ATTENTION!

"The Requirements Profile for Logistics Service Providers (current edition: June 2015) has been amended and new released as version March 2017. The substantial amendments are highlighted with yellow background.

Please note, that the disregarding of new amendments can lead to the rejection of vehicles provided for loading in our sites at the latest of 3 April. Excepted from this grace are the new amendments in A.2.21 "Rejection of vehicles with tandemaxle trailers" and A.2.30 "Carrying requirement of anti-slip mats for load securing", which are mandatory since beginning of this year already and will lead to rejection in any case if disregarded."

Requirements Profile on Road Haulage and Multimodal Transport

SHARED RESPONSIBILITY – REACHING DESTINATIONS SAFELY





MARCH 2017

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THIS REQUIREMENTS PROFILE, along with its regulations, serves to ensure that all transportation orders contracted by Evonik 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

Evonik Industries (referred to in the following as the client) places great value 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 Evonik Industries.

The particular goals of this requirements profile, in addition to quality management, are to ensure security and safety (in particular when transporting dangerous goods), while taking into consideration environmental and sustainability aspects when transporting chemical goods.

It is valid for all of Evonik's logistics service providers for transports in Europe for road haulage and for multimodal transport by road/rail and road / inland waterway.

It also applies fundamentally for all European 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"). In addition, (where applicable) it also applies to waste disposal transportation. Therefore, when placing orders, the client assumes that the contractors for waste disposal transportation know and comply with all the applicable waste regulations. In the case of waste disposal transportation within Germany, this particularly includes participation in an electronic records process (regulations for waste recovery and disposal records).

The requirements profile of the client is based on the basic requirements of the chemical industry (specified in the requirements profile of the German Chemical Industry Association (VCI)) in the respective applicable version; currently valid version dated Oct. 2015). Furthermore, it also contains company-specific additional requirements of the client, which are all preceded by the reference "Evonik-specific additional requirements". The requirements in Annex 3 (Requirements for curtainsiders/tautliners) and Annex 4 (Liability and Insurance) are exclusively "Evonik-specific requirements".

Since compliance with all legal requirements by the contractor is a prerequisite the requirements profile contains no repetition of legal regulations.

The client refers to the documents titled "Code of Conduct for Evonik's Employees", "Global Social Policy" and "Our values for the Environment, Safety, Health and Quality" which apply to Evonik Industries AG and its subsidiaries pursuant to Sec. 15 et seq. of the German Joint Stock Company Act and are available at www.evonik.com/responsibility. The client further refers to the "Evonik Code of Conduct for Suppliers" which sets out corresponding standards for suppliers and contractors and is also available at www.evonik.com/responsibility.

The client expects the contractor to observe the internationally recognized minimum standards of the UN Global Compact and the international labor standards of the International Labor Organization (ILO).

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, regardless of any other claims on the part of the client.

Customers of Evonik Industries who pick up their goods themselves are informed upon confirmation of an order that the safety-related and security-related requirements in this profile in the form of the "Safety and Security Relevant Minimum Requirements for Self-Collectors") also apply to customer pick up's (the applicable version is found at the web site www. evonik.de under > Company > Profile and Organization > Purchasing).

1. CONTRACTOR'S COMPANY PROFILE

The contractor shall provide the client with the following information¹⁾:

1.1	Legal form of its company
1.2	Headquarters
1.3	Executive management
1.4	Corporate affiliation / shareholders
1.5	Organization chart / branches / important investments in
	subsidiaries and affiliated companies
1.6	Range of goods and services offered
1.7	Dangerous goods 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, EN 16258, Good Manufacturing Practice
	[GMP], Safety Quality Assessment System [SQAS], Authorized
	Economic Operator [AEO], Regulated agent, Hazard Analysis and
	Critical Control Points (HACCP) concept for storage and transport)
1.11	Emergency plan / emergency telephone number(s)
1.12	Plant pandemic plan
1.13	Insurance documentation

Evonik-specific additional requirements:

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- **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 of any important changes in the company profile without specifically being asked to do so.

- 2.1 Vehicles, containers and additional equipment used for loading and unloading are in proper technical condition and in good visual appearance, while complying with legal and other official regulations as well as the additional contractual requirements 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 energy-saving (see under 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 in Ro/Ro haulage, the vehicles must be equipped with facilities (lashing eyelets, equipment to block sus pension travel, etc.) which allows secure lashing on board and prevent the transported unit from shifting during heavy seas.
- **2.7** The special requirements specified in the requirements profiles included in the annexes must be heeded (as far as applicable).

Evonik-specific additional requirements:

2.8 Vehicles for loading dangerous goods are checked by the client consistently in accordance with subsection 7.5.1.1 ADR. Vehicles that do not meet applicable legal requirements will be rejected. Among other things, these checks include the equipment prescribed in subsections 8.1.4 and 8.1.5 of the ADR and to the equipment listed in the written instructions pursuant to subsection 5.4.3 ADR regarding the performance of the general and any additional and/or special measures.

Windshields must be undamaged. This particularly applies to areas directly in the driver's field of vision, which we consider to be the area above the first windshield wiper (see illustration).

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Damage outside of this field of vision (such as chips caused by stones) can also result in rejection if larger than a €2 coin or involving cracks that could not be described as minimal (see illustration):



Damage is acceptable if smaller than that shown above and outside of the driver's field of vision.

- 2.9 The shovel required for dangerous goods as per 5.4.3 ADR will be complied with, if a shovel or spade of metallic material with a handle is carried in the vehicle. Shovels with a short handle (e.g. dustpans) are not acceptable. The working length of a shovel (from the tip of the blade to the end of the handle) needs to be at least 100 cm. Collapsible spades are tolerated, if they have a working length of at least 55 cm when unfolded.
- 2.10 For the transport of dangerous goods, the requirements of 8.1.5.2 ADR for the "eye flushing liquid" to be carried along 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 expiration date may not be exceeded.

- 2.11 In case additional equipment such as breathing protection for escape or other equipment not listed in subsections 8.1.4 or 8.1.5 of ADR should be required for certain dangerous goods, the client shall notify the contractor of this in writing, either generally or for specific orders (when the order is placed).
- 2.12 The transport of dangerous goods under the relaxed requirements of subsection 1.1.3.6 ADR (meaning waivers in connection with quantities that are carried per transport unit) requires prior consent by the respective loading station. If this consent is not given, then the provisions of the dangerous goods regulations must be observed fully, even for amounts under the limits specified in 1.1.3.6 ADR.
- **2.13** Vehicles with temporary license plates as per § 16 of the German Vehicle Registration Law (FZV) will not be accepted for loading.
- 2.14 If the equipment specified in 2.8 is carried in a container ("ADR container") in the vehicle, and is sealed, then the seal must be removed by the driver upon request, in order to check the contents. The driver's refusal to remove the seal may result in rejection.
- **2.15** If the vehicles to be loaded have containers or swap bodies, then the corner casting locks (twistlocks) must be properly locked.
- 2.16 When transporting products which, for safety reasons, are subject to temperature control (if so, corresponding information is part of the orders), the vehicles shall be fitted with the necessary tempe rature display and alarm equipment, and nothing else may ever be added to the load. Exceptions to this rule must be approved by the client. Before such products are loaded, the cargo space shall be pre-cooled to the working temperature of the cooling aggregate.

- 2.17 In addition to the basic requirement as per 2.1, the tarps/covers of vehicles waiting to be loaded and unloaded and transport containers must be free of ice that could be a hazard to others in traffic, if it should fall down during the trip.
- 2.18 For vehicles registered in Germany, the vehicle registration (German: "Fahrzeugschein") must be presented. If this is carried only as a copy, then the inspection certificate from the last major inspection must also be presented (see also Evonik-specific requirement 8.12).

- **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 loading devices
 - .5 personal protective equipment.
- **3.3** Upon request, contractor's driver must present the documents required under § 7b of the German law governing freight haulage (GüKG).
- **3.4** The contractor agrees to organize the work of its driving personnel to comply with the required driving and resting times.
- **3.5** Upon entry into 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 fenced locations as well as any plant-specific instructions must be observed at the loading and unloading stations.
- **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).

Evonik-specific additional requirements:

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.

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- **3.10** Drivers are always required to have the following personal protective equipment with them at the client's plant and to wear it when they leave their vehicles:
 - .1 Clothes which completely cover the body.
 - **.2** Protective shoes (acc. to EN 345)
 - .3 Hard hat
 - .4 Protective glasses
 - .5 Warning vest (EN 471)
- **3.11** In appropriately marked parts of the client's plant, in addition to the requirements under 3.10, the contractor's drivers are also required to keep the following additional protective equipment with them during loading and unloading work and put it on as needed:
 - .1 Protective clothing (according to the goods to be loaded)
 - **.2** Chemical-resistant protective gloves (according to the goods to be loaded)
 - .3 Tight-fitting protective goggles (obligatory)
 - .4 Protective face mask (for corrosive liquids / gases)
 - .5 Breathing protection

Hard hats indicated in 3.10.3 must fit snugly when worn.

3.12 The completeness of the personal protective equipment according to 3.10, or if applicable 3.11, and (in the case of dangerous goods) pursuant to 2.8, will be checked on entering the plant grounds. Vehicles that do not carry the necessary minimum protective equipment or (for dangerous goods) the equipment required by written instructions pursuant to section 5.4.3 of the ADR may be refused entry at the plant gate.

If a co-driver accompanies a given transport, the equipment items comprising personal protective equipment must be carried on board for the co-driver as well.

3.13 In the case of imminent danger (e.g. due to product leak or reaction) in the course of transport, the driver shall immediately take all the necessary measures – taking basic principles of self-protection into account – which seem suitable in the given situation to avert danger for third parties, the environment, animals, or the load or to prevent damage.

Any traffic accidents or damage to buildings, devices, vehicles and plants or contamination of soil, open water or sewer at the client's or recipient's premises caused by the contractor's driving crew must be reported immediately to site security or the site fire ser vices of the client and/or the recipient, regardless of who is at fault.

- **3.15** When entering the client's or recipient's site, no passengers (including family members) or pets may be in the vehicle.
- **3.16** 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 co-driver. If so, the requirements for personal protective equipment apply for that person as per 3.12.
- **3.17** Furthermore, the contractor's crew and the vehicle may not remain on the client's site unnecessarily (e.g. driving breaks that are not connected with the loading or unloading of the vehicle).
- **3.18** The requirement for the contractor as per 3.1 applies. Additionally, drivers of vehicles carrying dangerous goods, who would like to take advantage of the relaxed requirements as per subsection 1.1.3.6 ADR (such as drivers of courier / package delivery services), must have either a training certificate under 8.2.2.8.5 ADR ("ADR certificate") or under section 8.2.3, in conjunction with section 1.3 ADR.

3.19 By extension, a further application of requirement 3.2 is that truck drivers must be trained in all activities involved in filling and emptying of tanks and working on height. A vehicle may be rejected if gatehouse and filling station personnel feel that the safety of the filling procedure 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 upon 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.

Evonik-specific additional requirements:

4.3 When reporting the load, 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 and the vehicle. This authorization should be a contractor's official, written load order to the driver (with name of the carrier, product description, transport number, and, if applicable, recipient of the goods). This Authorization can also be demonstrated on an electronic device.

Remark:

As a rule, no loading should be possible in the client's plants without presentation of these documents. However, exceptions to this rule are possible (e.g. for regularly recurring pick-ups and / or drivers at short intervals).

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** The contractor shall pursue a strategy to prevent theft. This includes not only certified compliance with security standards, but also setting and following individual security targets in all its processes.
- **4.6** 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 SUBCONTRACTORS

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 used 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

Evonik-specific additional requirements:

5.4 In addition, the contractor shall ensure that the sub-contractor it uses meets the additional requirements set with regard to liability

and insurance (see Annex 4) to the same extent as its own com-

- **5.5** The contractor may use only sub-contractors with adequate carrier's liability insurance, including CMR liability.
- **5.6** Upon request, the contractor shall inform the client which subcontractor it intends to use before the vehicle is dispatched.
- 5.7 If the contractor subcontracts transport orders of the client to other contractors (i.e. uses subcontractors), then 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 consent by the client is required.

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6.1 Safety

- **6.1.1** Departure inspection: 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, A.2.10 and A.2.11).
- **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 (i.e. preferably limited access motorways, if necessary by-passing designated protected areas and avoiding routes through purely residential areas).
- **6.1.5** If vehicles with dangerous loads are parked, they must be guar ded or parked such that sufficient security is guaranteed. The applicable regulations must be complied with.
- 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 the 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 unloading.
- **6.1.8** The driver may unload only after instruction by an authorized agent of the recipient (and under that person's supervision).

- **6.1.9** The contractor shall provide a 24-h on-call service in case of transport incidents. 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 operation. Such measures can include implementation of the 2003/59/EC guidelines regarding basic qualifications and continued training of the drivers of certain motor vehicles for freight or personnel transport and/or implementation of the ECTA best practice (BBS) guideline "Behavior-Based Safety Guideline for secure driving of trucks" (see www.ecta.com).

Evonik-specific additional requirements:

6.1.11 For reloading operations initiated by the contractor during the course of a transport, the contractor must comply with all the requirements, particularly as specified in Annex 2.

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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 subcontractor's company and the client's transports).

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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 Behavior-Based Safety (BBS) as the standard
- in the company,
- Use of vehicles with favorable 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 propulsion technologies,
- 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 an additional basis for reduction of greenhouse gases. Greenhouse gases resulting during the transport of raw materials and finished products are also included in the balance. The shipmentbased information on energy consumption and greenhouse emissions as per DIN EN 16258, specifying the parameters and methods used (e.g. VCI guideline for determination of CO₂ emissions in the logistics of the chemical industry) shall be provided to the client without delay upon request.
- **6.2.4** It is expected that contractors will comply with the internationally recognized minimum standards of the UN Global Compact and the core working norms of the International Labor Organization (ILO).

Evonik-specific additional requirements:

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6.2.5 The contractor should maintain or strive for environmental management system on the basis of ISO 14001. If prices are equivalent, companies certified under ISO 14001 will be given preference 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)

Evonik-specific additional requirements:

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 contractor, the contractor shall enter the client in the freight note as "sender".
8.4	The goods may be handed over only upon receipt of a written acknowledgement of receipt (receipt). It shall be provided to the client upon 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 certi- ficates) must always be presented in the original (see also Evonik- specific requirement 8.10).
Evon	ik-specific additional requirements:

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

8. TRANSPORT- AND ACCOMPANYING DOCUMENTS

- **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, Paragraph 1, No. 2, of the German Turnover Tax Implementing Regulations (UStDV).
 - For intra-community transport, the issuance of a shipment certificate as per § 17a, Paragraph 3, Sentence 1, No. 1, Letter a, of the German Turnover Tax Implementing Regulations (UStDV).

As a rule, the interactive PDF form provided by the client will be for this purpose. In exceptions, in both cases a paper document can also be used in accordance with official requirements.

- 8.10 Since for dangerous goods the inspection personnel of the client must determine the originality of the documentation prior to loading – which is not always possible beyond doubt in the case of laminated documents – many of the client's shipping stations reject vehicles, if the driver presents laminated documents. In order to avoid such rejections, it is recommended that the cont ractor ask the client's respective shipping station about the acceptance of laminated documentation in advance.
- 8.11 For vehicles registered in Germany, the vehicle registration ("Fahrzeugschein") must be presented. If this is carried only as a copy, then the inspection certificate from the last major inspection must also be presented (see also Evonik-specific requirement 2.14).
- 8.12 When issuing transport orders for the client's products, whose transport in Germany is subject to § 35 (itinerary and modal shift from road to rail or inland waterways) of the German Ordinance on the Transport of Dangerous Goods by Road, Rail and Inland Waterways (GGVSEB), the contractor must apply for itinerary determinations as per § 35 (3) GGVSEB and for certification as per § 35 (5) GGVSEB, and forward this documentation to the client before carrying out the first transport and ensure the presentation of the documentation (by the driver) for each transport.

8. TRANSPORT- AND ACCOMPANYING DOCUMENTS

8.13 When for the transport of the client's products, whose transport in Germany is formally subject to § 35 (itinerary and modal shift from road to rail or inland waterways) of the German Ordinance on the Transport of Dangerous Goods by Road, Rail and Inland Waterways (GGVSEB), vehicles with permanently connected double-wall tanks as per 6.8.2.1.20, left column, paragraph b), numbers 2 or 3 of the ADR or tank containers with double walls as per 6.8.2.1.10, right column of the ADR are provided, for which the provisions of § 35 GGVSEB do not apply, the contractor must provide the client with written documentation that the tanks or tank containers are double-wall containers as per the above-mentioned provisions.

9. ACCIDENTS / DAMAGE / LOSS

- **9.1** Whenever persons are endangered and / or the environment is influenced, the fire department and / or police must always be notified. Furthermore, the following information must be provided to the client at the telephone number shown in the transport order or outside office hours at the client's emergency tele phone 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;
 - Options for calling back for further information (name, address, telephone, fax);
 - .8 If appropriate, the loss adjuster involved (name, address, telephone, fax).
- **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 damage and loss of goods immediately, regardless of cause or responsibility.

Evonik-specific additional requirements:

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

9. ACCIDENTS / DAMAGE / LOSS

- .1 Using the telephone number given in the order documents or, if this cannot be reached,
- Using the client's TUIS (Transport Incident and Information System maintained by the German Chemical Industry Association – VCI) telephone hotline below:

Phone +49 2365 49-2232

- **9.5** When the client's products are damaged during transport, get out of control, or are stolen, the client shall be informed without delay.
- **9.6** Damaged packages with products of the client may be transported further only with the express approval of the client; this applies particularly to dangerous goods, which have to be transported in compliance with applicable regulations.

10. MANAGEMENT SYSTEM / AUDITS

- 10.1 The contractor shall maintain a management system and use it to prove how all general and special additional requirements are met and further optimized.
 The management system should be based on the standard ISO 9000 ff or comparable methods if possible.
- 10.2 Upon 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 questionnaire "SQAS Transport Service" of the European Chemical Industry Council (CEFIC). This questionnaire is also recommended to contractors for self-assessment.

Evonik-specific additional requirements:

10.4 The client places high value on the contractor maintaining a management infrastructure in the areas of transport safety / security, work safety, environmental protection, and quality management (ESHQ) that is aligned toward the requirements of the chemical industry. To enable the client to assess this infra structure of the contractor, the contractor shall complete and maintain a SQAS assessment based on the guidelines of the European Chemical Industry Council (CEFIC) (detailed information can be found at the web site www.sqas.org).

The assessment template used by the client for the SQAS assessments on the basis of SQAS 2015 has been revised according to the revisions of SQAS 2015. One focus of these revisions includes the topics of "social responsibility of companies" and "sustainability", which the client has integrated fully into its SQAS assessment template. This is designed to make it unnecessary to do individual logistics service supplier audits on these topics. If requirements

10. MANAGEMENT SYSTEM / AUDITS

in these areas are not met, the contractor is requested to implement them within 12 months.

Contractors who still have valid SQAS assessments on the basis of SQAS 2011, in which these topics had not yet been addressed, must assume that the client will either do a separate audit or a survey on the basis of a self-information questionnaire on these topics in the transition period until the next re-assessment.

- 10.5 It is recommended that contractors from the tank / silo haulage sector that transport goods within the food / feed production chain maintain an integrated management system as per ISO 22000:2005 covering HACCP, IFS, BRC, and GMP+.
- **10.6** The contractor must ensure that products transported as bulk goods (such as certain fillers and food / feed additives), which are reported to it by the client in writing, are hauled only by transport companies that maintain a certified standard as per GMP+ B.4.
- 10.7 Contractors that transport products that are part of the food chain (such as food- and feed additives) must register with the responsible authority in accordance with legal requirements as feed companies as per Article 9 (2) of Directive (EC) No. 183/2005 (regulations for feed hygiene) and / or as feed com panies as per Article 6 of Directive (EC) No. 852/2004 (regulations for food hygiene) and must present the registration to the client upon request.

ANNEX 1 LIQUID AND DRY BULK GOODS IN TANKS, ROAD TANK-/SILO VEHICLES, TANK-/SILO CONTAINERS, TROUGHS, 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,		
and any hose material carried by the vehicle, fittings, and s		
	shall be clean, dry, and free of odors, unless different product-	
	specific 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.
- **A.1.1.5** Vehicle registration certificates shall be carried in the vehicle and presented upon request. Upon 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 presence of surge plates.

ANNEX 1 TECHNICAL COMPONENTS

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.
- **A.1.1.15** Vehicles with a dumping system must be secured against move ment when the cargo bed is lifted.

ANNEX 1 TECHNICAL COMPONENTS

Evonik-specific additional requirements:

A.1.1.16 If a tool (e.g. a hammer) must be used to open / close the dome lid, it must be ensured that this does not cause sparks.

- **A.1.1.17** The client's loading staff shall be reliably informed about the capacity of the tank and tank compartments as well as the maximum permissible load.
- **A.1.1.18** If necessary, hose material and pumps shall be cleaned between the individual emptying procedures.
- A.1.1.19 Flammable liquids may not be unloaded (pressed out) using compressors.
- **A.1.1.20** For safety reasons (to avoid dangerous sloshing), liquids and fluidized materials (i.e. solids that behave as liquids), which are not classified as dangerous goods and are loaded in bulk, are treated by the client analogously to the provisions of the dangerous goods regulations regarding the minimum degree of filling for tanks. Thus, the contractor must ensure that the tanks provided for filling are filled with the material to be transported to at least 80% but or at most 20% of their capacity. However, this does not apply, if the capacity does not exceed 7500 L, or if the tanks are divided by partitions or surge plates into compartments with a capacity of at most 7500 L, or if the cargoes are highly viscous fluids or non-fluidized solids.

Exceptions to this rule must be approved by the client.

A.1.1.21 For the transport of products for which the client requires a certified standard in accordance with GMP+ B4 (such as for certain fillers and food/feed additives), the contractor must not provide bulk cargo space for loading, which had never previously been used for the transport of prohibited substances or materials of freight category 1 ("Transport Exclusion List"), such as meat-and-bone meal. Exceptions to this are bulk loading areas, which,

ANNEX 1 TECHNICAL COMPONENTS

after the transport of such substances / materials, have been recertified / released after suitable cleaning and disinfection under stringent conditions followed by an assessment by an EN 45004-accredited inspection body specifically approved for the inspection of bulk cargo spaces.

- A.1.1.22 The contractor must be familiar with and observe the following ECTA/CEFIC guidelines:
 - "Guidelines for Equipment for the Transport of Dry Bulk Cargo, to be Discharged by Tipping"
 - "Best Practice Guidelines for Safe (Un)Loading of Road Freight Vehicles"
 - "BBS Guidelines for Training of Drivers and Safe Driving of Road Freight Vehicles"
 - "Best Practice Guidelines for the Safe Working at Height in the Chemical Logistics Supply C^hain"
 - Guideline for Investigation of Logistics Incidents and Identifying Root Causes (also available in German beginning Q1/2017)

A.1.1.23 For deliveries of bulk orders placed by the customer, sampling (where necessary) performed by the driver at the unloading site is neither part of the agreement nor is it desirable and, as such, is not a service required of the contractor. In the event that sam pling is required at the unloading site, this shall be performed by the personnel of the unloading site.

A.1.1.24 Drivers may climb their vehicle tanks at the customers and recipients sites only if their vehicles are placed in the filling and/or unloading stations and when proper fall protection equipment is properly used.

ANNEX 1 PRODUCT RESIDUE

A.1.2 Product residue

The goal 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.

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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 commit themselves to carry out necessary measures (servicing, maintenance, repairs) in due time and document these procedures, only using qualified staff and allow audits to be carried out if necessary.

It is therefore recommended that the contractor use cleaning companies that have done a SQAS assessment for tank cleaning systems.

- **A.1.3.2** Tank cleaning always depends on the last goods loaded and, as far as is 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 disposal. Proofs of disposal shall be provided to the client upon request.

Evonik-specific additional requirements:

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

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ANNEX 1 CLEANING STATIONS

- A.1.3.5 The contractor may do tank cleanings only at tank cleaning stations assessed pursuant to CEFIC SQAS Tank Cleaning. It is permissible to deviate from this guiding principle only in exceptional cases, if this requirement would be economically unreasonable in certain cases, which must be demonstrated suitably to the client upon request.
- A.1.3.6 The contractor shall ensure that the reports of the SQAS Tank Cleaning Assessments of the cleaning plant used by it are inspected at least once during the period they are valid and that the cleaning stations be requested to implement improvements if necessary.

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 the tank / silo has been cleaned properly. It is recommended that the "European 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: DIN A4
 - .2 Sequential, unique numbering, safeguarded technically against 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, showing the pre-determined code for the cleaning process (tank, hoses, pumps, valves)

Remark:

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

- For each cleaned compartment, information about the last loaded product with technical description and UN number
- .4 Signature of the cleaning manager and the contractual partner's representative (generally the driver)

ANNEX 1 PROOF OF CLEANING

Comments:

- 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 provided to the loading unit.

Evonik-specific additional requirements for:

- A.1.4.4 Cleaned containers and feeding lines shall be free of any residue from previous transport jobs.
- **A.1.4.5** 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 Confirmation about previous product

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- A.1.5.1 All logistics service providers whose tanks/silos are reloaded upon agreement without being cleaned shall guarantee that confirmation about the previous product (example see Attachment) will be drawn up and provided.
- **A.1.5.2** The confirmation about the previous product shall contain at least the following details:
 - .1 Name of the logistics service provider;
 - .2 Number of the vehicle, tank, chamber;
 - .3 Product
 - chemical-technical 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 company issuing the confirmation about previous load shall make sure that no impurities whatsoever (e.g. dust, foreign particles, condensation) have entered the tank / silo aft unloading and that the tank / silo is sent for renewed loading in a closed state.

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.

Evonik-specific additional requirements:

A.1.6.2 The client reserves the right for reasons of safety as well as for product-specific reasons to check tanks, hose material, and emptying devices for cleanliness and, in case of complaint, to refuse to load the container.

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ANNEX 1 REJECTION OF VEHICLES

A.1.7 Rejection of vehicles

As a rule, silo and tank vehicles, detachable tanks, and tank and silo containers used for the transport of food and feedstuffs may not be used for the client's products.

Exemptions to this basic rule are possible for client's products which are destined for the food or feed industries (e.g. feed additives). If the situation is unclear, consent shall be obtained from the client before the vehicle is provided for loading.

ANNEX 1 SECURITY DURING TRANSPORT

A.1.8 Security during transport

The contractor requirements are as follows:

Tank/silo vehicles and tank / silo containers loaded with dangerous goods

- .1 Shall either be monitored by the driver during stops or parked on fenced or guarded grounds and be checked before continuation of the trip;
- .2 Shall never be parked in residential areas;
- .3 May be parked only on the contractor's plant grounds or in secured areas over the weekend and on national holidays;

In case A.1.8.3, notice will be sent to the control center / fleet management of the contractor.

ANNEX 2 PACKAGED GOODS 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
	(durability as per DIN EN 283).

- A.2.2 Provide vehicles that have their own on-board re-usable cargosecuring devices in adequate numbers and dimensions and in proper condition, such as
 - **.1** Separators (such as clamping plates and insertable rigging boards or adjustable partitions),
 - Lashing equipment (such as standardized belts [LC = ≥2500 daN (straight traction) and STF 300 daN], chains, ropes, nets),
 - .3 Anti-slide mats,
 - .4 Loading areas with retractable lashing rings or lashing point rails or similar fixing points.
- A.2.3 Provide vehicles / containers, in which the walls, floor, and roof as well as doors, door seals, and weather protection appear to be in proper technical condition.
- A.2.4 Driver checks the cargo for external damage and completeness (for packages / packaging units placed on pallets and any packages placed inside outer packaging, the number of loading units is checked), if the driver is present during loading.
- **A.2.5** Drivers approve the measures taken to secure the cargo and support the loading staff if requested.

- 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 of 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 Evonik-specific additional requirements for A.2.8)
- A.2.7 No movement of vehicles (empty or loaded) with open sides or open cargo bay doors.

Evonik-specific additional requirements:

A.2.8 In addition to A.2.6, the following apply:

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 the driver is not able to correct the deficiencies with the available resources, the further transport must be interrupted until the deficiencies are eliminated. The driver will coordinate with the contractor's control center / fleet management or the client's shipping department to determine what action to take to correct the deficiency.

Remark:

The obligation to perform the above-mentioned visual inspection does not apply, if the contractor took over sealed transport resources from the client at the start of the trip. In the case of tranport units sealed by the client, 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 maneuvers, the trip must be interrupted and the contractor's control center 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).

A.2.9 Do not use vehicles that are clearly recognizable as vehicles transporting food and feedstuffs or which can be presumed to be transporting food and feedstuffs due to markings and/or advertisements on the vehicle. Exemptions to this basic rule are possible for client's products which are destined for the food or feed industries (e.g. food and feed additives) and Plexiglass[®] products.

If the situation is unclear, consent shall be obtained from the client before the vehicle is provided for loading.

- **A.2.10** No joint loading of products of the client that are food or feed additives along with other goods (including those of the client), if they are dangerous materials and/or goods.
- A.2.11 Provide vehicles with a cargo area that is suitable for the use of fork-lift trucks as specified by European standard EN 283 and that generally complies with the requirement for body stability according to EN 12642 (also see further details in Annex 3). Vehicles with a body strength as per EN 12642 Code XL are preferred.
- **A.2.12** Vehicles carry a sufficient number of correctly-proportioned cargo-securing devices, e.g. for palletized goods or intermediate bulk containers (IBC).

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

The lashing belts must be in proper technical condition and have at least the following characteristics:

- LC ≥ 2500 daN in a straight pull
- STF ≥ 300 daN
- Lashing belt length 10 m

At least 20 lashing belts of this specification must be carried. Deviations from this rule (meaning fewer lashing belts) are possible (e.g. due to multi-hole rail and the intention to use form-locked loading for Code XL vehicles or by filling up all empty spaces), but this requires the consent of the client.

In addition, six additional lashing belts of the same specification for formation of blocks, or other fastening devices, such as chains or ropes, as needed, as per EN 12195 Parts 3 and 4.

Notes (for all vehicle types):

- When lashing down, the belts must be fastened such that the maximum permissible vehicle width of 2.55 m is not exceeded.
- It must be ensured that belts cannot fall off the vehicle during transport or damage the load.
- The client does not allow belt anchoring using the vehicle side walls.
- A.2.13 Lashing belts must be taken out of service, if they show signs of damage. Signs of damage include:
 - Belts show tears, cuts, notches, or breaks in load-bearing fibers and seams, deformation due to the effects of heat or chemicals.
 - The end fittings and tension elements show deformation, cracks, and strong signs of wear or corrosion.
 - The label is missing and / or illegible.
 - There are cuts in the edge of the web greater than 10% of the belt width. Regular visual inspection before and after each use is recommended.

A.2.14 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 12640:2000 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 designs, the possibility that the lashing belts can fall out must be excluded. If the lashing point location is unfavorable, so that the pressure point cannot be positioned on the load when the belt it pulled down, then additional effort to switch to other cargo-securing measures can be required.

Remark (for all vehicle types):

Vehicles without adequate equipment for the lashing points and without adequately stable sides are excluded from loading.

- A.2.15 For standard sheeted sideboard vehicles, the side insert rigging boards (provided these comprise part of the vehicle body) must be complete and undamaged, at least to the upper edge of the load. For form-locked loads, the rigging boards must be made of metal materials (for curtainsiders / tautliners: see Item A.2.19).
- A.2.16 If box-type bodies are provided for loading, they must be equipped with a suitable retention system (e.g. an appropriate number of form-locking telescoping stanchions that can be fixed in place and are suitable for the nature and weight of the cargo to be loaded) to be used to secure the load opposite to the direction of driving (see photo of an ideal box-type vehicle and the following comments).



Remarks:

- If a sufficient number of lashing points are provided as per EN 12 640 as well as lashing belts, the load can also be lashed alternatively by the client by means of diagonal lashing.
- The use of telescoping stanchions which can be positioned only via 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). Box-type bodies must also be certified under EN 12642 Code XL. The certificate describes the body strength and must be carried in the vehicle.
- **A.2.17** Load units (such as film-wrapped or shrink-wrapped pallets) may not be changed without the express consent of the client.
- **A.2.18** Temperature controlled transport of goods specified in the transport order as temperature-sensitive or the continuous frost-proof transport of goods specified in the transport order as frost-sensitive (in each case in accordance with the agreement).
- A.2.19 When curtainsiders / tautliners are provided for loading, they must meet the specifications of Annex 3.
- **A.2.20** If vehicles are provided that already 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.

Remark:

Carrying out securing measures and / or re-loading previously loaded cargo will be rejected by the client for reasons related to insurance contingencies.

A.2.21 No transport units with single-axle trailers or trailers with tandem axles may be provided. Exceptions may be made to this rule on a case-by-case basis. Evonik must be consulted in advance, however, and provide its express consent.

A.2.22 Consent by the driver to the unloading of any empty pallets on the vehicle that is to be loaded, if they prevent the proper placement of the load reported by the client.

Remarks:

If it is not possible to unload the empty pallets interfering with loading, or if the client does not agree to unloading on site, the vehicle may be rejected.

- A.2.23 Loading space(s) of vehicles provided for the transport of client products that are used for the production of food and feedstuffs (such as certain fillers and feed additives) must be dry and clean (i.e. absolutely free of any residue and odor of previous loads).
- A.2.24 Containers provided for loading must have valid CSC approval (especially the test date) or, alternatively, valid ACEP approval.
- 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** For the lashing belts to be carried, a corresponding number of gliding edge fasteners must be taken along.
- A.2.27 The tarps of sheeted sideboard vehicles and open-top containers may not have any tears and / or holes.
- **A.2.28** Vent holes of freight containers must be unblocked (open).

- **A.2.29** Vehicles \leq 3.5 t permissible gross weight:
 - As a rule, such vehicles are small transporters for packages and special deliveries.
 - For commercially used vehicles, the client accepts only vehicles that are equipped with a retention system in accordance with DIN ISO 27956, such as a partition to separate cargo space from the passenger cabin. These vehicles must be equipped with lashing points, stop bar, and / or other suitable cargo-securing aids, so that the load can be secured properly.
- A.2.30 If cargo-related friction enhancing materials (e.g. anti-slip mats) are required for load securing, contractors shall provide them for all goods to be loaded. No anti-slip mats are required for vehicles with anti-slip coated surface with a verifiable friction coefficient of 0.6 μ (regardless of the type of load).

Comments:

The service life of anti-slip mats must not be exceeded, they must have a verifiable friction coefficient of at least 0.6 μ, a minimum thickness of 6 mm, and a minimum area of 1200 mm x 100 mm (length x width). Other sizes of anti-slip mats (e.g., 300 mm x 200 mm) may be accepted, provided they are at least 6 mm thick, their verifiable friction coefficient is at least 0.6 μ, and their service life is not exceeded.

- A.2.31 The contractor must be familiar with and observe the ECTA/ CEFIC guidelines given below:
 - Best Practice Guidelines for Safe (Un)Loading of Road Freight Vehicles
 - BBS Guidelines for Training of Drivers and Safe Driving of Road Freight Vehicles Guideline for Investigation of Logistics Incidents and Identifying Root Causes (also available in German beginning Q1/2017)

ANNEX 3 REQUIREMENTS FOR CURTAINSIDERS / TAUTLINERS

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ANNEX 3 INTRODUCTION

A.3.2 Introduction

The goal of the following information is to carry out transports as safely, quickly, and economically to the benefit of all those involved. New vehicle body types are taken into consideration, which reduce the effort for securing cargo without impairing safety. The focus is on the use of form-locking methods to secure cargo, which are most advantageous for safety and for the user in regard to efficiency and practical implementation (e.g. gentler handling of products, shorter idle times for the vehicles).

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For this purpose, the requirements upon the different variants of these vehicle types are described in Section A.3.4.

A.3.2.1 Expectations of the client regarding the curtainsiders / tautliners provided for loading

- If possible, transport units with demonstrated structural strengths as per DIN EN 12642 Code XL or demonstrated equivalent structural strength are used, in order to achieve form-locking loading as much as possible.
 Only such vehicles, due to their structural stability, permit the desired form- locking (time-and-cost-saving) loading techniques (see also A.3.4.1 and A.3.4.2).
- At least vehicles with a structural strength as per DIN EN 12642 Code L. However, to properly secure cargo, vehicles of this type require greater effect to tie down or directly lash cargo (see also A.3.4.1 and A.3.4.3) in comparison to Code XL vehicles.
- As a rule, vehicles that comply with neither DIN EN 12642 Code XL nor DIN EN 12642 Code L (meaning vehicles of unknown body strength) are rejected by the client (see also A.3.4.4).

If such vehicles are nevertheless to be loaded, this requires the express consent of the respective loading station of the client.

ANNEX 3 INTRODUCTION

In this context, see the following flowchart, which illustrates which vehicle body types are preferred by the client (because they can be used most effectively), which may be accepted only as needed (because they are connected with increased effort to secure the cargo), and which as a rule are not accepted (because technical deficits either do not permit proper securing of the cargo or because this is only possible with disproportionately greater effort).

The testing standard DIN EN 12642 applies generally to vehicle bodies over 3.5 t permissible gross weight (e.g. also for side wall body types and box body types for trucks and trailers) (see also Annex 2).



A.3.3 Definitions

A.3.3.1 Requirements for cargo securing:

A.3.3.1.1 Principle

Depending on the type of transport (road, rail, sea), different types of transport stresses (acceleration values) occur. The cargo-securing measures must be adapted to these transport stresses. For packages typical for chemicals (drums, canisters, flexible and rigid IBC, etc.), a combination of form-locking and force-locking methods for securing cargo is oft used.

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A.3.3.1.2 German Road Traffic Act - StVO § 22(1)

"(1) The cargo as well as devices, tension chains, and other loading equipment must be stowed and secured so that they cannot slide, fall over, roll back and forth, or cause avoidable noise – completely or partially, even during full braking or sudden evasive maneuvers. In this context, the recognized state of the art must be observed".

A.3.3.1.3 Special provisions for dangerous goods as per Subsection 7.5.7.1 ADR

"Shipping items containing dangerous freight and unpackaged dangerous freight must be secured by suitable means. If dangerous freight is transported together with other freight items (e.g. heavy machines or crates), all freight items in the vehicles or containers must be secured and packaged so that no dangerous freight substances can leak out. The movement of the shipping items can be prevented by filling up empty spaces with the aid of stowing blocks or by blocking and strapping. When strapping devices, such as straps or belts are used, they may not be overtightened so as to cause damage or deformation of the shipping item ¹). The requirements of this subsection are considered met, when the cargo is secured as per the standard EN 12195-1:2010."

¹ Instructions for stowing dan- gerous goods can be taken from the "European Best Practice Guidelines on Cargo Securing for Road Transport" published by the European Commission. Addi- tional instructions are also provi- ded by the responsible authori- ties and industry associations.

A.3.3.2 Form locking

Form locking means that the load is braced directly or indirectly against adequately stable cargo space boundaries (front wall, built-up side walls, insertable rigging boards, partitions or blocking beams, rear gate). That means that the load is secured via direct form locking (physical fit) among the individual items of the load or load unit and the securing structural element of the vehicle body. The term form locking must be considered in connection with the topic of cargo securing, also taking into account the weight and size of the package / loading unit as follows: assistance for practical use in stowing loading units with CP 1- (1200 x 1000 mm), CP 2- (1200 x 800 mm), and CP 3 pallets (1140 x 1140 mm) is provided by the following descriptions:

- Max. cargo gap per pallet unit in the direction of travel < 1 cm (max. total 4 cm after a max. of 4.8 load meters).
- Max. cargo gap per pallet row perpendicular to the direction of travel < 8 cm (relative to a max. internal width of 2480 mm and Code XL certification).
- Cargo gaps that exceed the above-mentioned limits must be filled up or else the load must be secured via force-locking methods.

The prerequisite for form-locked load is an adequately stable loading unit / package, which is stable enough to withstand transshipment and transport (loader obligation) and can compensate for the acceleration forces that occur.

Since Code XL side curtains are too elastic for form-locking cargosecuring methods, even with wooden insert rigging boards, metal rigging boards of defined stability must be used for the function of form-locking to secure loads when transporting chemical products.

Examples of form-locking loading techniques for vehicle bodies (including retrofittable, e.g. Code L vehicles) with high lateral stability as per DIN-EN 12642 Code XL:

Securing drums:





Cell construction



Gap filling

Securing FIBC and sacks:



Outside view



Form-locking loading with the aid of AJS-CP3 protectors



Cell construction



Gap filling



AJS-CP3 protectors

A.3.3.3 Force-locking cargo-securing by lashing down

Fixation of loads by means of permanent force application when lashing down. Lashing down is done with re-usable lashing belts acc. to EN 12195 Part 2

Examples of force-locking techniques to secure cargo:



Force-locking cargo-securing by lashing down

A.3.3.4 Friction locking:

Frictional locking results from additional fixation of loads by raising the friction between pairs of materials. To maintain the efficacy of the friction, it is necessary to combine this with lashing down and / or direct lashing.

For the material pair wooden pallet / grid flooring, a coefficient of friction of μ = 0.25 can normally be assumed. If there is any doubt of this, the friction should be increased as required to satisfy the calculation, (e.g. using friction agents).

A.3.3.5 Diagonal or direct lashing:

Diagonal lashing is a form-locking method of securing loads that can be readily accomplished, for example, with re-usable lashing belts.

Examples of direct lashing combined with lashing down:







A.3.4 Requirements for different vehicle body types / consequences As per A.3.2.1 preference should be given to the use of vehicles with bodies that in regard to their basic body strength are classified as DIN EN 12642 Code XL or offer demonstrated equivalent body strength (see 3.4.2). Only with these vehicle types, because of their body stabilities, is it possible to use form-locking and thus time-saving loading techniques.

Remark:

The Code XL certificate, for instance, for semi-trailers with lateral sliding tarpaulins (curtainsider semi-trailers) or tarpaulin superstructures with side walls, cannot be equated in the ability to provide lateral form-locking to secure cargo with systems that already meet the requirements for lateral securing of loads.

Drums, sacks on pallets, Big Bags, rigid IBC, octabins, and similar packaging must also be secured with lateral and in part with for ward load-securing aids.

Vehicle bodies as per DIN EN 12642 Code L are also permissible (see 3.4.3), which have been dynamically tested and certified by a recognized testing institution in regard to certain specified loads in accordance with Annex B of DIN EN 12642. Here, too, vehicles which provide for the securing of loads by means of form locking are preferred.

For all other vehicles, the load-securing measures are more complicated or not possible at all (see A 3.4.4) and are therefore accepted only with the consent of the client for loading.

When heavy pallet loading units are to be transported, for example with a loading weight of 1000 kg to 1200 kg, as well as for partial loads, it is mandatory that the permissible axle loads of the transport vehicle be observed and complied with.

Depending on the type of cargo, it can be necessary to create loading sections with blocking beams (or similar aids).

Loading sections can be also be necessary when partial loads are expected or when loads are sensitive to pressure or unstable, due to the possible braking deceleration of 0.8 g.

A.3.4.1 General requirements for all vehicle body types

- When provided, the vehicle / cargo space / cargo area must be in proper technical condition and clean.
- The loads must, whenever possible, be secured by means of form locking.
- Equipment such as lashing belts and points or the body elements, such as front walls and side structures must be in proper technical condition.
- Insertable rigging boards must be in proper technical condition at least to the upper edge of the load. In practice insertable wooden rigging boards and rigging boards made of metallic materials are used. Since Code XL side curtains are too elastic for form-locking cargo-securing methods, even with wooden insert rigging boards, metal rigging boards of defined stability must be used to secure loads through form locking when transporting chemical products. At a loading weight of 25 t, a coefficient of friction of 0.3 (loading unit / clean-swept vehicle floor) and a lateral acceleration of 0.5 g on a standard curtainsider semi-trailers with three sliding stanchions (standard stanchion area 3100 mm), the resulting lateral pressure upon the load is 5000 daN (weight pressure of 5000 kg). If this force is taken up by metal rigging boards (e.g. 5 standard minimum rigging boards per stanchion area with floor fastening), then it is not necessary to tie down the load. If only wooden insertable rigging boards are used, then greater effort is required to secure the load (e.g. the use of non-slip mats and a tie-down for the load at each load meter).
- Vehicle equipment with multi-hole rails with lashing point intervals of ≤ 150 mm is preferred by the client. If there are no multi-hole rails in the outer area, then there must be lashing points as per DIN EN 12640, but at a longitudinal interval of ≤ 600 mm instead of ≤ 1200 mm.

- Cargo areas must be swept clean and be dry, free of oil, grease, frost, moisture, ice, and snow residues. If this is not the case, the deficiency must be corrected by the driver before loading. If it cannot be corrected, the vehicle must be rejected.
- The coefficient of friction between the vehicle floor and wood must be at least 0.3 (μ value).
- If friction agents have to be used because of the particular cargo load, they shall be provided by the client.
- Pallet stops may be present on the long sides of the cargo area.
- If there are deficiencies regarding the requirements shown above, the client can refuse to let the cargo be loaded (caseby-case decision).

A.3.4.2 Requirements for curtainsiders / tautliners with certification as per DIN EN 12642 (Code XL)

As a rule these vehicles have body strengths of 13500 daN for the front wall, 10800 daN for the side wall, and 8100 daN for the rear wall. The vehicle bodies can safely handle the acceleration forces occurring in normal traffic, e.g. arising from full braking or avoidance maneuvers and thus return any cargo that may move to its original position and are thus suitable for form-locked loading. This is the vehicle type preferred by the client.

The requirements of the client for Code XL vehicles are as follows:

- A valid certificate must be carried in the vehicle, stating the types of loads that can be secured by form locking.
- 3 pairs of reinforced stanchions. With three stanchions and a cargo area of 13620 mm, the resulting side slat length is about 3100 mm supporting width.
- Vehicle equipment with multi-hole rails with lashing point intervals of ≤ 150 mm (the express wish of the client).
- 5 insertable lightweight metal boards per stanchion area, anchored in the lateral floor area as needed and with the ability to insert blocking beams at the side. The stability of these boards must be such 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 boards can be used (thus reducing the number needed). A certificate is required, or the boards must be marked with

the corresponding stability values. If form-locked loading is not possible because of wooden rigging boards or the cargo, then the load must be secured via force and / or friction locking. In this case, 20 lashing belts must be carried, even for XL-coded vehicles (for lashing belt specifications see A.2.13).

• The insertable rigging boards must be in proper technical condition at least to the upper edge of the load.

Optional:

- Use blocking beams as needed to form-lock the load in the direction of travel. Covering the vehicle floor with non-slip flooring with a coefficient of friction of ≥0.6 is not mandatory, but it makes it easier to secure the load and increases work safety. Furthermore, no non-slip mats need be used and the lateral load pressure is reduced. Pallet stops are not mandatory, but they do make it easier to secure the load when loading rigid IBC and stable loading units.
- The sliding tarpaulins are flame-retardant as per DIN EN 12641-2.

A.3.4.4 Requirements for curtainsiders / tautliners with no documentation of body strength (not listed in DIN EN 12642)

These are vehicle bodies that cannot absorb the acceleration forces occurring in normal traffic, e.g. arising from full braking or avoidance maneuvers.

For this type of vehicle, it must be assumed that personnel effected and material requirements will be distinctly higher. Depending on the cargo, it must be assumed that loading may have to be rejected, e.g. due to a lack of lashing rings. The additional materials can include: wooden pallets, non-slip mats, re-usable lashing belts, wooden racks.

Vehicles of this type requires the express consent of the client.

A.3.4.5 Curtainsiders / tautliners with technical deficits, which are rejected.

The following figures show examples of vehicles that must be rejected due to technical deficiencies:



Bent lightweight metal insertable rigging boards



Defective lightweight metal insertable rigging boards



Defective/cracked wooden insertable rigging boards

A.3.5 Special loading conditions

A.3.5.1 Vehicles partially loaded with goods of other companies

If vehicles are provided that already 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 the opportunity to secure the other cargo properly. If the driver is unable to do so, the client will refuse to load the vehicle.

A.3.5.2 Special aspects of securing cargo in multi-modal transport road → sea

The packages or loading units must be able to withstand the acceleration forces resulting during maritime transport in the horizontal direction, but especially in the vertical direction as well. It must be taken into consideration that, according to the CTU packing guidelines, lateral accelerations of 0.5 g (Baltic Sea) and 0.7 g (North Sea) can act upon the load during ferry transport. In sea transport, the cargo must be tied down as needed to secure it additionally against the forces of vertical acceleration.

The lashing down of the cargo may be dispensed only if

- the cargo can be loaded using form locking,
- the vehicle body has been tested as per DIN EN 12642 Code XL and can safely withstand the acceleration forces occurring in sea (ferry) transport, and,
- •inparticular, e.g. for cylindrical containers (such as drums), overriding is prevented by the formation of loading units.

If the prerequisites shown above are not met, distinctly longer loading times can be expected, which the contractor must take into account.

A.3.5.3 Special aspects of securing cargo in multi-modal transport road → rail

When selecting the means of transport, the increased acceleration forces of 1 g (in both directions of movement) must be taken into account when securing the load.

A.3.5.4 Stacked cargo loading (exception)

Stacked cargo loading 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 dangerous goods are transported.

If there is any doubt as to the stacking capacity of the shipping items, the client shall decide whether or not cargo stacking is a permissible mode of loading and whether a packing layer must be inserted in between (such as plywood or synthetic sheeting) to help distribute the weight.

ANNEX 4 LIABILITY AND INSURANCE

A.4 Liability and Insurance

A.4.1 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.4.2 The contractor agrees to take out and maintain

- Insurance for domestic transport according to HGB Section 407 ff 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 injury – 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 fourth bullet point of A.4.2.

A.4.3 The contractor shall confirm the insurance coverage corresponding to the above conditions by written acknowledgement of this requirement profile.

ANNEX 4 LIABILITY AND INSURANCE

- **A.4.4** Upon request from the client, the contractor shall prove the respective insurance coverage by written certificate from its insurer / the subcontractor's insurer.
- A.4.5 Department AS-P-DI-LO-S (based in Marl) carries out the recourse of the client, its associated companies, and other third party companies, insofar as this is not done by the transport insurer itself.

EUROPEAN CLEANING DOCUMENT

EFTCO	Cleaning Document =	VTI fac +40
www.eftco.org		
Kunden-Referenzmammer / Customer reference number*	3 Series-Nummer / Seriel number*	06007
Kunden-Daten / Customer	5 Bebulter-Daten / Identification numbers	06091
	SS 7553	
	Febrzeug / Vehicle	
	Auflieger, Silo, Container, IBC / Tank, Silo	, Container, IBC
Art des Produktes / Nature of product*	7 Nachate Beladung /Nont Load*	- 17
E Letztes Ladegut / Pravioue load	8 Duribgeführts Art	bolten
K UN N* Noine /None	EFTC0 Code / Desc	ription*
NAS		
K 10 Zusätzliche Arbeiten / Additional Services*		
K 10 Zusitzliche Arbeiten /Additional Services*	in	2
K 10 Zusätzliche Arbeitien / Additional Services*	in	a
K 10 Zuestzliche Arbeiten /Additional Services*	in	2
K 10 Zuisitzliche Arbeiten / Additional Services*	in	2
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K 10 Ziestzliche Arbeiten / Additional Services* 1 Bernerkangen / Commenta*	1	
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CONFIRMATION ABOUT PREVIOUS LOAD

CONTRACTOR	DATE VOUCHER NO.
FREIGHT CARRIER	REGISTRATION NUMBER
TRACTOR / TRAILER	CONTAINER NO.
TYPE OF VEHICLE	
Silo Trailer Container	

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

TANK MATERIAL

		OTHER	TOTAL NUMBER OF COMPARTMENTS
V2A	Aluminium		
V4A	Rubberized		

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.

We confirm that the above-specified tank/silo is being provided empty and uncleaned and complies with the above-mentioned provisions.

NAME OF COMPANY	

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