Checklist unloading installation for first unloading of bulk chemicals

(Yellow fields concern critical unloading points that must be completed for authorization)

Data delivery site recipient	
Company name	
Address of delivery	
Phone number	
Opening hours unloading site	
Contact	
E-mail contact	

Product information (checklist to complete per product	
Product Name	
UN-n°	
ADR classification	

Installation						
Operator presence when connecting (and disconnecting) the tanker to the installation? *(see ADR 1.3)*	❑ Yes	❑ No	❑ Unmanned unloading site *(see delivery conditions)*			
Is supervision present during unloading?					❑ Yes	❑ No
Positioning storage tank	❑ Above ground	❑ Underground	❑ Upstairs	❑ In basement		
	❑ Inside	❑ Outside				
Unloading in IBC ?	❑ No	❑ Yes, if procedure supplier is followed				
Can tractor-trailer deliveries be made?					❑ Yes	❑ No
Is the unloading site/point easily (safely) accessible?					❑ Yes	❑ No
Clear pass-through height m	Clear pass-through width: m					
Content of storage tank	m^3				liters	
Content listed	Onto storage tank				❑ Yes	❑ No
	Onto coupling				❑ Yes	❑ No
Product name + danger info + UN-number stated	Onto storage tank				❑ Yes	❑ No
	Onto coupling				❑ Yes	❑ No
Storage tank is compliantly inspected until (DD/MM/YYYY): ..... *(inspection certificate for info can be provided)*						
Material to specify						
Storage tank (interior)	❑ SS	❑ Steel	❑ PVC	❑ PE	Others:	
Piping unloading point -> tank	❑ SS	❑ Steel	❑ PVC	❑ PE	Others:	
Valves unloading point	❑ SS	❑ Steel	❑ PVC	❑ PE	Others:	
Connections customer	❑ SS	❑ Steel	❑ PVC	❑ PE	Others:	
Filling pipe	Diameter: inch / cm / DN* *delete where not applicable			❑ Below filling ❑ Top filling		
	Length: m			Overshoot: m		
Overfill protection storage tank	❑ No	❑ Visual alarm		❑ Acoustic alarm		
Alarm set to	❑ 90%	❑ 95%	❑ 98%	Others:		
Security closes the valve?	❑ No	❑ Yes, bypass to purge unloading hose possible ❑ Yes, bypass to purge unloading hose not possible				
Level measurement visible at unloading point?	❑ Yes			❑ No		
If not, which method used?	*(float on tank, display at unloading point, ...)*					
Distance between unloading point and tank trailer					m (by preference < 6 m)	
Unloading hose belongs to					❑ supplier	❑ customer
Possibility to rinse unloading hoses (cfr. legislation)?					❑ Yes	❑ No

Fixed connector installation (see annex)	❑ KNZ	❑ TW	❑ Guillemin	❑ Rosita/ melk	❑ Camlock	❑ Others
Rem KNZ: (M)Male / (F) female (R)ight/(L)eft thread	❑ M ❑ R ❑ F ❑ L	❑ M ❑ F		❑ M ❑ F	❑ M ❑ F	
Diameter connector customer	inch / cm / DN* *delete where not applicable					
Height connection point to ground level	cm					
Connection point is locked (electronical, padlock, ...) ?	❑ Yes, method: ...					❑ No

Venting diameter of storage tank					inch / cm / DN* *delete where not applicable	
Venting provided with scrubber of filter					❑ Yes	❑ No
Customer installation provided with vapor return					❑ Yes	❑ No
Vapor return installation Type of coupling	❑ KNZ	❑ TW	❑ Guillemin	❑ Rosita/ melk	❑ Camlock	❑ Others:
Vapor return installation diameter					inch / cm / DN*	
Hose vapor return belongs to	❑ supplier				❑ customer	
Unloading is done via	❑ gravity					
	❑ customer pump					
	❑ pump tank trailer					
	❑ compressed air tank trailer				Max pressure bar	
	❑ compressed air customer				Max pressure bar	
	❑ nitrogen customer				Max pressure bar	
Is there a working emergency shower in immediate vicinity?					❑ Yes	❑ No
Distance between emergency shower and unloading point					m	
Is there a working emergency eyewash in immediate vicinity?					❑ Yes	❑ No
Distance between eyewash and unloading point					m	
Presence of a water hose with sufficient length:					❑ Yes	❑ No

Additional info for flammable liquids (flashpoint < 60 ℃)					N.A.	
Is earthing present?					❑ Yes	❑ No
In case of mandatory earthing, is interlock protection present on the unloading process?					❑ Yes	❑ No
If not is there any other control on the use of earthing?						
ATEX unloading bay inspection valid until:						
Is the measured resistance (according to report) < 10 ohms?					❑ Yes	❑ No
Is Atex signalling present?					❑ Yes	❑ No

Other information						
Is a written unloading procedure in place?					❑ Yes	❑ No
Are the roles and responsibilities of customer and driver clearly defined?					❑ Yes	❑ No
Sample taking?	❑ Yes	❑ No		By customer?	❑ Yes	❑ No
Good overall impression / housekeeping (no clutter, emergency facilities and access roads clear, etc.)?					❑ Yes	❑ No
In the event of an emergency, can people leave the unloading site via at least 2 routes?					❑ Yes	❑ No
Good lighting to unload outside daylight hours?					❑ Yes	❑ No
Can the unloading area be limited? REMARK! Unloading from the public road is not allowed.					❑ Yes	❑ No
Are special instructions applicable at the customer's premises?					❑ Yes	❑ No
If yes, which?:						
Photos of the unloading site have been attached with permission or by the company!					❑ Yes	❑ No

Signature by expert of receiver of bulk product:

Name:

Date: Signature:

Checklist ❑ completed by ❑ checked by supplier:

Name:

Date: Signature:

Please send fully completed form to:

BELGIAN ASSOCIATION OF CHEMICAL DISTRIBUTORS

BACD
belgian association of chemical distributors

CODE OF GOOD PRACTICE FOR BULK DELIVERY OF LIQUID CHEMICALS

RESPONSIBLE CARE

Prepared by the Committee on "Safety, Health and Environment"

Content:

- Definitions
- Procedures
- Appendices

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Responsible Care®
OUR COMMITMENT TO SUSTAINABILITY

DEFINITIONS

BULK DELIVERY
This means transferring a chemical liquid from a transport tank to the corresponding storage tank of the customer using an unloading hose that connects the transport tank to the fixed unloading pipeline of the corresponding storage tank.

PRODUCTS
These include all liquid chemical products in bulk, primarily those classified as hazardous.

TRANSPORT TANK
This is a tank installation mounted on a specially equipped vehicle used for delivering and unloading bulk liquid into the customer's storage tank. This does not refer to packaging.

STORAGE TANK
This is a permanently installed tank equipped with legally prescribed safety equipment (bunding, overfill detection, etc.) and legally required markings.

OVERFILL DETECTION
Alarm system that secures against tank overflow. Some systems contain silica gel/activated carbon filters that need regular maintenance and replacement to prevent system blockage and potential tank rupture.

UNLOADING AREA
A designated zone laid out according to legal requirements (e.g., bunding) where the truck must be positioned to unload.

UNLOADING HOSE
A hose connecting the transport tank with the fixed unloading pipeline.

FIXED UNLOADING PIPELINE
A permanently installed pipeline connecting the storage tank to the unloading point at the unloading area, equipped with an appropriate coupling marked with the product name, UN number, and all other legal inscriptions. This pipeline is positioned to connect with ideally one unloading hose (approx. 6 meters long) safely. If one hose is insufficient, a maximum of two connected hoses is allowed. The coupling should ideally be under a natural slope or supported.

COUPLINGS


These are the fittings mounted on both ends of the unloading hose to connect the transport tank on one side and the fixed unloading pipeline on the other. A maximum of one adapter is allowed.

RESPONSIBLE OPERATOR
A person authorized to operate the customer's unloading installation safely so that the unloading proceeds correctly. This role cannot be performed by the driver alone. Reference is made to ADR Chapter 1.3 (Training of persons involved in the transport of dangerous goods) and Chapter 1.4 (Safety obligations of all parties involved).

UNLOADING PROCEDURES FOR LIQUID BULK PRODUCTS

The driver reports to the gatekeeper/reception of the customer, stating his company name, the product(s) to be delivered, and possibly the customer's order reference.

The driver hands over the shipping note (and possibly analysis certificates) to the gatekeeper/receptionist, as well as a copy of the weigh ticket(s).

The best way to control product quality is based on an "Analysis Certificate". **Sampling** should be avoided as much as possible. If sampling is required, it must be done by **a qualified person from the site**, observing all safety measures.

The driver proceeds to the designated unloading area following the **customer's safety** instructions and waits there for further instructions from the responsible operator. **This responsible operator supervises the unloading operation, ensuring that the full amount can be unloaded into the storage tank before starting. Unloading begins only after explicit agreement from the responsible operator.**

The driver ensures that the following six critical points are in order. If any point is not in order, unloading does not proceed, and the driver contacts his department head/dispatcher. Any deficiencies in the critical points are noted on the shipping note/CMR.

The following 6 critical points must be in order:
- Presence of customer employee during connection and disconnection
- Safe access to the connection point
- Unloading area is cordoned off during unloading (no public access)
- Fixed connection with clear labeling
- Earthing point present (in the case of ADR-flammable substances)
- Eye or emergency shower present (alternative running water)

Additional rules for unloading solvents, acids, lyes in bulk:

- The driver ensures **personal protective equipment** (PPE) (such as helmet, goggles, face shield, suitable gloves, and work clothing, safety shoes/boots). For acids & bases, a chemical suit and fully sealing safety goggles are mandatory. The responsible (customer) operator must ensure and supervise the correct use of required PPE according to the nature of the hazardous products.

- **The driver connects the unloading hose to the transport tank. The responsible operator connects the hose to the customer's installation, which must be properly identified and labeled.**

- The driver and the responsible operator verify that the connection between the transport tank and the fixed unloading pipeline is correct.

- **For unloading flammable products, the transport tank must be grounded before starting. The fixed storage tank and fixed pipelines at the customer must also be connected to the ground via an equipotential.**

- For loading and unloading chemical liquids, a fixed right-handed coupling is used according to the standard couplings recommended in the attached matrix. For **Sodium Hypochlorite**, only a **left-handed coupling** is allowed for safety reasons to prevent hazardous mixing with other products. This standard matrix is based on the compatibility of the material with the product, safety, ease of use, possible leaks, and availability. It is strongly recommended to avoid adapters and regularly renew seals.

- For the safety of the driver and the responsible operator, it is highly recommended to familiarize themselves with the locations of emergency showers near the unloading area and the emergency stop of the installation.

- Unloading is done:
  - by gravity
  - by the customer's pump
  - by the supplier's truck pump
  - by the truck compressor (only for acids/bases)
  - by the customer's compressed air system (for non-ADR flammable products)
  - by the customer's nitrogen system (for ADR flammable products)

- The driver remains at the truck during unloading, and the responsible operator supervises the unloading activity.

- If unloading is done with the truck compressor, it will be under a maximum working pressure of 22 bar. The driver will immediately close the unloading valve of the transport tank and the compressed air supply after unloading and then slowly release the compressed air content from the transport tank via the customer's installation. The remaining pressure in the transport tank must be safely released before returning to the public road.

- The driver disconnects the unloading hose from his transport tank, and the responsible operator disconnects it from the fixed pipeline. The driver seals the hose with end caps before storing it.

ADR and CLP hazardous bulk products may only be unloaded into storage tanks. For unloading into IBC's, refer to the supplier's conditions. Direct unloading is never allowed in barrels, open containers, open baths, etc. ...

- Any irregularities (product refusal, insufficient delivery, incomplete unloading, etc.) are noted on the shipping note, along with the reason. The driver also contacts his department head/dispatcher before leaving the customer.

- The driver has the customer sign the shipping note for receipt, including the customer's name. The customer receives a copy of the shipping note.

- Before leaving the customer's premises, the driver records the empty tank or compartment data on the "transport document for empty, uncleaned tanks" following the applicable ADR regulations.

- The driver leaves the customer's unloading area via the designated route.

Guideline for couplings

Kleurcode die in de tabel wordt gebruikt:
Groen: koppeling die de voorkeur geniet
Geel: aanvaardbare koppeling
Oranje: aanvaardbare koppeling die echter te vermijden is omdat ze niet aan één (of meer) van de bovenvermelde criteria voldoet
Rood: onaanvaardbare koppeling

De werkgroep streeft uiteraard naar een situatie waarin alleen de koppelingen worden gebruikt die de voorkeur genieten.

	TW (VK) DN50 SS	TW (VK) DN80 SS	Guillemin DN80 SS	Guillemin DN50 SS	KNZ M88 PE CCW mannelijk	KNZ M110 PE CCW mannelijk	KNZ M88 PE CW mannelijk	KNZ M110 PE CW mannelijk	Camlock	Guillemin PE/PP
Zuren die metaal aantasten										
Andere zuren										
Alkaliën										
Solventen										
Natriumhypochloriet										

Definities

SS:	Stainless Steel – Roestvrij staal- RVS	**PE/PP:**	Polyethyleen, polypropyleen
CCW:	Tegen de klok in (linksdraaiend)	**CW:**	Met de klok mee (rechtsdraaiend)
Zuren die metaal aantasten:	Hydrochloorzuur, zwavelzuur (con. < 70%), Zinkchloride, IJzerchloride, Polyaluminiumchloride (PAC, ...	**Andere zuren:**	Fosforzuur, salpeterzuur, zwavelzuur > 70 %
Alkaliën:	Bijtende soda, kaliumhydroxide, ammoniakoplossing	**Solventen:**	Koolwaterstoffen