Requirements Profile on Road Haulage and Multimodal Transport

SHARED RESPONSIBILITY – REACHING DESTINATIONS SAFELY

STOCKHAUSEN

Inhalt

THIS REQUIREMENTS PROFILE, along with its regulations, serves to ensure that all transportation orders contracted out by Stockhausen are conducted safely, securely, sustainably, and with respect for social responsibility and all relevant statutory regulations Each logistics service provider is therefore obliged to acknowledge this Requirements Profile and to observe the specifications contained herein.

Introduction

Stockhausen (referred to in the following as the client) places great value on ensuring that products and raw materials are transported safely and in a sustainable manner, without harming the environment or impairing their quality, while taking customer wishes into account. This results in increased requirements on the part of the authorized logistics service providers (referred to in the following as the contractors), which are described in this requirements profile of Stockhausen Superabsorber GmbH.

The particular goals of this requirements profile are to ensure security and safety while taking into consideration environmental and sustainability aspects when transporting chemical goods. Protecting people and the environment takes absolute priority over economic success.

This requirement profile applies to all of Stockhausen's logistics service providers for transports in Europe for road haulage and for multimodal transport by road/rail and road/inland waterway. It also includes pre- and on-carriage transports to/from seaports and airports, regardless of whether these transports are authorized by the client itself ("merchant's haulage") or by the maritime shipping company / air freight company ("carrier's haulage").

This requirements profile of the client is based on the corresponding basic requirements of the chemical industry (specified in the requirements profile of the German Chemical Industry Association (VCI) as amended). It also contains company-specific requirements made by the client. Annex 3 (Liability and Insurance) consists solely of "Stockhausen-specific requirements".

The client presumes that the contractors will comply with all relevant statutory regulations, therefore, apart from a few exceptions, this requirements profile does not contain any requirements already resulting from statutory regulations. Stockhausen Superabsorber GmbH refer to the "Code of Conduct" for Stockhausen Employees which can be viewed on the Internet (see https://www.stockhausen.com/en/contact-and-documents) Corresponding standards for contractors are summarized in the "Stockhausen Code of Conduct for Suppliers" (see link above).

The contractor shall also comply with all anti-corruption laws applicable to the contractual relationship between the contractor and the client. Without prejudice to any other rights or remedies available to us, any breach of these laws shall be deemed to be a breach of contract, which would justify extraordinary termination of the contract.

1. CONTRACTOR'S COMPANY PROFILE

The contractor shall provide the client with the following information*):

1.1	Legal form of its company
1.2	Headquarters
1.3	Management Board
1.4	Corporate affiliation / shareholders
1.5	Organizational chart / branches / important investments in subsidiaries and affiliated companies
1.6	Range of goods and services offered
1.7	Dangerous goods safety adviser (officer)
1.8	Security officer (in conjunction with Section 4)
1.9	Management system officer
1.10	Status regarding certifications, attestations, approvals (such as ISO 9001, ISO 14001, Safety Quality Assessment System [SQAS], Authorized Economic Operator [AEO], Regulated agent
1.11	Emergency plan / emergency telephone number(s)
1.12	Corporate pandemic plan
1.13	Insurance documentation
1.14	Complete address (with contact data and Internet address)
1.15	Status of certifications/approvals other than those specified in Item 1.10 (e.g. ISO 22000, GMP, UKASTA, AEO/ZWB)

The contractor shall notify the client proactively of any important changes in the company profile.

*) Confidentiality vis-a-vis third parties is guaranteed

2. VEHICLES, CONTAINERS AND ADDITIONAL EQUIPMENT

2.1 Vehicles, containers and additional equipment used for loading and unloading shall be in proper technical condition and in good visual appearance, while complying with legal and other official regulations as well as the additional contractual requirements agreed upon between the parties in individual cases for the goods to be loaded that were specified when the order was accepted.

2.2 Vehicles should have equipment designed to increase safety (such as driver assistance systems).

2.3 Vehicles should be fitted with devices, systems, or processes designed to prevent theft.

2.4 Vehicles used should be low-pollution, low-noise, and energysaving vehicles (see 6.2).

2.5 Swap bodies and semi-trailers for multimodal transport should be equipped with the owner identification system for European loading units (ILU (intermodal loading units) published by the UIRR [Union International Rail – Route]).

2.6 For planned transports by truck ferry (Ro/Ro), the vehicles must be equipped with devices (lashing eyelets, equipment to block suspension travel, etc.) to allow secure lashing on board and to prevent the transported unit from moving during heavy seas.

2.7 The special requirements specified in the requirements profiles included in Annexes 1 and 2 must be heeded (where applicable).

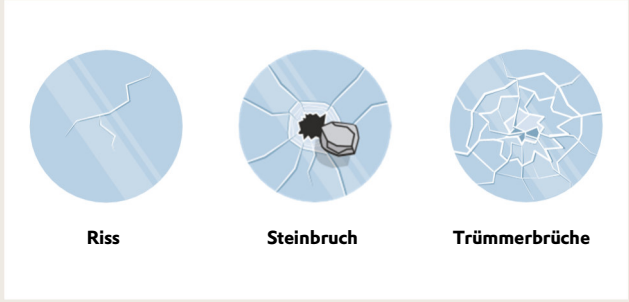
2. VEHICLES, CONTAINERS AND ADDITIONAL EQUIPMENT

2.8 Vehicles for loading dangerous goods are checked by the client consistently in accordance with subsection 7.5.1.1 and 7.5.1.2 ADR. Vehicles that do not meet applicable legal requirements will be rejected. Vehicles that do not satisfy the vehicle-specific requirements of this requirements profile can also be rejected.

2.9 Windscreens shall be undamaged (see illustrations below). Any damage in the driver's field of vision (see graphic below) larger than a €2 coin or consisting of cracks that must be described as more than minimum can also result in rejection.

Damage (e.g. falling rocks) outside this field of vision can also lead to rejection if it is larger than one
€ 2 coin or are cracks that cannot be described as minimal (see graphic):

2. VEHICLES, CONTAINERS AND ADDITIONAL EQUIPMENT



2.10 If a shovel is required for dangerous goods as per 5.4.3 ADR, this requirement is met if a shovel or spade (also collapsible spade) made of metal or robust plastics with a handle is carried in the vehicle. Shovels with a short handle (e.g. dustpans) are not acceptable. The length of a shovel/spade (from the tip of the blade to the end of the handle) should be about 100 cm. Collapsible spades must have a length of at least 55 cm when unfolded.

2.11 For the transport of dangerous goods, the requirements of 8.1.5.2 ADR for the "eye flushing liquid" to be carried in the vehicle is met by one of the following: a bottle of fresh, clear, uncarbonated water or an eye flushing bottle with special eye flushing liquid. In the case of the latter, the expiry date may not be exceeded.

2.12 The transport of dangerous goods under the relaxed requirements of subsection 1.1.3.6 ADR (i.e. exemptions based on the quantities carried per transport unit) is not standard practice with the client and therefore requires individual consultation with and consent from the respective loading station. If corresponding consent is not obtained, consignments of dangerous goods that do not exceed the quantity limits as per 1.1.3.6 ADR are carried as normal dangerous goods (i.e. without using the relaxed requirements).

2. VEHICLES, CONTAINERS AND ADDITIONAL EQUIPMENT

2.13 It he vehicles to be loaded have containers or swap bodies, then the corner fittings (twistlocks) must be fully functional and properly locked.

2.14 When transporting products subject to temperature control (corresponding information is included in the specific order), the vehicles shall be fitted with the necessary temperature display and alarm equipment, and no other loads may ever be added to the load. Exceptions to this rule must be approved by the client.

2.15 In addition to 2.1, it also applies that vehicles from non-EU Member States licensed after 2015 must be fitted with an advanced emergency braking system (AEBS) in accordance with EU regulations.

2.16 If vehicles are fitted with an advanced emergency braking system (AEBS), it must not be disabled by the driver during the journey.

3. PERSONS INVOLVED IN THE TRANSPORT

3.1 The contractor shall use reliable, properly trained drivers who are in possession of a valid driving license and have sufficient driving experience; in the case of dangerous goods, the driver shall have the relevant certificates of training and instruction in the area of safety.

3.2 The contractor shall provide the drivers with all the relevant information and documents necessary for safe and qualified implementation of the order, e.g. for dealing with:

1. dangerous goods and wastes,
2. the vehicle's technical equipment,
3. cargo-securing equipment,
4. oading devices and
5. personal protective equipment.

3.3 On request, the contractor's driver must present the documents required under § 7b of the German law governing freight haulage (GüKG).

3.4 The contractor undertakes to organize the work of its driving personnel to comply with the required driving and resting times.

3.5 On entering the client's site, no persons shall be present in the contractor's vehicle who are not part of the driving crew.

3.6 The announced internal regulations applicable for enclosed company premises together with the plant-specific instructions must be observed at the loading and unloading stations.

3. PERSONS INVOLVED IN THE TRANSPORT

3.7 There is a general alcohol and drug ban (for both consumption and carrying).

3.8 The contractor must ensure that the drivers and their vehicles are always effectively secured against unintended rolling (for instance parking brake and, if necessary, use of wheel chocks).

3.9 Drivers shall remain in or near their vehicle during loading and unloading, or officially inform a person responsible from the client's company when they leave the vehicle and when they return.

3.10 Drivers are always required to have the following personal protective equipment with them when on the client's premises and to wear it when they leave their vehicles:

1. Clothes which completely cover the body
2. Protective shoes (according to ISO EN 20345), must be closed (min. safety level S 1)
3. Hard hat (must be worn fit closely)
4. Protective glasses
5. Warning vest (according to ISO EN 20471)

Remarks on 3.10.2:
Protective shoes that are open at the back (e.g. clogs with steel cap) are not accepted.

If a co-driver accompanies a given transport (of dangerous goods), the items of personal protective equipment for the co-driver must also be carried in the vehicle.

3. PERSONS INVOLVED IN THE TRANSPORT

3.11 The following additional personal protective equipment must be carried in the vehicle for loading and unloading liquid and solid bulk loads and must be used by the driver as required when loading and unloading the vehicle:

1. Protective clothing (according to the goods being loaded)
2. Protective shoes (according to ISO EN 20345), impervious to fluids (min. safety level S 2)
3. Chemical-resistant protective gloves (according to the goods being loaded)
4. Tight-fitting protective goggles
5. Protective face mask (for corrosive liquids / gases)
6. Breathing protection (according to the goods being loaded)
7. Safety harness for hooking into the fall protection system if needed).

3.12 If (in the case of dangerous goods) there is a co-driver in the vehicle who has no valid driving license and / or no ADR training certificate, that person must be able to present confirmation from his / her employer (the carrier) that he/she is acting as an official codriver. In this case, the requirements for personal protective equipment apply for that person as well.

3.13 The requirement 3.2 is extended to the extent that

- all of the contractor's drivers must have at least basic language skills of the country where the respective loading station is located (or English)
- Drivers of tank vehicles must have received training for all tasks involved in filling, emptying and climbing onto the tank together with working on the tank.

A vehicle may be rejected if gatehouse and filling station personnel feel that the necessary safety in the plant or at the filling station is compromised because the driver is insufficiently qualified or because they are unable to communicate with him.

4. SECURITY

4.1 The driving staff must be able to present authorization to pick up the load.

It must be possible to identify the vehicle and the entire vehicle crew (by official identity card with photo, e.g. personal identity card, passport, driving license, or ID card). This is designed to prevent the goods from being transferred to unauthorized persons.

4.2 The contractor is either a recognized "authorized economic operator" – AEO) F or S, or informs the client on request in the form of a security declaration (e.g. standard "AEO Security Declaration" of the European Commission) that he / she meets the requirements relevant for the security of the delivery chain.

4.3 When reporting for loading, the contractor shall ensure that the driver will be able to present the following documents as authorization to pick up the load, so that the client can identify the load to be transferred, the vehicle and the driver. This authorization should be the contractor's official, written load order to the driver (with name of the carrier, product description, transport number, and, if applicable, consignee). Alternatively, the driver can also simply present a reference number (e.g. transport number) if he is capable of answering at least one other control question on request (e.g. product description, consignee) about the load being picked up. Authorization to pick up the load can also be presented on an electronic device (e.g. mobile phone, tablet PC).

4. SECURITY

4.4 The contractor agrees that goods that are stored, transported, delivered to, or received by an approved economic operator (AEO) pursuant to an order shall be stored and / or loaded at secure operational areas or transhipment locations and that these goods will be protected against unauthorized access during loading, unloading, and transport. Furthermore, the contractor shall ensure that the personnel used for storage, loading, transport, and receipt are authorized.

4.5 To prevent the smuggling of people and / or goods in and on the transport units in which the client's goods are to be transported, the contractor shall ensure that the transport units are checked regularly to make sure that they are not damaged and that they do not offer concealed possibilities for smuggling.

5. USE OF SUB-CONTRACTORS

5.1 If the contractor does not carry out the transport by itself, it may use only exclusively selected, reliable sub-contractors.

5.2 The contractor shall ensure and bear responsibility for compliance by the sub-contractor deployed by the contractor with the above requirements profile to the same extent as its own company.

5.3 The contractor's management system shall encompass the use of sub-contractors.

5.4 The contractor may use only sub-contractors with adequate carrier's liability insurance, including CMR liability.

5.5 On request, the client shall be informed which subcontractor and possibly also sub-subcontractor the contractor intends to use before the vehicle is dispatched.

5.6 If the contractor subcontracts transport orders of the client to other contractors (i.e. uses subcontractors), it must ensure that the subcontractor knows that it may not use any further (sub-)contractors for this purpose. If this should become necessary in individual cases, then the client's consent is required.

6. TRANSPORT

6.1 Safety

6.1.1 Before the transport, the road safety and completeness of the vehicle equipment shall be checked by the driver. The prescribed or agreed equipment shall be carried on all the vehicles until the transport has been completed.

6.1.2 Legally prescribed and any further prohibitions of the client regarding the loading of certain goods together in the same transport unit shall be observed (see Annex 2).

6.1.3 For loading, vehicles must be provided that have a maximum payload meeting the requirements for the order (taking legal requirements into consideration).

6.1.4 Safe transport routes shall be chosen (particularly for dangerous goods), i.e. preferential use of motorways, if necessary by-passing designated protected areas, avoiding routes through purely residential areas and no parking in residential areas.

6.1.5 If vehicles with dangerous loads are parked, they must be guarded or parked so that sufficient security is guaranteed. No parking in residential areas.

6.1.6 Transloading of complete and partial loads (starting at a gross weight of 3000 kg) requires the consent of the client. If transloading is required during transportation, comparable requirements must be imposed upon the vehicle qualities, drivers, etc. as for loading at the client's plant.

6.1.7 The driver shall deliver the vehicle to the assigned location for loading and unloading.

6.1.8 The driver of bulk goods transports may load and unload only after instruction by an authorized agent of the client / recipient (and under that person's supervision).
Packaged goods are always loaded by the shipper. The driver carries out the load securing.

6. TRANSPORT

6.1.9 The contractor shall provide a 24-h on-call service in case of transport incidents (referring to dangerous goods). In case of emergency, a responsible expert person must be reachable.

6.1.10 The contractor shall take measures to help prevent the vehicles from tipping over during the journey. Such measures can include e.g.:

- implementing the directive 2003/59/EC on the basic qualifications and continued training of the drivers of certain motor vehicles for freight or passenger transport;
- implementation of the ECTA Best Practice (BBS) Guideline "Behaviour-Based Safety – Guideline for safe driving of road freight vehicles" (see www.ecta.com).

6.1.11 For transloading operations initiated by the client during the course of a transport, the contractor must comply in particular with the requirements specified in Annex 2.

6.2 Environment & sustainability

6.2.1 Environmentally harmful influences shall be avoided, and if unavoidable, shall be minimized as much as possible.

6.2.2 The contractor must to the best of its abilities be ready, through technical and / or organizational measures, to positively influence or reduce the emission of greenhouse gases (regarding the sub-contractor's company and the client's transports).
Possible technical and/or organizational measures can be:

- Certification under ISO 14001 or the Eco-Management and Audit Scheme (EMAS),
- Modal shift (contractor should be able to offer Intermodal transport solutions),
- CO2 report for the company of the client,
- Driver training as per ECO-Drive and Behaviour-Based Safety (BBS) as the standard in the company,

- Use of vehicles with favourable exhaust gas values,
- Use of technical measures to reduce exhaust gas emission values in vehicles with lower exhaust gas standards (e.g. throttling down the motor),
- Use of high-quality tires,
- Use of low-friction oils,
- Use of modern telematic trip planning and optimization systems,
- Use of alternative drive systems,
- Additional aerodynamic measures to reduce air resistance.

The effectiveness of the measures taken shall be checked by the contractor.

6.2.3 Valid, uniform, and thus comparable data for CO2 emissions are important for reducing greenhouse gases. Greenhouse gases resulting during the transport of raw materials and finished products are included in the eco-balance. Shipment-based information about energy consumption and greenhouse emissions as per DIN EN 16258 shall be made available to the client promptly on request, specifying the parameters and methods used (e.g. VCI guideline for determination of CO2 emissions in the logistics of the chemical industry).

6.2.4 The contractors are expected to comply with the internationally recognized minimum standards of the UN Global Compact and the core working norms of the International Labour Organization (ILO).

6.2.5 The contractor should maintain an environmental management system on the basis of ISO 14001. If prices are equivalent, preference shall be given to companies certified under ISO 14001 when issuing contracts.

7. DELIVERY SERVICE / INFORMATION

7.1 The contractor shall support the client's efforts to achieve a customer-oriented delivery service, among other things by

- Taking over the goods at the agreed time;
- Keeping to agreed and specified schedules and prescribed delivery deadlines;
- Complying with consignees' instructions and regulations for the delivery, as long as they do not contradict those of the client;
- Determining the current location of a consignment within an appropriate period;
- Informing the client immediately about any delays on the transport route and the reason for the delay, measures taken, and the probable new delivery date;
- Informing the client immediately about any complaints regarding the quality and quantity of the goods, which the recipient notes in writing on the receipt.

7.2 The contractor shall ensure the correct and timely forwarding of the relevant information – e.g. safety data, order status, reference number of the client or the customer – in order to maintain a chain of information (e.g. to subcontractors) that is free of gaps

7.3 All the information and data provided shall be treated as confidential (see also 7.4).

7.4 The contractor shall ensure that information which is normally regarded as a client's business secret is treated as strictly confidential, is not forwarded to third parties, and is not used for its own commercial purposes. This includes knowledge about facts used as a basis for the calculation of logistics prices / rates. In addition, the contractor shall ensure that absolute secrecy is guaranteed towards third parties about the logistics conditions agreed upon with the client.

8. TRANSPORT- AND ACCOMPANYING DOCUMENTS

8.1 Transport documents must be filled out correctly and be carried together with the other accompanying documents.

8.2 When a forwarding order is issued by the client, the contractor shall enter its company name in the freight note as "sender".

8.3 When a transport contract is concluded between client and con tractor, the contractor shall enter the client in the freight note as "sender".

8.4 The goods may only be handed over after receiving a written acknowledgement of reception (receipt). The receipt shall be made available to the client on request within an appropriate time period and can also be archived digitally by the contractor.

8.5 Transport documents / accompanying documents or their contents shall not be made accessible or handed to third parties – with the exception of the official check points.

8.6 Transport documents which do not concern the current transport must be separated from those that do concern the current transport.

8.7 The documentation for the transport of dangerous goods (such as ADR training certificate of the vehicle driver or approval certificates) must always be presented in the original (see also 8.10).

8.8 All the information required for drawing up the transport documents shall be taken exclusively from the client's written order.

8.9 For cross-border transport (transport into third countries and intracommunity transport), the scope of performance of the contractor includes::

- For transports into a third country, the issuance of an export certificate as per § 10 (1) 2 of the German Turnover Tax Implementing Regulations (UStDV).
- For intra-community transport, the issuance of a shipment certificate as per § 17a (3) 1 (1) a of the German Turnover Tax Implementing Regulations (UStDV).UstDV.

8. TRANSPORT- AND ACCOMPANYING DOCUMENTS

As a rule, the interactive PDF form provided by the client will be used for this purpose.

8.10 Proof documents under dangerous goods law may not be laminated. This leads to the rejection of the vehicle during the inspection.

8.11 For vehicles registered in Germany, the vehicle registration document (Zulassungsbescheinigung Teil I, so called “Fahrzeugschein”) must be presented. If this is only presented as a copy, then the inspection certificate from the last major inspection must be presented.

8.12 In the case of transport orders for the client's products named in § 35b of the GGVSEB (German Ordinance on the Transport of Dangerous Goods by Road, Rail and Inland Waterways), in other words, dangerous goods whose transport is covered by §§ 35 and 35a GGVSEB and thus subject to §§ 35 and 35a (also applicable to cross-border transports), the con-tractor shall apply for routing determination as per § 35a GGVSEB and (if applicable) for the approval as per § 35 (4) GGVSEB, and forward these to the client on request before carrying out the first transport and ensure corresponding presentation during regular operations (by the driver) at the client’s request.

8.13 If, in the case of transport orders that fundamentally fulfil the conditions as per 8.12, vehicles are used according to the exemptions in § 35c GGVSEB, the contractor shall provide the client with the corresponding verification on request before carrying out the first transport and ensure corresponding presentation during regular operations (by the driver) at the client's request.

9. ACCIDENTS / DAMAGE / LOSS

9.1 Whenever persons are endangered and / or the environment is at risk, the fire department and / or police must always be notified. Furthermore, the following information must be made available to the client using the telephone number shown in the transport order or – outside office hours – using the client's emergency telephone number (see 9.4.2).

1. Name and company of the reporting person;
2. Registration number and type of vehicle, freight carrier, forwarding agent;
3. Place, time, and description of the accident / damage incident;
4. Number of injured / dead, extent of product leaked, police / fire brigade present at the site;
5. Consignment data (order number. destination, transport company, forwarding agent);
6. Measures carried out or arranged by the driver;
7. Options for calling back for further information (name, address, telephone);
8. If appropriate, the loss adjuster involved (name, address, telephone).

9.2 For every accident, damage or incident in connection with the transport, the contractor shall prepare an informal report and send it to the client without delay.

9.3 The contractor shall inform the client about recognizable transport damage and loss of goods immediately, regardless of cause or responsibility.

9.4 In the case of imminent or existing danger (e.g. due to an imminent product reaction or a product leak) in the course of transport, the driver shall immediately take all the necessary measures (with due consideration for the basic principles of self-protection) which seem suitable in the given situation to avert danger from third parties, the environment, animals, or the load and/or to prevent damage.

9. ACCIDENTS / DAMAGE / LOSS

Whenever persons are endangered and/or the environment is at risk, the police and/or fire department must always be notified. Directly afterwards, the client shall be informed as follows:

1. Using the telephone number given in the order documents or, if this cannot be reached,

2. Using the client's following TUIS telephone hotline (Transport Incident and Information System for emergencies or incidents during transport):

Phone +49 2365 49-2232

9.5 When the client's products are damaged during transport, or if they should get out of control or are stolen, the client shall be informed without dela.

9.6 Damaged packaging containing the client's products may only continue to be transported with explicit consent from the client. This applies particularly to dangerous goods which must be transported in compliance with the pertinent valid regulations.

10. MANAGEMENT SYSTEM / AUDITS

10.1 The contractor must use a management system based on ISO 9000.

10.2 On request, the contractor - to the extent permitted by data privacy aspects – will grant the client or a named representative access to the system documentation and allow auditing of the operational processes.

10.3 Safety and quality audits by the client or external inspection companies are based on the "SQAS Transport Service" questionnaire of the European Chemical Industry Council (CEFIC). Contractors are also advised to use this questionnaire for selfassessment.

10.4 The contractor shall maintain an ESHQ management system aligned to the requirements of the chemical industry. To make it easy to assess the system and compare with competitors, it is very important for the client that the contractor proceeds with and upholds an SQAS assessment according to the guidelines of the European Chemical Industry Council (CEFIC) (for detailed information, see www.sqas.org).

ANNEX 1
LIQUID AND DRY UNPACKED GOODS (IN BULK) IN TANKS, TANK / SILO VEHICLES, CONTAINERS, TIPPERS AND DUMP TRUCKS

The contractor requirements are as follows:

A.1.1 Technical components

A.1.1.1 Vehicle equipment, such as containers, emptying devices, pumps and any hose material carried by the vehicle, fittings, and seals shall be clean, dry, and free of odors, unless different productspecific agreements have been made.

A.1.1.2 Technical and visually fault-free and pressure-tested hose material shall be used that is suitable for the respective cargo.

A.1.1.3 Hose material which is used for specified products / product groups, shall be clearly marked and may only be used for these specific products / product groups.

A.1.1.4 For liquids, stainless steel pressure tanks shall be used, providing there are no different requirements.

Additional requirement acrylic acid:
List of permissible materials for tanks for filling with acrylic acid (UN 2218) or butyl acrylate (UN 2348) in the loading of the acrylic-acid-plant Marl, building 9081B:

Lfd. Nr.	Werkstoff-Nr.
1	1.4401
2	1.4402
3	1.4404
4	1.4436
5	1.4571

For the transport of acrylic acid, the **"Additional Requirement Acrylic Acid Marl"** must also be observed.

ANNEX 1
TECHNICAL COMPONENTS

A.1.1.5 Vehicle registration certificates shall be carried in the vehicle and presented upon request. On request, tank approvals for the transported goods shall be provided within a reasonable period of time.

A.1.1.6 For safety reasons (surge effect), the minimum tank filling level prescribed for the transport of dangerous goods shall also be observed for the transport of non-dangerous goods. The contractor shall therefore provide containers that can meet this requirement.

A.1.1.7 Information on the number of surge plates, if present.

A.1.1.8 The compartment number shall be marked on the dome lids, filling connections, and corresponding outlets.

A.1.1.9 Details of the tank / compartment volume shall be marked clearly and be permanently affixed to the dome lids and filling connections..

A.1.1.10 The vehicle shall be fitted with devices (rings) for attaching product signs and lead seals to outlets and dome lids.

A.1.1.11 All the emptying devices shall be closed properly before filling; and all the filling devices after filling.

A.1.1.12 The vehicle shall be fitted with a clearly marked and fully functional grounding device.

A.1.1.13 As a rule, entry into the empty vehicle tanks / containers on the premises of the client or its customers is not permissible. If entry is made, the appropriate safety regulations must be observed.

A.1.1.14 When climbing on tank / silo vehicles, drivers must use either personal fall safety equipment provided by the plant or their own inspected equipment. Furthermore, they must be trained in putting on and using such safety equipment.

ANNEX 1
TECHNICAL COMPONENTS

A.1.1.15 Vehicles with a dumping system must be secured against movement when the cargo bed is lifted.

A.1.1.16 If a tool is needed to open / close the dome lid, this must not cause sparks.

A.1.1.17 The client's loading staff must be reliably informed by the driver about the capacity of the tank and tank compartments as well as the maximum permissible load.

A.1.1.18 Flammable liquids may not be unloaded (pressed out) using compressors.

A.1.1.19 For deliveries of orders placed by the client, sampling (where necessary) by the driver at the consignee's site (client's customer) is neither part of the order nor is it desirable and, as such, is not a service required by the contractor. In the event that sampling is required at the unloading site, this shall not be carried out by the driver in principle.

A.1.1.20 Divers may climb onto their vehicle tanks on the client's premises and on the premises of the client's customer only if the vehicle is placed at the filling and/or unloading station and when suitable fall protection equipment is used.

ANNEX 1
PRODUCT RESIDUE

A.1.2 Product residue

The aim is to empty the tanks completely. If product residue is still found due to unavoidable technical inadequacies, the tanks may only be cleaned and the contents disposed of after consultation with the client.

ANNEX 1
CLEANING STATIONS

A.1.3 Cleaning stations

A.1.3.1 The contractor is responsible for the selection of suitable and reliable cleaning stations. A cleaning station regarded as suitable is a station which has the necessary authorization (with regard to operation and disposal) and carries out cleaning and disposal in line with legal regulations and official approval certificates.

It is assumed that the operators of the cleaning station undertake to carry out the necessary measures (servicing, maintenance, repairs) in due time and document these procedures, only using qualified staff and allowing audits to be carried out if necessary.

The contractor is therefore advised to use cleaning companies that have completed an SQAS assessment for tank cleaning stations.

A.1.3.2 Tank cleaning always depends on the last goods loaded and, if known, the next goods to be loaded and is carried out in agreement with the cleaning station.

A.1.3.3 The client provides the contractor with product information as needed (e.g. safety data sheet) to ensure proper cleaning and dis posal. Proofs of disposal shall be made available to the client on request.

A.1.3.4 In the case of tank / silo vehicles and tank / silo containers used to transport a certain product in the long term (dedicated / oneway traffic), the client's instructions regarding cleaning and disposal shall be heeded.

ANNEX 1
CLEANING STATIONS

A.1.3.5 The contractor shall always have tank cleaning carried out at tank cleaning stations that are members of the European Federation of Tank Cleaning Organisations (EFTCO). Exceptions to this principle are only permitted in exceptional cases when the basic requirement would be economically unreasonable in certain cases. Suitable verification must be presented to the client on request.

ANNEX 1
PROOF OF CLEANING

A.1.4 Proof of cleaning

A.1.4.1 All cleaning companies are required to issue proof of cleaning which clearly states that cleaning has been carried out properly. It is recommended that the "EFTCO Cleaning Document" (example see attachment) be used for this.

A.1.4.2 The proof of cleaning should include the following minimum standards:

1. Format of the document: A4
2. Sequential, unique numbering, with technical safeguards to prevent duplication and forgery
3. The document must contain at least the following information:

   - Identification of the tank cleaning plant with full address, fiscal and commercial information and – where available – national membership and a reference to EFTCO
   - Identification of the customer (contractual partner)
   - Identification of the vehicle / tank
   - Arrival and departure times of the vehicle
   - Information about the cleaning work done, stating the defined code for the cleaning process (tank, hoses, pumps, valves)
   - For each cleaned compartment, information about the last loaded product with technical description and UN code

   Remarks:
   This nomenclature is available in six languages and has been accepted by all national associations of the cleaning station companies. The EFTCO Cleaning Code can be downloaded as a PDF file from the internet at www.eftco.org. This nomenclature can be expanded as needed to include additional codes and languages.

ANNEX 1
PROOF OF CLEANING

4. Signature of the cleaning manager and the contractual partner's representative (generally the driver).

Remarks:
- *Non-binding: Information about the next load*
- *The cleaning process is either printed in full and marked with an "X" or printed out in full after successful cleaning with details of the steps carried out.*

A.1.4.3 Before loading, the proof of cleaning must be made available to the loading unit.

A.1.4.4 The proof of cleaning to be presented by the contractor pursuant to A.1.4.3 must always be issued by a tank cleaning station with a valid assessment as per SQAS Tank Cleaning. Exceptions to this principle are only permitted in exceptional cases if this would be economically unreasonable in certain cases. Suitable verification must be presented to the client on request.

The electronic tank cleaning certificate (eECD) started in early 2019 by ECLIC will replace the paper ECD in the medium term. The client will gradually change over to e-ECD proof of cleaning and asks its contractors to take part in this system (information at www.eclic.eu), which entails becoming licensed as equipment operator.

A.1.4.5 Cleaned containers and feeding lines shall be free of any residue from previous transport jobs (see A.1.4.5 for exceptions to this rule).

A.1.4.6 The contractor is responsible for faults caused by a cleaning company commissioned by the contractor as if they were his own faults.

ANNEX 1
CONFIRMATION ABOUT PREVIOUS PRODUCT

A.1.5 Proof of previous load

A.1.5.1 All logistics service providers whose tanks/silos are reloaded upon agreement without being cleaned shall guarantee that proof of previous load (example see Attachment) will be drawn up and provided.

A.1.5.2 The proof of previous load shall contain at least the following details:

1. Name of the logistics service provider;
2. Number of the vehicle, tank, chamber;
3. Product
   - Chemical description (not simply the trade name)
   - Dangerous goods class;
4. Last client order number, loading date;
5. Voucher number, date, stamp, signature

These details can also be recorded on the pick-up note.

A.1.5.3 The electronic proof of previous load (ePPL) started in early 2019 by ECLIC will replace the paper proof of previous load in the medium term. The client will gradually change over to electronic proof of previous load (ePPL) and asks its contractors to take part in this system (information at www.eclic.eu), which entails becoming licensed as equipment operator.

A.1.5.4 The company issuing the proof of previous lOad shall make sure that no impurities whatsoever (e.g. dust, foreign particles, condensation) have entered the tank / silo after unloading and that the tank / silo is closed on being sent for renewed loading.

ANNEX 1
INSPECTION BEFORE LOADING

A.1.6 Inspection before loading

A.1.6.1 The contractor shall give the client's personnel the opportunity of checking the proper condition of the tank / silo and the emptying equipment before loading.

A.1.6.2 For safety and product-specific reasons, Stockhausen Superabsorber GmbH reserves the right to check the cleanliness of tanks, hose material and emptying equipment and – in the event of complaints – to refuse to load the container.

ANNEX 2
PACKAGED GOODS (NON-BULK) IN TRUCKS; CONTAINERS AND SWAP BODIES

The contractor requirements are as follows:

A.2 Packaged goods

A.2.1 Provide vehicles / containers / swap bodies with cleanly swept, dry, nail-free cargo areas that can be used by a fork-lift truck (minimum durability as per DIN EN 283).

A.2.2 Provide vehicles that have their own on-board re-usable cargo-securing devices in adequate quantity and dimensions and in proper condition, such as

1. Separators (such as clamping plates and inserted rigging boards or adjustable partitions),
2. Lashing equipment (such as standardized straps [LC = ≥ 2500 daN (straight traction) and ≥ STF 250 daN], chains, ropes, nets),
3. Non-slip mats,
4. Loading areas with retractable lashing rings as per EN 12640 or lashing point rails (multi-hole rail) or similar fixing points.

A.2.3 Provide vehicles / containers, in which the walls, floor, and roof as well as doors, door seals, and tarpaulin appear to be in proper technical condition.

A.2.4 Driver checks the cargo for external damage and completeness (referring to the number of loading units for packages / packaging units placed on pallets and any packages placed inside outer packaging) if the driver is present during loading.

A.2.5 Drivers approve the measures taken to secure the cargo (e.g. positioning non-slip mats) and support the loading staff if requested.

ANNEX 2
PACKAGED GOODS

A.2.6 The load is secured properly through to the final unloading station, as necessary by means of

- re-securing the load after partial unloading or reloading and
- monitoring problems with the load caused by traffic and weather to check the stowing and securing of the cargo during transport, and re-securing the load as needed. (see also A.2.8).

A.2.7 No movement of vehicles (empty or loaded) with open sides or open cargo bay doors.

A.2.8 In addition to A.2.6, the following applies: Checking (through visual inspection) whether the load is secured during the transport period (meaning at intermediate stops, e.g. due to drive time breaks and/or when driving into additional loading / unloading stations) to identify obvious deficiencies. This applies particularly when the originally applied cargo-securing devices have been changed (e.g. due to reloading, partial unloading, additional loading).

If visual inspection identifies obvious deficiencies, the contractor's driver must correct them using the available resources. If this is not possible, the further transport must be interrupted until the deficiencies are corrected. The driver will coordinate with the contractor's control centre or the client's shipping department to determine what action to take to fix the deficiency.

Remarks:
The obligation to perform the above-mentioned visual inspection does not apply if the contractor's driver took over sealed transport units. In the case of sealed transport units, if there is a high probability that the cargo-securing devices put in place by the client may have lost their effectiveness due to abrupt driving manoeuvres, the trip must be interrupted and the contractor's control centre contacted to clarify what further action to take (e.g. consultation with the client about the removal of the seal to check the cargo-securing devices).

ANNEX 2
PACKAGED GOODS

A.2.9 Do not provide vehicles for loading that are clearly recognizable as a vehicle transporting food and feedstuffs or which can be presumed to be transporting food and feedstuffs due to markings and/or advertisements on the vehicle. If the situation is unclear, consent shall be obtained from the client before the vehicle is provided for loading.

A.2.10 Do not provide vehicles for loading that have loaded food and feedstuffs.

Remarks:
"Vehicle" is to be understood that when consisting of two transport units (e.g. truck with trailer) of which only one is loaded with food or feedstuffs while the other offers sufficient space for the client's load, this shall be accepted for loading.

A.2.11 Provide vehicles that comply with the requirement for body stability according to DIN EN 12642. Vehicles with a body strength as per DIN EN 12642 Code XL are preferred by the client.

A.2.12 All vehicles that are put up for loading at Stockhausen in Krefeld have to be loaded from behind via a ramp system. The height of the lower loading sill must not be less than 1.00 m.
In addition to the AFP, all vehicles must be equipped with at least 26 lashing points in the cargo compartment. For a full load, the vehicle must carry at least 21 lashing straps (DIN EN 12195-2) with a length of 10m. see attached load securing report

Stockhausen Superabsorber GmbH Krefeld does not cover any costs for demurrage fees or cancellation freight if the vehicles provided do not meet the above requirements.

A.2.13 When curtainsiders / tautliners are provided for loading, these must comply with the additional requirements (see Attachment to this Annex).

ANNEX 2
PACKAGED GOODS

A.2.14 Provide adequate quantities and dimensions of cargo-securing equipment (e.g. for a palletized complete load).

For each pallet row at least one lashing belt with ratchet as per EN 12195 Part 2 in perfect technical condition with a length of at least 8 m for fixing the load units by force locking or form locking (direct lashing).

Lashing straps longer than 8 m are needed at some of the client's loading stations. The contractor shall be informed separately in this case.

As a basic rule, at least 21 lashing straps and an adequate number of gliding edge fasteners must be carried on the vehicle. Deviations from this rule (i.e. fewer lashing straps) are possible (e.g. due to multi-hole rail and the intention to use form-locked loading for Code XL vehicles), but this requires the client's consent. More than 21 lashing straps are needed at some of the client's loading stations. The contractor shall be informed separately in this case.

If other lashing equipment is needed, e.g. chains or ropes, the client shall provide separate notification accordingly. If necessary, chains and possible wire ropes must be made and tested to EN 12195 Parts 3 and 4.

Notes (for all vehicle types): When lashing down, the straps must be fastened so as not to exceed the maximum permissible vehicle width of 2.55 m.

- *It must be ensured that straps cannot fall off the vehicle during transport or damage the load.*
- *Lashing over the side walls is not allowed*

ANNEX 2
PACKAGED GOODS

A.2.15 Lashing straps must be taken out of use if they show signs of damage (the discard criteria for lashing straps are described in the standard EN 12195-2).

A.2.16 Equipment of the vehicles and swap bodies with end-to-end multi-hole rails with lashing points in the side part of the loading area (≤ 150 mm).

If there are no multi-hole rails, the client expects the vehicle to be equipped at least with lashing points as per DIN EN 12640 and a lashing point strength of at least 2000 daN.

The design of the lashing points must be such that they are positioned in/on the loading surface so that they are freely accessible and moveable before and after the loading process and, e.g. cannot be blocked by the goods even when the entire surface is loaded.

For closed vehicle bodies, the possibility of the lashing straps faling out must be excluded. Unfavorable lashing positions where the pressure point cannot be positioned on the load when the belt is pulled down may result in the client rejecting vehicle due to the necessary additional effort required.

Remark (for all vehicle types):
Vehicles without adequate equipment for the lashing points and without adequately stable sides are excluded from loading.

A.2.17 In the case of standard tarpaulin vehicles, undamaged insertion boards (if they are part of the vehicle body) must be present in their entirety, but at least up to the upper edge of the load. In the case of form-fitting loads, the side boards must be made of metallic materials (for sliding tarpaulin vehicles, see Appendix).

ANNEX 2
PACKAGED GOODS

A.2.18 If the contractor provides box-type bodies for loading, they must be equipped with a suitable retention system (e.g. an appropriate number of form-locking telescopic stanchions (e.g. roof and floor) and multi-hole rails at a suitable height in the side walls) for securing the load opposite to the travelling direction (see photo of an ideal box-type vehicle and the following comments).

Anmerkungen:

- *If a sufficient number of lashing points are provided as per DIN EN 12640 as well as lashing straps, the load can also be lashed alternatively by the client by means of diagonal lashing.*
- *Telescopic stanchions which can be positioned only by friction locking and are therefore practically ineffective physically (except in the case of extremely light goods with a retention force < 50 daN) will not be accepted by the client.*
- *To facilitate proper load securing even for low load units, the client urgently recommends, when new vehicles with box-type bodies are purchased, to have them fitted with integrated retainer system rabbets (see example below) at three different levels (approximately 40, 80, and 160 cm from the floor). Boxtype bodies must also be certified to EN 12642 Code XL. The certificate describes the body strength and must be carried in the vehicle.*

ANNEX 2
PACKAGED GOODS

A.2.19 Load units (e.g. film-wrapped or shrink-wrapped pallets) may not be changed without the express consent of the client.

A.2.20 Temperature controlled transport of goods specified in the transport order as temperature-sensitive or the continuous frostproof transport of goods specified in the transport order as frostsensitive (in accordance with the agreement).

A.2.21 If vehicles are used that have other cargo loaded on the cargo bed it must be secured in accordance with specifications. If this is not the case, the driver is given an opportunity to secure the other cargo properly. If the driver is unable to do so, the client will refuse to load the vehicle.

Remarks:
The client refuses to proceed with load-securing measures or to reposition third-party cargo for insurance reasons.

A.2.22 Transport units with single-axle trailers or trailers with tandem axles shall not be provided. Exceptions to this rule are possible with the client's consent.

A.2.23 Loading space(s) of vehicles for the transport of the customer's products must be odourless. This means free of residues and odours from previous loads.

A.2.24 Containers provided for loading must have valid CSC approval (especially the test date) or, alternatively, valid ACEP approval.

ANNEX 2
PACKAGED GOODS

A.2.25 The contractor must ensure that the goods received from the client can be unloaded at the recipient's site without being impeded by other goods (meaning that the transport unit is easily accessible and does not have other goods stacked on top of it) and that metal containers of the client are not subsequently wrapped in foil / film of any kind without the consent of the client (in order to avoid corrosion due to condensation).

A.2.26 Any tears or cracks (longer than 6 cm) and/or holes (> 3 cm in diameter) in the tarpaulins of sheeted sideboard vehicles and open-top containers can result in rejection of the vehicle.

The roofs must not have any cracks/tears or holes.

Remark:
Effectively repaired tears and cracks and/or holes are not seen as grounds for rejection.

A.2.27 If cargo-related friction enhancing materials (e.g. non-slip mats) are required, they must be provided by the contractor in an adequate quantity for the entire cargo. Non-slip mats are not needed for vehicles with a non-slip coated cargo surface with a verifiable friction coefficient of at least 0.6 μ (regardless of the type of load).

ANNEX 2
PACKAGED GOODS

Comments to anti-slip mats (ARM):

When using anti-slip mats for load securing of load units, all of them must have the same thickness, must not be discardable, must have a coefficient of friction of at least 0.6 µ and should have a minimum thickness of 6 mm.

ARM must be available in sufficient quantity and size (at least DIN A5, length x width of 148 mm x 210 mm). The quantity specification corresponds to the number and dimensions of the pallets to be loaded.
The ARMs should preferably be distributed as longitudinal strips over the entire area required for the load, or in a herringbone pattern in such a way that each pallet is underlaid at at least 4 points.

When using other anti-slip mats, there must be no mixed friction, i.e. they must be designed so that there is no contact between the load and the vehicle loading surface even under load.
In/after consultation with the loading personnel of the customer before loading takes place, drivers may leave anti-slip materials at the loading area of the transport unit.

A.2.28 Particularly for ferry transport by sea (Ro/Ro haulage), the cargo must be secured additionally by lashing down to take account of the vertical acceleration forces that occur during sea transport. This can only be waived if form-locking loading of the cargo is possible, the vehicle body is tested to DIN EN 12642 Code XL and is capable of reliably absorbing the acceleration forces that occur during sea transport. Otherwise, distinctly longer loading times can be expected, which the contractor must take into account.

A.2.29 Special rule for vehicles ≤ 3.5 t permissible gross weight (e.g. CEP services):

When carrying dangerous goods, such vehicles must have a partition to separate the cargo area from the driver's cab; they must be equipped with lashing points as per DIN ISO 27956 and carry suitable load-securing equipment on board.

ANNEX 2 - ATTACHMENT
REQUIREMENTS FOR CURTAINSIDER/ TAUTLINER VEHICLES PROVIDED FOR LOADING

A.2.A.1 Vehicle types:

- As far as possible, transport units should be provided with verified body strength as DIN EN 12642 Code XL or verified equivalent body strength.
- However, vehicles should be provided with a verified body strength at least as per DIN EN 12642 Code L.
- Vehicles with undefined (not verified) body strength are usually not accepted by the client. If in isolated cases such vehicles are nevertheless to be loaded, this requires the express consent of the client's respective loading station.

The following applies to all vehicle types:

- Insertable rigging boards must be in proper technical condition at least to the upper edge of the load.

  Since Code XL side curtains are too elastic for form-locking cargo- securing methods when wooden insert rigging boards are the only load securing equipment, the rigging boards must be made of metallic material.
- Vehicle equipment with multi-hole rails with lashing point intervals of ≤ 150 mm is preferred by the client.
  If no multi-hole rails are available, there must be lashing points as per DIN DN 12640 at intervals of ≤ 600 mm.
- Pallet stops should be present on the long sides of the cargo area.

ANNEX 2 - ATTACHMENT
REQUIREMENTS FOR CURTAINSIDER/ TAUTLINER VEHICLES PROVIDED FOR LOADING

- Two-layered cargo stacking is only permissible if the acceleration forces are either proved to be safely absorbed by the vehicle body (also in the upper body section) or if force locking is used to secure the load.

  The applicable regulations (see 7.5.7.2 ADR) also apply when transporting dangerous goods. If there is any doubt as to whether the shipping items can be stacked, the client shall decide whether to allow double-layered cargo stacking (pos- sibly by inserting an interim layer, e.g. plywood or synthetic sheeting to help distribute the weight).

The following applies in addition to curtainsider/tautliner vehi- cles as per DIN EN 12642 Code XL:

- A valid certificate must be carried in the vehicle, stating the types of loads that can be secured by form locking.
- Three pairs of reinforced sliding stanchions and five lightweight metal rigging boards per stanchion area, anchored in the lateral floor area as needed and with the possibility of inserting blocking beams at the side.
- These boards must be so stable that they can withstand a lateral load pressure of 5000 daN and a lateral acceleration of 0.5 g, when form-locked loading is used. Alternatively, higher-quality side boards can be used (thus reducing the number needed, e.g. when using systems by Allsafe TruXafe). Corresponding stability values should be marked on the side boards.

ANNEX 3
LIABILITY AND INSURANCE

A.3. Liability and Insurance:

A.3.1 The contractor is liable to the client for damage caused by it in accordance with the respective liability conditions, from acceptance of the contract until delivery to the end recipient.

A.3.2 **The contractor agrees to take out and maintain:**

- Insurance for domestic transport according to German Commercial Code (HGB) Section 407 et seq. and according to CMR for international transport,
- Insurance for its liability for European / domestic transport within Europe according to the applicable national law,
- Vehicle indemnity insurance – including cover for personal in- jury – corresponding to normal national maximum insured sums, and
- Employer's liability insurance with coverage of at least € 1 million per loss event for personal and material damage

  If the contractor engages a sub-contractor, it shall impose the requirement to obtain liability insurance according to CMR for European / domestic transport within Europe, indemnity insurance for the vehicles used with the minimum insurance sum required by national law, and employer's liability insurance to the amount according to the 4th bullet point of A.3.2.

A.3.3 The contractor shall confirm the insurance coverage corresponding to the above conditions by written acknowledgement of this requirement profile.

A.3.4 At the client's special request, the contractor shall prove the respective insurance coverage by written certificate from its insurer / the subcontractor's insurer.

ANNEX 4
SHORT REPORT TÜV – LOADING WITH PALLET - PAGE 1

TÜV Rheinland Akademie GmbH
Richard-Byrd-Straße 13
D-50829 Cologne-Ossendorf

Richard Bog
T +49 - (0) 2 21 - 99 38 48 – 31
F +49 - (0) 2 21 - 99 38 48 - 29
M +49 - (0) 160 - 126 32 39
richard.bog@de.tuv.com

Evonik Industries AG
Bäkerpfad 25
D-47805 Krefeld

Konrad Gilgen
+49 - (0) 21 51 - 38 - 13 36
+49 - (0) 21 51 - 38 - 14 18
+49 - (0) 172 - 20 94 58 8
konrad.gilgen@evonik.com

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EVONIK INDUSTRIES

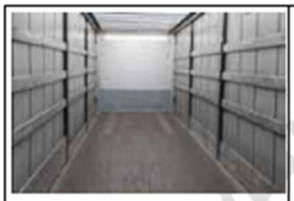
Cargo securing expert opinion no. TRA-VSZ 2012-07-002/LS[1]

for the transport of non-rigid and rigid big bags with Superabsorbent

The driving tests carried out on the 25th of May of 2012, for the purpose of this report showed that, with an interlocking fit to the end wall and the big bags to each other in combination with appropriate head lashings, safety requirements pursuant to

§§ 22 and 23 StVO, §§ 30 and 31 StVZO, VDI 2700 ff and DIN EN 12195 Part 1

are given with the cargo securing measures described below. This short form of the expert opinion is intended to be carried along during transport in order to provide the required proof of safety within the scope of traffic controls. The detailed report on the road tests can be obtained from Evonik Industries AG or from TÜV Rheinland Akademie GmbH (cf. top of this page).

	swept clean loading area		Interlocking loading against the end wall, interlocking connection of the big bags to each other (distance between the pallets is permissible in accordance with the overhang of the big bag).
	➢ after 4 or respectively 5 rows head flashing with direction of action **against** the direction of travel ➢ after 5 or 6 rows head flashing with direction of action **in the** direction of travel		underlay 3 strips of friction-enhancing mats μ_D at least = 0.6, thickness should be min. 6 mm Direct contact of the centre of the pallet to the vehicle floor is permissible.
	Secure the big bags per loading row with one belt (hold down)		Secure individual big bags by direct securing

applied securing method: **interlocking loading / friction value increase / hold down**

[1] This expert opinion has been freely translated from German into English. In the event of any conflict between this version and the original, the German version shall prevail.

ANNEX 4
SHORT REPORT TÜV – LOADING WITH PALLET - PAGE 2

Prerequisite for transport in compliance with regulations
of non-rigid or rigid big bags with Superabsorbent

Vehicle:

- swept clean loading area
- Head wall loadable with at least 50 kN
- Equipped with lashing points according to DIN EN 12640 (lashing point distance max. 600 mm)

Loading units:

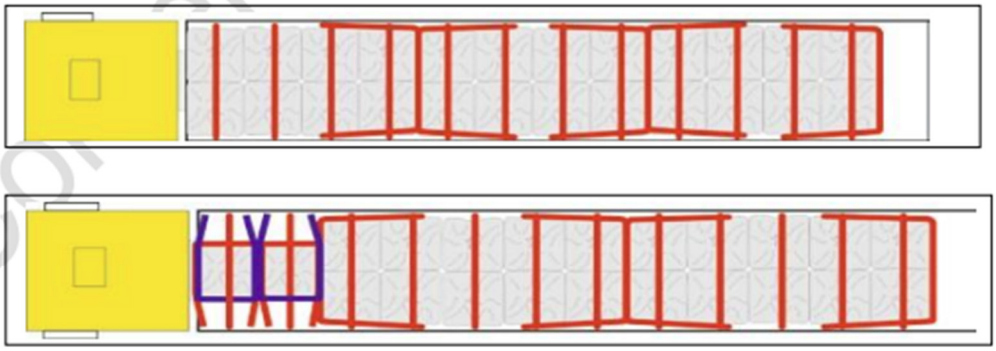
- Big bag in proper condition
- Intermediate layer of friction-enhancing paper (coefficient of friction ≥ 0.5) between pallet and big bag

Loading the big bag

- The big bags must be loaded with interlocking fit to the end wall and between the big bags (gaps between the pallets due to overhanging big bags are permissible).
- Individually standing big bags are to be secured using the "direct securing" method

Cargo securing

- To increase the coefficient of friction, 3 anti-slip mat strips (≥ 0.6) are placed underneath (left - centre - right), an anti-slip mat thickness of at least 6 mm is recommended.
- Each row of big bags is secured with a lashing strap (LC min 2,000 daN) by holding it down.
- every fourth or fifth row is secured against movement backwards by head flashing
- every fifth or sixth row is secured against forward movement by head flashing
- The belts are fastened in lashing points according to the regulations, multiple use of a lashing point is permissible.
- The belts must be tensioned to a maximum of S_{HF} (usually 50 daN) (high pretensioning forces in the lashing belts are not necessary, since the securing technique is based on vertical strapping, which is merely intended to prevent the load from lifting off the friction-enhancing supports in the event of vertical oscillations). **Reducing the pretensioning force to "0" does not impair the effectiveness of the securing technique.**
- As an additional safeguard against cargo movement against the direction of travel, a rear head lashing must be fitted by means of two belts.



A further check and, if necessary, retensioning of the belts is necessary after special driving situations (evasive manoeuvres, emergency braking or driving through a bad stretch of road).

TÜV Rheinland Akademie GmbH
i.V.
Wolfgang Klein
Head of Road Safety

D-50829 Cologne-Ossendorf, the 15th July
on behalf
Richard Bog
Head of the Road Transport and Logistics Division

Status: July 15, 012 Page 2 of 2 Pages

ANNEX 4
SHORT REPORT TÜV – LOADING WITH SLIP SHEET - PAGE 1

TÜV Rheinland Akademie GmbH
Richard-Byrd-Straße 13
D-50829 Cologne-Ossendorf

Richard Bog
T +49 - (0) 2 21 - 99 38 48 – 31
F +49 - (0) 2 21 - 99 38 48 - 29
M +49 - (0) 160 - 126 32 39
richard.bog@de.tuv.com

Evonik Industries AG
Bäkerpfad 25
D-47805 Krefeld

Konrad Gilgen
+49 - (0) 21 51 - 38 - 13 36
+49 - (0) 21 51 - 38 - 14 18
+49 - (0) 172 - 20 94 58 8
konrad.gilgen@evonik.com

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EVONIK INDUSTRIES

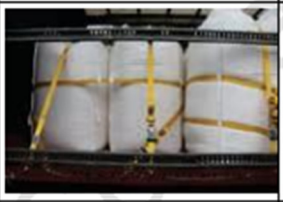
Cargo securing expert opinion no. TRA-VSZ 2012-10-003Z/LS[1]

for transport of non-rigid and rigid big bags loaded with Superabsorbents on slip sheet

The driving tests carried out on September 11, 2012, for this report showed that, with interlocking loading to the head wall and of the big bags among each other in combination with appropriate head lashings, the safety requirements pursuant to

§§ 22 and 23 StVO, §§ 30 and 31 StVZO, VDI 2700 ff and DIN EN 12195 Part 1 (2004 and 2010)

are given with the cargo securing measures described below. This short form of the expert opinion is intended to be carried along during transport in order to provide the required proof of safety within the scope of traffic controls. The detailed report on the road tests can be obtained from Evonik Industries AG or from TÜV Rheinland Akademie GmbH (cf. top of this page).

	swept clean loading area		Underlying slip Sheet between loading area and big bag
	Securing the big bags with one belt per loading row After individually loading big bags, secure the first row of double big bags with 2 head lashings.		Interlocking loading to the end wall, interlocking of the big bags to each other Secure individual big bags additionally with direct securing devices.
	➢ after no more than five rows, use head lashing with the direction of action **against** the direction of travel ➢ after six rows at the latest, head lashing with the direction of action **in** the direction of travel		Structure according to DIN EN 12642 Code XL plus - 3 ALU battens (100 mm) or - 2 ALU battens (150 mm) or - 1 steel C-profile batten or - 1 Truxafe batten in the lower stanchion pocket or drop side vehicle

applied securing method: **interlocking loading / friction value increase / hold down**

Status: September 16, 2012 Page 1 of 2 Pages

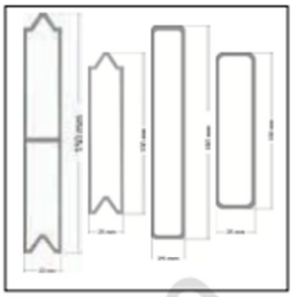
[1] This expert opinion has been freely translated from German into English. In the event of any conflict between this version and the original, the German version shall prevail.

ANNEX 4
SHORT REPORT TÜV – LOADING WITH SLIP SHEET - PAGE 2

Prerequisite for transport in compliance with regulations

from non-rigid or rigid big bag loaded with Superabsorbent on slip sheet

Vehicle:



- Build-up strength according to DIN EN 12642 Code XL
- plus 3 ALU battens (100 mm) or 2 ALU battens (150 mm) or 1 steel C-profile batten or 1 Truxafe batten in the lower stanchion pocket
- swept clean loading area
- Equipped with lashing points according to DIN EN 12640 (lashing point distance max. 600 mm)

Loading units:

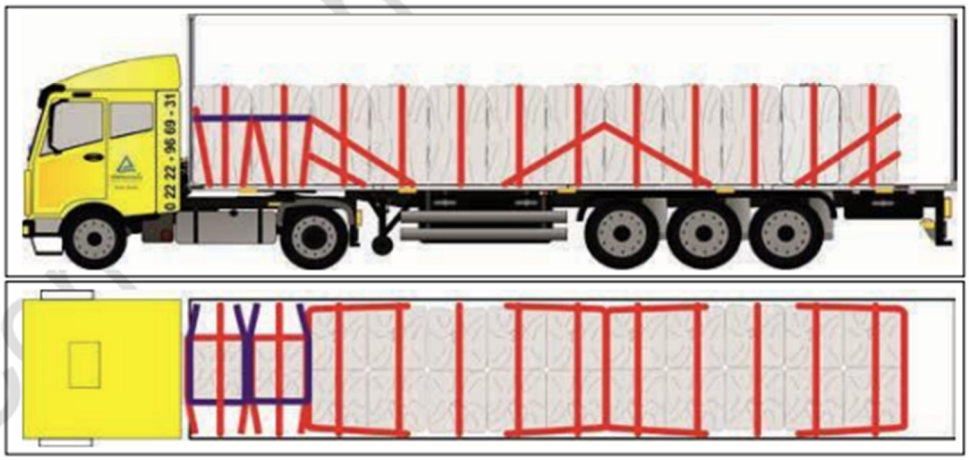
- Big bag in proper condition

Loading the big bag

- the loading of the big bag must be interlocked to the end wall and between the big bags
- Interrupt connection of loading area and big bag with slip sheet
- Individually standing big bags are to be secured using the "direct securing" method

Cargo securing

- Each row of big bags is secured with a lashing strap (LC min 2,000 daN).
- every fifth row is secured against backward movement by head flashing
- every fifth row is secured against forward movement by head flashing
- The belts are fastened in lashing points according to the regulations, multiple use of a lashing point is permissible.
- The belts must be tensioned to a maximum of S_{HF} (usually 50 daN)
- If big bags are loaded individually in the middle at the end wall, the big bags that are double-loaded in the following row must be secured with two head lashing belts.
- As an additional safeguard against cargo movement against the direction of travel, a rear head lashing must be fitted by means of two belts.



A further check and, if necessary, retensioning of the belts is necessary after special driving situations (evasive manoeuvres, emergency braking or driving through a bad stretch of road).

TÜV Rheinland Akademie GmbH
i .V.

Wolfgang Klein
Head of Road Safety

D-50829 Cologne-Ossendorf, the 16th September 2012
on Behalf

Richard Bog
Head of the Road Transport and Logistics Section

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ANNEX 5
PROOF OF PREVIOUS LOAD

CONTRACTOR

DATE

VOUCHER NO:

FREIGHT CARRIER

REGISTRATION NMBER

TRACTOR / TRAILER

CONTEINER NO.

TYP OF VEHICLE

☐ **Silo** ☐ **Auflieger/Anhänger** ☐ **Container**

Compartment no.	Last goods loaded	Dangerous goods class	Order number	Loading date	Remarks
1					
2					
3					
4					
5					
6					

TANK MATERIAL

☐ **V2A** ☐ **Aluminium**

☐ **V4A** ☐ **Rubberized**

☐ OTHER

NO: OF TANK COMPARTMENTS

The company issuing the confirmation shall make sure that no impurities whatsoever (e.g. dust, foreign particles, condensation) have entered the tank / silo after unloading and that the tank / silo is sent for renewed loading in a closed state:

Wir e confirm that the above-specified container is being provided empty and uncleaned and complies with the above-mentioned provisions.

Last use of the above-marked vehicle type:

FROMM

TO

ON

COMPANY NAME

PLACE / DATE

NAME / SIGNATURE

PRINT SAVE AS