at this point been separated from the WEEE? Battery damages caused by treatment?

Yes, the batteries have at this point been removed from the WEEE.

5. What information is available on the share of lithium batteries in WEEE?

?

6. Which national specifications/studies on the conduct and safety of collections and carriage operations exist?

None. Further information may be obtained from [www.elretur.dk](http://www.elretur.dk).

## **Questionnaire on the carriage of waste electrical and electronic equipment**

### **A. Introduction**

In September 2014, the Joint Meeting dealt with the carriage of waste electrical and electronic equipment on the basis of a document presented by Germany (INF. 12).

In accordance with Directive 2012/19/EU, waste electrical and electronic equipment has to be collected separately from municipal waste so that it can be sent for correct treatment, i. e. the material can be prepared for re-use, or recovery and recycling measures can be performed. The Joint Meeting noted that the waste electrical and electronic equipment carried within this framework may comprise dangerous goods, in particular lithium batteries. For this reason, special conditions of carriage in RID/ADR/ADN or exemptions should be considered.

Before deciding on the further proceedings, the Joint Meeting wants to take stock of all experiences of the states that have already had experiences in this field. To this avail, Germany was asked to draw up a questionnaire.

The delegations are requested to answer the following questions and send their responses via e-mail until 31 January 2015 to the German delegation (e-mail: [Ref-G24@bmvi.bund.de](mailto:Ref-G24@bmvi.bund.de)).

## B. Questions

1. Is waste electrical and electronic equipment (WEEE) carried as dangerous goods? (Class 9 or exempt under SP 636) **YES, Class 9**

2. Which receptacles/containments are used?

	Collection	Carriage
Packagings	-	-
Large packagings	-	-
IBCs	-	-
Durable outer packagings	-	-
Wire-mesh boxes, crates, etc.	YES	YES
Special collection bins	YES	-
Open containers	-	-
Sheeted containers	-	-
Closed containers	YES	-
Open vehicles	-	-
Sheeted vehicles	-	-
Closed vehicles	YES	YES
Other		

Further comments:

Export for Cooling and freezing appliances: truck is loaded manually and without any packaging or collection bin/boxes.

3. Conduct of the collection

- a) Which types of collection points are provided?

Collection bins in the public street environment	No
Collection points in stores/at manufacturers without personnel	YES
Collection points in stores/at manufacturers with personnel	YES
Collection points at municipal disposal companies without personnel	No
Collection points at municipal disposal companies with personnel	YES
Collection points at private disposal companies without personnel	NO
Collection points at private disposal companies with personnel	YES
Other	

**Further comments:**

Mobile collection - Once per year in the thinly populated municipalities. Organized by EES-Ringlus.

b) Which type of sorting is performed or could be performed prior to carriage?

	Sorting is performed	Sorting could be performed
Separation between WEEE with and without battery	NO	NO
Separation between WEEE with and without cable	NO	NO
Collection and carriage in collection groups according to Directive 2012/19/EU	NO	YES
Separation between WEEE with small batteries and WEEE with batteries $\geq 500$ g/ $\geq 100$ Wh/ $\geq 2$ g lithium	NO	NO
Other		

**Further comments:**

After collection, our warehouse is sorting the WEEE into 5 category:

- C&F appliances –bulk or special container
- LHA appliances – bulk or special container
- TV-s – wire-mesh box or special container
- Monitors – wire-mesh box or special container
- Other WEEE – wire-mesh box or special container
- Lamps - special container

After the carriage to the treatment plant, more detailed sorting happens:

- Batteries and accumulators from WEEE by types:
- C&F appliances – with compressors
- C&F appliances – without compressors
- LHA
- Microwave ovens
- SHA
- TV-CRT
- TV – CRT – incomplete (only CRT glass)
- TV – LCD/Plasma etc.
- Other AVD
- Monitor – CRT
- Monitor – LCD/plasma etc.
- Computers
- Printers/copiers,Fax
- Other IT and telec.
- Etc..

4. Describe the collection/carriage procedure taking the following steps into account:

**a) From consumer to collection point**

**Questions: Collection by disposal company?** It happens in some cases and costs for transport is paid by the consumer or by the disposal company (white goods/metal-scrap dealers)

**Hand over to collection point by consumer?** Collection points which are organized by EES-Ringlus - According to the reception guide, which is developed by EES-Ringlus.



**b) From collection point to collection point**

**Questions: Consolidation of various collection points?** Usually there are not any consolidation of various collection points, because the e-waste is transported to the warehouse only then, when the truck can be fully loaded.

**Who operates the collection points?** Disposal companies, private companies, municipalities,

**Who performs the carriage operations?** Collection in countryside – disposal companies or transport companies who have special license for waste management and contract with EES-Ringlus. In some cases - collection points (shops) – WEEE is transported by their own transport.

**c) From collection point to primary treatment facility**

**Questions: Who performs the carriage operations?** Export of WEEE - transport companies who have special license for waste management or at least ADR.

Internal transport - disposal companies or transport companies who have special license for waste management and contract with EES-Ringlus.

**d) from primary treatment facility to secondary treatment/disposal/recycling**

**Questions: Have batteries at this point been separated from the WEEE?** YES

**Battery damages caused by treatment?** NO

5. **What information is available on the share of lithium batteries in WEEE?** There is no information!

6. Which national specifications/studies on the conduct and safety of collections and carriage operations exist? n.a.

## **Questionnaire on the carriage of waste electrical and electronic equipment**

### **A. Introduction**

In September 2014, the Joint Meeting dealt with the carriage of waste electrical and electronic equipment on the basis of a document presented by Germany (INF. 12).

In accordance with Directive 2012/19/EU, waste electrical and electronic equipment has to be collected separately from municipal waste so that it can be sent for correct treatment, i. e. the material can be prepared for re-use, or recovery and recycling measures can be performed. The Joint Meeting noted that the waste electrical and electronic equipment carried within this framework may comprise dangerous goods, in particular lithium batteries. For this reason, special conditions of carriage in RID/ADR/ADN or exemptions should be considered.

Before deciding on the further proceedings, the Joint Meeting wants to take stock of all experiences of the states that have already had experiences in this field. To this avail, Germany was asked to draw up a questionnaire.

The delegations are requested to answer the following questions and send their responses via e-mail until 31 January 2015 to the German delegation (e-mail: [Ref-G24@bmvi.bund.de](mailto:Ref-G24@bmvi.bund.de)).

## B. Questions

1. Is waste electrical and electronic equipment (WEEE) carried as dangerous goods?  
(Class 9 or exempt under SP 636)

No

2. Which receptacles/containments are used?

	Collection	Carriage
Packagings	X	
Large packagings		
IBCs		
Durable outer packagings	X	
Wire-mesh boxes, crates, etc.	X	
Special collection bins		
Open containers		X
Sheeted containers		X
Closed containers		C
Open vehicles		
Sheeted vehicles		X
Closed vehicles		X
Other		

Further comments:

3. Conduct of the collection

- a) Which types of collection points are provided?

Collection bins in the public street environment	
Collection points in stores/at manufacturers without personnel	
Collection points in stores/at manufacturers with personnel	X
Collection points at municipal disposal companies without personnel	
Collection points at municipal disposal companies with personnel	X
Collection points at private disposal companies without personnel	
Collection points at private disposal companies with personnel	X
Other	

Further comments:

b) Which type of sorting is performed or could be performed prior to carriage?

	Sorting is performed	Sorting could be performed
Separation between WEEE with and without battery		
Separation between WEEE with and without cable		X
Collection and carriage in collection groups according to Directive 2012/19/EU		
Separation between WEEE with small batteries and WEEE with batteries $\geq 500$ g/ $\geq 100$ Wh/ $\geq 2$ g lithium		
Other		

Further comments:

4. Describe the collection/carriage procedure taking the following steps into account:

a) From consumer to collection point

Questions:

Collection by Disposal Company?

Before collecting take please there is a wastestreamnummer which includes a description of the waste. The waste is collected and packed into packaging or a crate (depending on the amount)

Hand over to collection point by consumer? Consumer put the waste into a container. Depending on the location it will be an open, sheeted or closed container.

b) From collection point to collection point

Questions:

Consolidation of various collection points?

From small collection point the waste will be collected in crates and placed in a sheeted or closed vehicle.

From big collection points the waste is transported in an open, sheeted or closed container

Who operates the collection points?

The collection point are mostly operated by private companies some are operated by Public companies

Who performs the carriage operations?

The collection point of destination mostly performs the carriage operations

c) From collection point to primary treatment facility

Questions:

Who performs the carriage operations?

The transport to the primary treatment facility can be performed by every company which is allowed to transport waste

d) From primary treatment facility to secondary treatment/disposal/recycling

Questions:

Have batteries at this point been separated from the WEEE?

Batteries are separated from the WEEE and is packed according to the ADR.

Battery damages caused by treatment?

If a battery is damaged at the treatment facility it will be packed according to the ADR.

5. What information is available on the share of lithium batteries in WEEE?

Until the primary treatment there is no information available about the battery.

6. Which national specifications/studies on the conduct and safety of collections and carriage operations exist?

## **Questionnaire on the carriage of waste electrical and electronic equipment**

### **A. Introduction**

In September 2014, the Joint Meeting dealt with the carriage of waste electrical and electronic equipment on the basis of a document presented by Germany (INF. 12).

In accordance with Directive 2012/19/EU, waste electrical and electronic equipment has to be collected separately from municipal waste so that it can be sent for correct treatment, i. e. the material can be prepared for re-use, or recovery and recycling measures can be performed. The Joint Meeting noted that the waste electrical and electronic equipment carried within this framework may comprise dangerous goods, in particular lithium batteries. For this reason, special conditions of carriage in RID/ADR/ADN or exemptions should be considered.

Before deciding on the further proceedings, the Joint Meeting wants to take stock of all experiences of the states that have already had experiences in this field. To this avail, Germany was asked to draw up a questionnaire.

The delegations are requested to answer the following questions and send their responses via e-mail until 31 January 2015 to the German delegation (e-mail: [Ref-G24@bmvi.bund.de](mailto:Ref-G24@bmvi.bund.de)).

## B. Questions

1. Is waste electrical and electronic equipment (WEEE) carried as dangerous goods? (Class 9 or exempt under SP 636)

Exempted, except for batteries above limited quantities. Also specific instructions from the national ADR authorities requiring safe but not UN-approved packaging for the collection of WEEE containing Lithium batteries

2. Which receptacles/containments are used?

	Collection	Carriage
Packagings		
Large packagings	X	X
IBCs		
Durable outer packagings	X	X
Wire-mesh boxes, crates, etc.	X	X
Special collection bins	X	X
Open containers	X	X
Sheeted containers	X	X
Closed containers	X	X
Open vehicles		
Sheeted vehicles	X	X
Closed vehicles	X	X
Other		

Further comments:

Special UN-approved drums are used for the collection of batteries, special bins (not UN-tested) for lamps. Containers are used for the collection of big size WEEE (fridges, ...)

3. Conduct of the collection

- a) Which types of collection points are provided?

Collection bins in the public street environment	
Collection points in stores/at manufacturers without personnel	
Collection points in stores/at manufacturers with personnel	X
Collection points at municipal disposal companies without personnel	
Collection points at municipal disposal companies with personnel	X
Collection points at private disposal companies without personnel	
Collection points at private disposal companies with personnel	X
Other	Reuse centers (social economy) for several types of WEEE

	Schools, hospitals, administrations for batteries
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Further comments:

b) Which type of sorting is performed or could be performed prior to carriage?

	Sorting is performed	Sorting could be performed
Separation between WEEE with and without battery		
Separation between WEEE with and without cable		
Collection and carriage in collection groups according to Directive 2012/19/EU	X	
Separation between WEEE with small batteries and WEEE with batteries $\geq 500$ g/ $\geq 100$ Wh/ $\geq 2$ g lithium		
Other		

Further comments:

4. Describe the collection/carriage procedure taking the following steps into account:

a) From consumer to collection point

Questions: Collection by disposal company? Some companies are still collecting WEEE in door to door collection.

Hand over to collection point by consumer? The majority is brought to the collection point (shop or municipality) by the consumer. In case the producer is a company, the collection is organized by a registered collector

b) From collection point to collection point

Questions: Consolidation of various collection points? Who operates the collection points? Who performs the carriage operations? A registered collector

c) From collection point to primary treatment facility

Questions: Who performs the carriage operations? A registered collector

d) from primary treatment facility to secondary treatment/disposal/recycling

Questions: Have batteries at this point been separated from the WEEE? Battery damages caused by treatment? The primary treatment facility operates a depollution of the hazardous substances/devices (batteries, Freon, ammonia,...). The secondary treatment facility operates the mechanical separation of the fractions to optimize the recycling of the valuable fractions.



5. What information is available on the share of lithium batteries in WEEE?

Only available for WEE collected by the take back scheme RECUPEL.

6. Which national specifications/studies on the conduct and safety of collections and carriage operations exist?

There is a 'vademeccum' on the transport of hazardous substances, with specific FAQ's on the carriage of waste containing Li-batteries and lamps.

## **Questionnaire on the carriage of waste electrical and electronic equipment**

### **A. Introduction**

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## B. Questions

1. Is waste electrical and electronic equipment (WEEE) carried as dangerous goods? (Class 9 or exempt under SP 636)

No, they are not carried as dangerous goods but only as dangerous waste UNcode 20.01.35\* (for small appliances including lithium batteries) in compliance with French and UE laws so far end of the year 2014.

2. Which receptacles/containments are used?

	Collection	Carriage
Packagings		
Large packagings		
IBCs		
Durable outer packagings		
Wire-mesh boxes, crates, etc.	X for SDA & Screens	X for screens
Special collection bins		
Open containers		
Sheeted containers	X	X
Closed containers		
Open vehicles		
Sheeted vehicles		X
Closed vehicles	X	X
Other		

Further comments:

3. Conduct of the collection

a) Which types of collection points are provided?

Collection bins in the public street environment	
Collection points in stores/at manufacturers without personnel	X
Collection points in stores/at manufacturers with personnel	X
Collection points at municipal disposal companies without personnel	X
Collection points at municipal disposal companies with personnel	X
Collection points at private disposal companies without personnel	X
Collection points at private disposal companies with personnel	X
Other	

Further comments:

b) Which type of sorting is performed or could be performed prior to carriage?

	Sorting is performed	Sorting could be performed
Separation between WEEE with and without battery		
Separation between WEEE with and without cable		
Collection and carriage in collection groups according to Directive 2012/19/EU	X	
Separation between WEEE with small batteries and WEEE with batteries $\geq 500$ g/ $\geq 100$ Wh/ $\geq 2$ g lithium		
Other		

Further comments:

4. Describe the collection/carriage procedure taking the following steps into account:

a) From consumer to collection point

Questions: Collection by disposal company? Hand over to collection point by consumer?

- *Only by handing over to collection point by consumer*

b) From collection point to collection point

Questions: Consolidation of various collection points? Who operates the collection points? Who performs the carriage operations?

- *Only an internal disposition from the collection facility apart from Eco-systemes organization*

c) From collection point to primary treatment facility

Questions: Who performs the carriage operations?

- This part is organized by Eco-systemes with disposal companies whom are in contract after tenders

d) from primary treatment facility to secondary treatment/disposal/recycling

Questions: Have batteries at this point been separated from the WEEE? Battery damages caused by treatment?

- *Yes, at this stage, batteries were removed from the SDA and sometimes some of them are damaged, but only a very little part of the complete fraction is concerned*

5. What information is available on the share of lithium batteries in WEEE?

*Information is available only for the SDA fraction.*

- *Average relative share (number) devices containing batteries / Lithium batteries: 3.3%*

6. Which national specifications/studies on the conduct and safety of collections and carriage operations exist?

*None on the WEEE topic*

## Questionnaire on the carriage of waste electrical and electronic equipment

### A. Introduction

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In accordance with Directive 2012/19/EU, waste electrical and electronic equipment has to be collected separately from municipal waste so that it can be sent for correct treatment, i. e. the material can be prepared for re-use, or recovery and recycling measures can be performed. The Joint Meeting noted that the waste electrical and electronic equipment carried within this framework may comprise dangerous goods, in particular lithium batteries. For this reason, special conditions of carriage in RID/ADR/ADN or exemptions should be considered.

Before deciding on the further proceedings, the Joint Meeting wants to take stock of all experiences of the states that have already had experiences in this field. To this avail, Germany was asked to draw up a questionnaire.

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## B. Questions

1. Is waste electrical and electronic equipment (WEEE) carried as dangerous goods? (Class 9 or exempt under SP 636)

In France, WEEE are not carried as dangerous goods.

2. Which receptacles/containments are used?

	Collection	Carriage
Packagings		
Large packagings		
IBCs		
Durable outer packagings		
Wire-mesh boxes, crates, etc.	X	X
Special collection bins		
Open containers	X	X
Sheeted containers	X	X
Closed containers		
Open vehicles		
Sheeted vehicles	X	X
Closed vehicles		
Other		

Further comments:

3. Conduct of the collection

- a) Which types of collection points are provided?

Collection bins in the public street environment	X
Collection points in stores/at manufacturers without personnel	X
Collection points in stores/at manufacturers with personnel	X
Collection points at municipal disposal companies without personnel	
Collection points at municipal disposal companies with personnel	X
Collection points at private disposal companies without personnel	Not sure
Collection points at private disposal companies with personnel	X
Other	

Further comments: In France the treatment of WEEE of municipal origin is a responsibility of the municipalities. However, the scheme is organised by different EPR organisms: ecosystems and ecologic for WEEE, Recyclum for lamps and professional WEEEs for instance. EPR organisms contract with the private or the public sector for collection, transport and treatment.

b) Which type of sorting is performed or could be performed prior to carriage?

	Sorting is performed	Sorting could be performed
Separation between WEEE with and without battery		
Separation between WEEE with and without cable		
Collection and carriage in collection groups according to Directive 2012/19/EU		
Separation between WEEE with small batteries and WEEE with batteries $\geq 500$ g/ $\geq 100$ Wh/ $\geq 2$ g lithium		- Inverter could be separated from other Small Domestic Appliances
Other		

Further comments:

4. Describe the collection/carriage procedure taking the following steps into account:

a) From consumer to collection point :

Collection by disposal company? The direct collection by waste management companies is done for professional WEEE.

Hand over to collection point by consumer? Hand over to collection point by consumer is done for WEEE of household origin.

b) From collection point to collection point :

Consolidation of various collection points? A major part of WEEE collected through civic amenities is regrouped on a consolidation centre.

Who operates the collection points? The collection points are operated by:

- private waste operators
- entities from the social economy

Who performs the carriage operations?

Carriage operations are performed generally by waste operator or carriage companies (for long distance) contracted by EPR organisms or by EPR organisms when the collection is a stand-alone operation.

c) From collection point to primary treatment facility :

Who performs the carriage operations? The carriage operations are performed by an operator or a transport company contracted by EPR organisms.

d) From primary treatment facility to secondary treatment/disposal/recycling:

Have batteries at this point been separated from the WEEE? At this point, batteries have been separated from WEEE and placed in specific containers gave by the EPR schemes, collected and transported according to ADR.

Battery damages caused by treatment? The WEEELABEX requirement should prevent damages caused by treatment.

5. What information is available on the share of lithium batteries in WEEE?

As a trade association, we do not have this kind of information. However, EPR organisms should have this type of aggregated data.

6. Which national specifications/studies on the conduct and safety of collections and carriage operations exist?

There is the WEEElabex for collection. The CEN/CENELEC standardisation for the treatment of WEEE is ongoing. FNADE has developed a guidance document with the transport industry on ADR. The document is reviewed every two years.

## Questionnaire on the carriage of waste electrical and electronic equipment

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## B. Questions

1. Is waste electrical and electronic equipment (WEEE) carried as dangerous goods? (Class 9 or exempt under SP 636)

Between the take back point and the place of treatment electrical and electronic equipments (WEEEs) are not carried as hazardous waste.

2. Which receptacles/containments are used?

	Collection	Carriage
Packagings		
Large packagings		
IBCs		
Durable outer packagings		
Wire-mesh boxes, crates, etc.		
Special collection bins		
Open containers		
Sheeted containers		
Closed containers		
Open vehicles		
Sheeted vehicles		
Closed vehicles		
Other		

Further comments: there is no separate legislation for containers

1. private disposal companies/municipal disposal companies → both for collection and carriage containers with 1 m<sup>3</sup> capacity are typically used. Those containers that are placed to the collection points could be found under covered storages.
2. stores/at manufacturers → those special containers are applied into which the WEEEs could be placed, but they cannot be taken out.

3. Conduct of the collection

- a) Which types of collection points are provided?

Collection bins in the public street environment	
Collection points in stores/at manufacturers without personnel	X
Collection points in stores/at manufacturers with personnel	X
Collection points at municipal disposal companies without personnel	X
Collection points at municipal disposal companies with personnel	X
Collection points at private disposal companies without personnel	
Collection points at private disposal companies with personnel	X
Other	

Further comments: Since 1<sup>st</sup> January 2015 the Hungarian WEEE legislation has been amended with the regulation referring to the 400m<sup>2</sup>/25 cm.

- b) Which type of sorting is performed or could be performed prior to carriage?

	Sorting is performed	Sorting could be performed
Separation between WEEE with and without battery		
Separation between WEEE with and without cable		
Collection and carriage in collection groups according to Directive 2012/19/EU		
Separation between WEEE with small batteries and WEEE with batteries $\geq 500$ g/ $\geq 100$ Wh/ $\geq 2$ g lithium		
Other		

Further comments: Before the carriage from the take back points typically no treatment procedure is applied, since sorting is not legally binding. Sorting could be realised in those cases that do not require a waste treatment license.

4. Describe the collection/carriage procedure taking the following steps into account:

a) From consumer to collection point

Questions: Collection by disposal company? Hand over to collection point by consumer? Both of them exist.

b) From collection point to collection point

Questions: Consolidation of various collection points? Who operates the collection points? Who performs the carriage operations? Typically producers, public service providers, industry players. All actors could perform the carriage operations and there are also companies which deal only with carriage (ADR, licence needed).

c) From collection point to primary treatment facility

Questions: Who performs the carriage operations? See point b)

d) From primary treatment facility to secondary treatment/disposal/recycling

Questions: Have batteries at this point been separated from the WEEE? Typically yes! Battery damages caused by treatment? The question cannot be interpreted.

5. What information is available on the share of lithium batteries in WEEE?

We do not have this kind of information/ document.

6. Which national specifications/studies on the conduct and safety of collections and carriage operations exist?

All the EU rules have been implemented into the Hungarian legislation, just like the directive for cross-border shipments of WEEE. In addition to this, in Hungary the EKÁER system (this Hungarian abbreviation stands for Electronic Road Transportation Control System) has started to be built out, the details of which still need to be clarified and worked out. → the surveillance of the system is the function of NAV (this Hungarian abbreviation stands for the National Tax and Customs Administration of Hungary)

## Questionnaire on the carriage of waste electrical and electronic equipment

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## B. Questions

1. Is waste electrical and electronic equipment (WEEE) carried as dangerous goods? (Class 9 or exempt under SP 636)

No. WEEE includes fridges, large appliances, TV's / monitors, and small appliances. For the purposes of this questionnaire, wherever it says WEEE, I'm going to assume it means **Small Appliances**.

2. Which receptacles/containments are used?

	Collection	Carriage
Packagings		
Large packagings		
IBCs		
Durable outer packagings		
Wire-mesh boxes, crates, etc. "Cages"	Yes	Yes
Special collection bins		
Open containers	Yes	Yes
Sheeted containers		
Closed containers	Yes	Yes
Open vehicles		
Sheeted vehicles		
Closed vehicles	Not loose, in "Cages"	Not loose, in "Cages"
Other	Pallets/cages	Pallets/cages

Further comments:

I have answered above only for Small Appliances (as per Q1)

3. Conduct of the collection

a) Which types of collection points are provided?

Collection bins in the public street environment	Not at the moment
Collection points in stores/at manufacturers without personnel	Don't think so
Collection points in stores/at manufacturers with personnel	Yes, WEEE retailers
Collection points at municipal disposal companies locations without personnel	Possible – bring centres with closed metal containers (theft proof)
Collection points at municipal disposal companies with personnel	Yes, i.e. Civic Amenity Sites
Collection points at private disposal companies without personnel	Possible – using closed metal containers (theft proof)
Collection points at private disposal companies with personnel	Yes
Other: In Cages, at Public Locations (i.e. Car Park) with Personnel from our company	Yes

Further comments:

Answer IE

b) Which type of sorting is performed or could be performed prior to carriage?

	Sorting is performed	Sorting could be performed
Separation between WEEE with and without battery	No	No
Separation between WEEE with and without cable	No	No
Collection and carriage in collection groups according to Directive 2012/19/EU	Yes	Yes
Separation between WEEE with small batteries and WEEE with batteries $\geq 500$ g/ $\geq 100$ Wh/ $\geq 2$ g lithium	No	No
Other		

Further comments:

We have had no fire incidents caused by batteries contained in WEEE, and would consider the amount of Lithium Batteries in normal mixed household WEEE to be very small proportionate to total weight collected.

4. Describe the collection/carriage procedure taking the following steps into account:

a) From consumer to collection point

Questions: Collection by disposal company? Hand over to collection point by consumer?

Consumers bring their equipment in their own cars to Civic Amenity Sites, Collection Days at Public Locations (i.e. Supermarket Car Park), Bring Banks, Retailers etc

We arrange for collections from businesses, using waste collection permitted vehicles which bring the WEEE directly to an authorised treatment facility. In cases of larger employers, cages may be provided for collection of WEEE arising from employees home use – these cages are collected when full using Waste Permitted Collection Vehicles, and transported to an authorised treatment facility.

Storage containers are typically mesh cages which prevent the WEEE from falling out. These cages are then loaded onto Waste Permitted Collection Vehicles, and transported to an authorised treatment facility.

In some public bring centres / civic amenity sites the container might be

- a closed metal "WEEE House" (like a small shipment container with windows for material to be posted through), or
  - an open skip (though this is typically only for the larger types of WEEE which don't have batteries)
- ...these are then loaded onto a waste collection permitted vehicles & brought direct to an authorised treatment facility.

There is free handover from consumer to collection point. Consumers bring WEEE in their own vehicles. Once handed over, it is stored as WEEE and transported as WEEE thereafter, by permitted haulage companies to authorised facilities.

- b) From collection point to collection point  
Questions: Consolidation of various collection points? Who operates the collection points? Who performs the carriage operations?

In most cases this step is not involved. If it were I believe it would be only by permitted transport companies.

- c) From collection point to primary treatment facility  
Questions: Who performs the carriage operations?  
Permitted transport companies only.

- d) from primary treatment facility to secondary treatment/disposal/recycling  
Questions: Have batteries at this point been separated from the WEEE? Battery damages caused by treatment?

We receive separately collected batteries, and WEEE containing batteries. The process for liberating batteries keeps the batteries intact. Very rarely are there damaged batteries, but if there are, these are identified during our battery sorting activity and managed appropriately.

Another company states that batteries are removed at the primary facility. Batteries are stored in vermiculite. The removal is carried out manually - the batteries are not damaged by the treatment.

##### 5. What information is available on the share of lithium batteries in WEEE?

Detailed Battery Sort information. Batteries from our WEEE Plant are retained onsite in plastic bins under weatherproof covering as a mix, and then sorted through our Battery Sorting Plant. All outputs are recorded from the Sort Activity.

Sort data for separately collected batteries shows Lithium (as an output) represent approx. 0.7% of the total sort input.

##### 6. Which national specifications/studies on the conduct and safety of collections and carriage operations exist?

Many... We use (UK) Environmental Agency guidance a good bit, but are also complying with the WEEELABEX Standard for Treatment Operators – a new European Standard, which is primarily a tool for verifying conformance to the WEEE Directive. In addition, we are inspected and audited by our DGSA and the EPA – guidance through auditing is useful (provided it is consistent and based on definite requirements).

Our Industry is very competitive – additional rules / requirements increase the cost of recycling for those operatives who endeavour for maximum compliance. Safety obviously is paramount, but incident history should be taken into account to evaluate risk, and control should be based on 'reality' – especially concerning batteries when they are already protected to a certain degree, by being enclosed in equipment.

## Questionnaire on the carriage of waste electrical and electronic equipment

*Notes from Elizabeth O'Reilly, Compliance Manager, WEEE Ireland*  
[elizabeth@weeeireland.ie](mailto:elizabeth@weeeireland.ie) tel 0035312999320

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## B. Questions

1. Is waste electrical and electronic equipment (WEEE) carried as dangerous goods? (Class 9 or exempt under SP 636)

NO

2. Which receptacles/containments are used?

	Collection	Carriage
Packagings		
Large packagings		
IBCs		
Durable outer packagings		
Wire-mesh boxes, crates, etc.	x	x
Special collection bins		
Open containers	x	x
Sheeted containers		
Closed containers	x	x
Open vehicles		
Sheeted vehicles		
Closed vehicles		x
Other	x	x

Further comments:

Other – appliance pallets, lamp coffins, liteboxes, WEEE trolleys,

3. Conduct of the collection

a) Which types of collection points are provided?

Collection bins in the public street environment	
Collection points in stores/at manufacturers without personnel	Yes
Collection points in stores/at manufacturers with personnel	Yes
Collection points at municipal disposal companies without personnel	Yes
Collection points at municipal disposal companies with personnel	Yes
Collection points at private disposal companies without personnel	
Collection points at private disposal companies with personnel	
Other	Yes

Further comments:

Public collection events with Compliance Scheme waste contractor personnel  
Some business and office collection points with WEEE trolleys

b) Which type of sorting is performed or could be performed prior to carriage?

	Sorting is performed	Sorting could be performed
Separation between WEEE with and without battery	No	No
Separation between WEEE with and without cable	No	No
Collection and carriage in collection groups according to Directive 2012/19/EU	Yes	Yes
Separation between WEEE with small batteries and WEEE with batteries $\geq 500$ g/ $\geq 100$ Wh/ $\geq 2$ g lithium	No*	No*
Other		

Further comments:

Some limited manual sorting is carried out at recycling facility but it is not absolute.

4. Describe the collection/carriage procedure taking the following steps into account:

a) From consumer to collection point

Questions: Collection by disposal company? Hand over to collection point by consumer?

Handover at collection point by consumer and also collection by retailer on delivery of new EEE

b) From collection point to collection point

Questions: Consolidation of various collection points? Who operates the collection points? Who performs the carriage operations?

Compliance Scheme contractors collect at retail collection points and municipal collection points

Retailers also employ reverse logistics to consolidate WEEE at their distribution hubs where Compliance Scheme contractors collect from

Retailers also bring WEEE to Compliance Scheme transfer hub

c) From collection point to primary treatment facility

Questions: Who performs the carriage operations?

Compliance Scheme logistics contractors collect WEEE from collection points and transfer hubs and bring to primary treatment facilities

d) from primary treatment facility to secondary treatment/disposal/recycling

Questions: Have batteries at this point been separated from the WEEE? Battery damages caused by treatment?

Processing for Mixed WEEE is carried out in Ireland. Some manual separation but whole batteries mainly separated out during the processing. Batteries separated whole during the initial mechanical phase of the mixed WEEE treatment process, they are largely unidentifiable and may have superficial or surface damage. They are then transferred to the battery sorting area and included in the Battery management process – sorted for shipment to European Battery recycling facilities.

5. What information is available on the share of lithium batteries in WEEE?

None. Rechargeable Lithium ion and lithium polymer battery volumes placed on the Ireland market are reported each month to the National Registration Body by all Producers but there is currently no requirement to report if they are incorporated into WEEE.

6. Which national specifications/studies on the conduct and safety of collections and carriage operations exist?

Compliance Scheme provides safety information to collection points. HSA ([www.hsa.ie](http://www.hsa.ie)) is the competent authority in Ireland for carriage of dangerous goods legislation. Requirement to adhere to this legislation by Schemes and operators is also specified within the Battery Regulations.

[http://www.hsa.ie/eng/Your\\_Industry/ADR - Carriage of Dangerous Goods by Road/](http://www.hsa.ie/eng/Your_Industry/ADR_-_Carriage_of_Dangerous_Goods_by_Road/)



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## B. Questions

1. Is waste electrical and electronic equipment (WEEE) carried as dangerous goods?  
(Class 9 or exempt under SP 636)

No

2. Which receptacles/containments are used?

	Collection	Carriage
Packagings	X	
Large packagings		
IBCs		
Durable outer packagings	X	
Wire-mesh boxes, crates, etc.	X	
Special collection bins		
Open containers		X
Sheeted containers		X
Closed containers		C
Open vehicles		
Sheeted vehicles		X
Closed vehicles		X
Other		

Further comments:

3. Conduct of the collection

- a) Which types of collection points are provided?

Collection bins in the public street environment	
Collection points in stores/at manufacturers without personnel	
Collection points in stores/at manufacturers with personnel	X
Collection points at municipal disposal companies without personnel	
Collection points at municipal disposal companies with personnel	X
Collection points at private disposal companies without personnel	
Collection points at private disposal companies with personnel	X
Other	

Further comments:

b) Which type of sorting is performed or could be performed prior to carriage?

	Sorting is performed	Sorting could be performed
Separation between WEEE with and without battery		
Separation between WEEE with and without cable		X
Collection and carriage in collection groups according to Directive 2012/19/EU		
Separation between WEEE with small batteries and WEEE with batteries $\geq 500$ g/ $\geq 100$ Wh/ $\geq 2$ g lithium		
Other		

Further comments:

4. Describe the collection/carriage procedure taking the following steps into account:

a) From consumer to collection point

Questions:

Collection by Disposal Company?

Before collecting take please there is a wastestreamnummer which includes a description of the waste. The waste is collected and packed into packaging or a crate (depending on the amount)

Hand over to collection point by consumer? Consumer put the waste into a container. Depending on the location it will be an open, sheeted or closed container.

b) From collection point to collection point

Questions:

Consolidation of various collection points?

From small collection point the waste will be collected in crates and placed in a sheeted or closed vehicle.

From big collection points the waste is transported in an open, sheeted or closed container

Who operates the collection points?

The collection point are mostly operated by private companies some are operated by Public companies

Who performs the carriage operations?

The collection point of destination mostly performs the carriage operations

c) From collection point to primary treatment facility

Questions:

Who performs the carriage operations?

The transport to the primary treatment facility can be performed by every company which is allowed to transport waste

d) From primary treatment facility to secondary treatment/disposal/recycling

Questions:

Have batteries at this point been separated from the WEEE?

Batteries are separated from the WEEE and is packed according to the ADR.

Battery damages caused by treatment?

If a battery is damaged at the treatment facility it will be packed according to the ADR.

5. What information is available on the share of lithium batteries in WEEE?

Until the primary treatment there is no information available about the battery.

6. Which national specifications/studies on the conduct and safety of collections and carriage operations exist?

## **Questionnaire on the carriage of waste electrical and electronic equipment**

### **A. Introduction**

In September 2014, the Joint Meeting dealt with the carriage of waste electrical and electronic equipment on the basis of a document presented by Germany (INF. 12).

In accordance with Directive 2012/19/EU, waste electrical and electronic equipment has to be collected separately from municipal waste so that it can be sent for correct treatment, i. e. the material can be prepared for re-use, or recovery and recycling measures can be performed. The Joint Meeting noted that the waste electrical and electronic equipment carried within this framework may comprise dangerous goods, in particular lithium batteries. For this reason, special conditions of carriage in RID/ADR/ADN or exemptions should be considered.

Before deciding on the further proceedings, the Joint Meeting wants to take stock of all experiences of the states that have already had experiences in this field. To this avail, Germany was asked to draw up a questionnaire.

The delegations are requested to answer the following questions and send their responses via e-mail until 31 January 2015 to the German delegation (e-mail: [Ref-G24@bmvi.bund.de](mailto:Ref-G24@bmvi.bund.de)).

## B. Questions

1. Is waste electrical and electronic equipment (WEEE) carried as dangerous goods? (Class 9 or exempt under SP 636)

No and no!

2. Which receptacles/containments are used?

	Collection	Carriage
Packagings	x	x
Large packagings	x	x
IBCs	x	x
Durable outer packagings	x	x
Wire-mesh boxes, crates, etc.	x	x
Special collection bins	x	x
Open containers	x	x
Sheeted containers	x	x
Closed containers	x	x
Open vehicles	x	x
Sheeted vehicles	x	x
Closed vehicles	x	x
Other		

Further comments:

There are no obligations for transportation at this moment to my knowledge.

3. Conduct of the collection

a) Which types of collection points are provided?

Collection bins in the public street environment	x
Collection points in stores/at manufacturers without personnel	x
Collection points in stores/at manufacturers with personnel	x
Collection points at municipal disposal companies without personnel	x
Collection points at municipal disposal companies with personnel	x
Collection points at private disposal companies without personnel	x
Collection points at private disposal companies with personnel	x
Other	

Further comments:

Every type of collection today is used in the Netherlands, it's today easy because there are no ADR requirements.

b) Which type of sorting is performed or could be performed prior to carriage?

	Sorting is performed	Sorting could be performed
Separation between WEEE with and without battery	-	x
Separation between WEEE with and without cable	-	x
Collection and carriage in collection groups according to Directive 2012/19/EU	x	x
Separation between WEEE with small batteries and WEEE with batteries $\geq 500$ g/ $\geq 100$ Wh/ $\geq 2$ g lithium	-	-
Other		

Further comments:

From computers today no battery is removed before shredding, we get a lot of battery fractions from computer dismantlers (in the Netherlands) and they are almost all damaged and therefore not safe enough! The batteries are transported under ADR Class 9, so the right packaging and cushioning material in between.

4. Describe the collection/carriage procedure taking the following steps into account:

a) From consumer to collection point

Questions: Collection by disposal company? Hand over to collection point by consumer?

Yes and also by scrap dealers and special collection programs like Stibat is doing today.

b) From collection point to collection point

Questions: Consolidation of various collection points? Who operates the collection points? Who performs the carriage operations?

Same as by question A.

c) From collection point to primary treatment facility

Questions: Who performs the carriage operations?

Same as by question A and also industrial waste collectors like Sita, Van Gansewinkel et cetera.

d) from primary treatment facility to secondary treatment/disposal/recycling

Questions: Have batteries at this point been separated from the WEEE? Battery damages caused by treatment?

In the Netherlands normally yes, like companies as Sims, Coolrec, Jacomy Electronics and others but at the end by shredders and afterwards handpicking of the (damaged) batteries.



5. What information is available on the share of lithium batteries in WEEE?

At this moment I have no information about this. Schemes like; Stibat, Weecycle, Recharge should have this kind of information. What is absolute sure is that the amount of Lithium batteries is rapidly growing. We aren't sorting all the fractions due to safety reasons.

6. Which national specifications/studies on the conduct and safety of collections and carriage operations exist?

This is normally also done by the schemes, at least in the Netherlands. We as Van Peperzeel company do it ourselves at Lelystad.

## **Questionnaire on the carriage of waste electrical and electronic equipment**

### **A. Introduction**

In September 2014, the Joint Meeting dealt with the carriage of waste electrical and electronic equipment on the basis of a document presented by Germany (INF. 12).

In accordance with Directive 2012/19/EU, waste electrical and electronic equipment has to be collected separately from municipal waste so that it can be sent for correct treatment, i. e. the material can be prepared for re-use, or recovery and recycling measures can be performed. The Joint Meeting noted that the waste electrical and electronic equipment carried within this framework may comprise dangerous goods, in particular lithium batteries. For this reason, special conditions of carriage in RID/ADR/ADN or exemptions should be considered.

Before deciding on the further proceedings, the Joint Meeting wants to take stock of all experiences of the states that have already had experiences in this field. To this avail, Germany was asked to draw up a questionnaire.

The delegations are requested to answer the following questions and send their responses via e-mail until 31 January 2015 to the German delegation (e-mail: [Ref-G24@bmvi.bund.de](mailto:Ref-G24@bmvi.bund.de)).

## B. Questions

1. Is waste electrical and electronic equipment (WEEE) carried as dangerous goods? (Class 9 or exempt under SP 636)

*Yes – depending on the collection group this is classified as dangerous goods; however under previous ADR it was exempted through SP 636*

2. Which receptacles/containments are used?

	Collection	Carriage
Packagings	X	
Large packagings		
IBCs		
Durable outer packagings		
Wire-mesh boxes, crates, etc.		
Special collection bins	X	
Open containers		X
Sheeted containers		
Closed containers		
Open vehicles		
Sheeted vehicles		
Closed vehicles		
Other	<i>Carton boxes</i>	

Further comments:

3. Conduct of the collection

- a) Which types of collection points are provided?

Collection bins in the public street environment	<i>Yes</i>
Collection points in stores/at manufacturers without personnel	<i>Yes</i>
Collection points in stores/at manufacturers with personnel	<i>Yes</i>
Collection points at municipal disposal companies without personnel	<i>Yes</i>
Collection points at municipal disposal companies with personnel	<i>Yes</i>
Collection points at private disposal companies without personnel	<i>Yes</i>
Collection points at private disposal companies with personnel	<i>No</i>
Other	

Further comments:

b) Which type of sorting is performed or could be performed prior to carriage?

	Sorting is performed	Sorting could be performed
Separation between WEEE with and without battery	No	No – not visible from outside WEEE
Separation between WEEE with and without cable	No	Yes
Collection and carriage in collection groups according to Directive 2012/19/EU	Yes	Yes
Separation between WEEE with small batteries and WEEE with batteries $\geq 500$ g/ $\geq 100$ Wh/ $\geq 2$ g lithium	No	No, not visible
Other		

Further comments:

*This type of sorting would require specialist experience and high degree of product knowledge – not available with current personnel. In addition, product themselves provide very limited information on the contents of the products.*

4. Describe the collection/carriage procedure taking the following steps into account:

a) From consumer to collection point

Questions: Collection by disposal company? Hand over to collection point by consumer?

*Consumers have two options: hands over WEEE at municipal collection point (supervised/non-supervised placement in closed 20ft container) or at a retail store (supervised/non-supervised placement in a plastic collection box (120L))*

b) From collection point to collection point

Questions: Consolidation of various collection points? Who operates the collection points? Who performs the carriage operations?

*Retail collection: currently authorised transport companies who distribute new appliances are tasked to collect WEEE at Consumer collectionpoints (retail shops)*

*Municipal collection: authorised waste collection companies collect WEEE at municipal collectionpoints; this is done in closed 20ft containers, only covered with a net.*

c) From collection point to primary treatment facility

Questions: Who performs the carriage operations?

*A bulk container company will transport sorted WEEE from 8 sorting facilities to final treatment partners. This happens in open 20ft containers.*

d) from primary treatment facility to secondary treatment/disposal/recycling

Questions: Have batteries at this point been separated from the WEEE? Battery damages caused by treatment?

*Yes, all Wecycle treatment partners perform depollution at primary treatment facility and will remove batteries from WEEE*

5. What information is available on the share of lithium batteries in WEEE?

*Reptool reporting (based on representative sampling at all treatment partners) shows that Lithium batteries make up 0,04% in weight of the total collected SDA volume*

6. Which national specifications/studies on the conduct and safety of collections and carriage operations exist?

*None that we are aware of.*

## Questionnaire on the carriage of waste electrical and electronic equipment

### A. Introduction

In September 2014, the Joint Meeting dealt with the carriage of waste electrical and electronic equipment on the basis of a document presented by Germany (INF. 12).

In accordance with Directive 2012/19/EU, waste electrical and electronic equipment has to be collected separately from municipal waste so that it can be sent for correct treatment, i. e. the material can be prepared for re-use, or recovery and recycling measures can be performed. The Joint Meeting noted that the waste electrical and electronic equipment carried within this framework may comprise dangerous goods, in particular lithium batteries. For this reason, special conditions of carriage in RID/ADR/ADN or exemptions should be considered.

Before deciding on the further proceedings, the Joint Meeting wants to take stock of all experiences of the states that have already had experiences in this field. To this avail, Germany was asked to draw up a questionnaire.

The delegations are requested to answer the following questions and send their responses via e-mail until 31 January 2015 to the German delegation (e-mail: [Ref-G24@bmvi.bund.de](mailto:Ref-G24@bmvi.bund.de)).

## B. Questions

1. Is waste electrical and electronic equipment (WEEE) carried as dangerous goods? (Class 9 or exempt under SP 636)

In general, WEEE is not carried as dangerous goods in Norway.

2. Which receptacles/containments are used?

	Collection	Carriage
Packagings		
Large packagings		
IBCs		
Durable outer packagings		
Wire-mesh boxes, crates, etc.		
Special collection bins		
Open containers		
Sheeted containers		
Closed containers		
Open vehicles		
Sheeted vehicles		
Closed vehicles		
Other		

Further comments:

We do not regulate which kind of containers are used. The responsible take-back schemes are obliged to make sure transport of WEEE is done in a sound manner. Different kind of WEEE will be put in different kind of receptacles/containments dependent on the type of WEEE. Eg. Light bulbs equipment will need special containments to avoid breakage.

3. Conduct of the collection  
a) Which types of collection points are provided?

Collection bins in the public street environment	X
Collection points in stores/at manufacturers without personnel	X
Collection points in stores/at manufacturers with personnel	X
Collection points at municipal disposal companies without personnel	X
Collection points at municipal disposal companies with personnel	X
Collection points at private disposal companies without personnel	X
Collection points at private disposal companies with personnel	X
Other	

Further comments:



b) Which type of sorting is performed or could be performed prior to carriage?

	Sorting is performed	Sorting could be performed
Separation between WEEE with and without battery		X
Separation between WEEE with and without cable		X
Collection and carriage in collection groups according to Directive 2012/19/EU		
Separation between WEEE with small batteries and WEEE with batteries $\geq 500$ g/ $\geq 100$ Wh/ $\geq 2$ g lithium		X
Other		

Further comments:

Not sure what is ment by "collection groups". If you mean "categories", the answer is "Sorting could be performed".

4. Describe the collection/carriage procedure taking the following steps into account:

a) From consumer to collection point

Questions: Collection by disposal company? Hand over to collection point by consumer?

Consumer can return WEEE at collection points at distributors/retailers, put up by municipalities or collection points put up by take-back schemes. These collection points shall be organized so that return can be done in a sound manner.

b) From collection point to collection point

Questions: Consolidation of various collection points? Who operates the collection points? Who performs the carriage operations?

Municipalities, retailers or return schemes operates collection points in the return system. There might be transport of WEEE from one collection point to another. The owner of the collection point have the responsibility to make sure this is done in a sound manner.

c) From collection point to primary treatment facility

Questions: Who performs the carriage operations?

In the return system, return schemes are responsibly for safe transport from collection point to treatment facility. The carriage operations are done by transporters which have contracts with the return schemes.

d) from primary treatment facility to secondary treatment/disposal/recycling

Questions: Have batteries at this point been separated from the WEEE? Battery damages caused by treatment?

Batteries shall be separated removed from WEEE as a first step of treatment.

5. What information is available on the share of lithium batteries in WEEE?

NO

We have no information on the share of lithium batteries in WEEE.

6. Which national specifications/studies on the conduct and safety of collections and carriage operations exist?

None.

## Questionnaire on the carriage of waste electrical and electronic equipment

### A. Introduction

In September 2014, the Joint Meeting dealt with the carriage of waste electrical and electronic equipment on the basis of a document presented by Germany (INF. 12).

In accordance with Directive 2012/19/EU, waste electrical and electronic equipment has to be collected separately from municipal waste so that it can be sent for correct treatment, i. e. the material can be prepared for re-use, or recovery and recycling measures can be performed. The Joint Meeting noted that the waste electrical and electronic equipment carried within this framework may comprise dangerous goods, in particular lithium batteries. For this reason, special conditions of carriage in RID/ADR/ADN or exemptions should be considered.

Before deciding on the further proceedings, the Joint Meeting wants to take stock of all experiences of the states that have already had experiences in this field. To this avail, Germany was asked to draw up a questionnaire.

The delegations are requested to answer the following questions and send their responses via e-mail until 31 January 2015 to the German delegation (e-mail: [Ref-G24@bmvi.bund.de](mailto:Ref-G24@bmvi.bund.de)).

## B. Questions

1. Is waste electrical and electronic equipment (WEEE) carried as dangerous goods? (Class 9 or exempt under SP 636)

In Poland transport of waste must comply with the provisions of the Act of 14 December 2012 on waste. If waste electrical and electronic equipment is considered as dangerous, according to art. 24 section 2 of the Act mentioned above it is transported under provisions regulating transport of dangerous goods.

2. Which receptacles/containments are used?

	Collection	Carriage
Packagings		
Large packagings	X	X
IBCs		
Durable outer packagings		
Wire-mesh boxes, crates, etc.		
Special collection bins	X	X
Open containers		
Sheeted containers		
Closed containers	X	X
Open vehicles		
Sheeted vehicles		
Closed vehicles	X	X
Other		

Further comments:

3. Conduct of the collection  
a) Which types of collection points are provided?

Collection bins in the public street environment	X
Collection points in stores/at manufacturers without personnel	X
Collection points in stores/at manufacturers with personnel	
Collection points at municipal disposal companies without personnel	
Collection points at municipal disposal companies with personnel	X
Collection points at private disposal companies without personnel	
Collection points at private disposal companies with personnel	
Other	

Further comments:

- b) Which type of sorting is performed or could be performed prior to carriage?

	Sorting is performed	Sorting could be performed
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Separation between WEEE with and without battery		
Separation between WEEE with and without cable		
Collection and carriage in collection groups according to Directive 2012/19/EU		
Separation between WEEE with small batteries and WEEE with batteries $\geq 500$ g/ $\geq 100$ Wh/ $\geq 2$ g lithium		
Other		

Further comments:

According to Polish law a collection operator (a collector) who has got a permit for collecting waste electrical and electronic equipment has to deliver waste to a treatment facility. Sorting which includes separation referred to above is made in treatment facilities, that is after waste electrical and electronic equipment has been carried from the collection operator to the treatment facility.

4. Describe the collection/carriage procedure taking the following steps into account:

a) From consumer to collection point

Questions:

Collection by disposal company? **Yes.**

Hand over to collection point by consumer? **Yes.**

b) From collection point to collection point

Questions:

Consolidation of various collection points?

Who operates the collection points? **Collection operator who has got a permit for collecting waste.**

Who performs the carriage operations? **Operator who has got a permit for transport.**

c) From collection point to primary treatment facility

Questions:

Who performs the carriage operations? **Operator who has got a permit for transport.**

d) from primary treatment facility to secondary treatment/disposal/recycling

Questions:

Have batteries at this point been separated from the WEEE? **Yes, before they are delivered for recycling.**

Battery damages caused by treatment? **No. Batteries which are taken from waste electrical and electronic equipment in a treatment facility are delivered to batteries' treatment facilities.**

5. What information is available on the share of lithium batteries in WEEE?

**There is no information on this data.**

6. Which national specifications/studies on the conduct and safety of collections and carriage operations exist?

**All procedures are laid down by law:**

1) Act of 14 December 2012 on waste,

2) Act of 29 July 2005 on waste electrical and electronic equipment.

## Questionnaire on the carriage of waste electrical and electronic equipment

### A. Introduction

In September 2014, the Joint Meeting dealt with the carriage of waste electrical and electronic equipment on the basis of a document presented by Germany (INF. 12).

In accordance with Directive 2012/19/EU, waste electrical and electronic equipment has to be collected separately from municipal waste so that it can be sent for correct treatment, i. e. the material can be prepared for re-use, or recovery and recycling measures can be performed. The Joint Meeting noted that the waste electrical and electronic equipment carried within this framework may comprise dangerous goods, in particular lithium batteries. For this reason, special conditions of carriage in RID/ADR/ADN or exemptions should be considered.

Before deciding on the further proceedings, the Joint Meeting wants to take stock of all experiences of the states that have already had experiences in this field. To this avail, Germany was asked to draw up a questionnaire.

The delegations are requested to answer the following questions and send their responses via e-mail until 31 January 2015 to the German delegation (e-mail: [Ref-G24@bmvi.bund.de](mailto:Ref-G24@bmvi.bund.de)).

## Sweden

2015-01-30

### B. Questions

1. Is waste electrical and electronic equipment (WEEE) carried as dangerous goods? (Class 9 or exempt under SP 636)

No

2. Which receptacles/containments are used?

	Collection	Carriage
Packagings		
Large packagings		
IBCs		
Durable outer packagings		
Wire-mesh boxes, crates, etc.	X	X
Special collection bins (Container 38m3)	X	X
Open containers		
Sheeted containers	X	X
Closed containers	X	X
Open vehicles		
Sheeted vehicles		
Closed vehicles	X	X
Other		

Further comments:

3. Conduct of the collection

a) Which types of collection points are provided?

Collection bins in the public street environment	
Collection points in stores/at manufacturers without personnel	
Collection points in stores/at manufacturers with personnel	X
Collection points at municipal disposal companies without personnel	
Collection points at municipal disposal companies with personnel	X
Collection points at private disposal companies without personnel	X
Collection points at private disposal companies with personnel	X
Other	

Further comments:

b) Which type of sorting is performed or could be performed prior to carriage?

	Sorting is performed	Sorting could be performed
Separation between WEEE with and without battery	No	No
Separation between WEEE with and without cable	No	No
Collection and carriage in collection groups according to Directive 2012/19/EU	No	No
Separation between WEEE with small batteries and WEEE with batteries $\geq 500$ g/ $\geq 100$ Wh/ $\geq 2$ g lithium	No	No
Other		

Further comments: Separation is performed at a municipal collection point, after the first transport

4. Describe the collection/carriage procedure taking the following steps into account:

a) From consumer to collection point

Questions: Collection by disposal company? Hand over to collection point by consumer?

Most common is handing over to the collection point by the consumer.

b) From collection point to collection point

Questions: Consolidation of various collection points? Who operates the collection points? Who performs the carriage operations?

Collection and transport from a collection point near the household to a municipal collection point is performed by disposal companies.

c) From collection point to primary treatment facility

Questions: Who performs the carriage operations?

At a municipal collection point: Separation is performed into 5 fractions: electronics, batteries, lamps, white goods and refrigerators/freezers. Various carriers are engaged for the transport of the specific fraction.

d) from primary treatment facility to secondary treatment/disposal/recycling

Questions: Have batteries at this point been separated from the WEEE? Battery damages caused by treatment?

At a the primary treatment facility: Batteries are separated from the WEEE before next transport to recycling and disposal

5. What information is available on the share of lithium batteries in WEEE?

Yearly reports to "WF-RepTool"

6. Which national specifications/studies on the conduct and safety of collections and carriage operations exist?

No