

**ESAD 2022 Chlorinated Solvent**

**Questionnaire & Guidelines**

 

Version 12/04/2022

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| **ESAD Chlorinated Solvent 2022 - Questionnaire & Guidelines - English version**  **New text is in blue** | | | |  | **Mandatory Comment** |
|  | | | |  |  |
| **Item N°** | **Question** |  | **Guideline** |  |  |
| 1. | Introduction |  | **Introduction** |  |  |
|  | For distributors handling chlorinated solvents (CS), this assessment form shall apply in addition to the assessment form for "Distributor Standard Activities" in the SQAS Core plus ESAD Supplement and the relevant parts of the "Site Assessment" form. |  | These guidelines are provided for consideration by chlorinated solvent producers and distributors as a way to implement Responsible Care® continuous improvement initiatives. No agreement requiring the use of any particular distribution arrangements shall be inferred from these guidelines, and producers and distributors are encouraged to consult with their own legal counsel regarding appropriate language for their agreements. |  |  |
|  |  |  | **Purpose** |  |  |
|  |  |  | Chlorinated solvents have specific hazard characteristics such as risk of ground / water pollution and possible long term irreversible health effects. They are subject to public concern and numerous special regulations within the European Union and member states. This and their wide use in non-chemical industries creates the need to strongly emphasise “Product Stewardship” principles covering the suppliers’ responsibility to avoid chlorinated solvent misuse and to promote their safe and proper application over the total life cycle. |  |  |
|  |  |  | The SQAS Core plus ESAD Supplement and Site assessment documents do not cover in their general sections (“Standard Activities” and “Site Assessment”) all special needs for a safe use and handling of chlorinated solvents all along the supply chain. Therefore, this section shall address the additional special requirements and care needed to assure RESPONSIBLE CARE compliance over the whole distribution chain of chlorinated solvents in order to enhance their acceptance by society and their sustainability. |  |  |
|  |  |  | **Scope** |  |  |
|  |  |  | This section only covers the chlorinated solvents perchloroethylene (PER), and dichloromethane (DCM) (synonym of Methylene Chloride). It does not include trichloroethylene (TRI). It focuses on additional requirements not covered by the general sections (“Standard Activities” and “Site Assessment”) of the SQAS Core plus ESADsupplement and Site assessment. Companies involved in the distribution of chlorinated solvents shall comply in minimum to the following SQAS Core plus ESAD supplement parts: “Standard Activities”, “Site Assessment” (relevant sections) and this section, previously called Appendix C. |  |  |
| 2. | Product Stewardship |  | **Product Stewardship** |  |  |
|  | **SUPPLY CHAIN** |  | **SUPPLY CHAIN** |  |  |
| **2.1.** | **[Does the distributor undertake](#Doesthedistributorundertake) maximum efforts to ensure compliance with Product Stewardship principles along the entire supply chain of CS?** |  | **Does the distributor undertake maximum efforts to ensure compliance with Product Stewardship principles along the entire supply chain?** |  |  |
|  |  |  | Distributors are responsible for the application of these ESAD guidelines down the entire distribution chain (including potential sub-distribution) and shall undertake maximum efforts to ensure compliance with the RESPONSIBLE CARE principles down to the end-user (specifically regarding the product and application specific information transfer). |  |  |
|  |  |  | The distributor shall undertake maximum efforts to identify and record the intended application [1]. It is recommended to maintain customer information including the volume and a proper description of the end-use application for each chlorinated solvent account. The distributor shall provide this information to suppliers when requested for specific product stewardship initiatives. |  |  |
|  |  |  | [1] Application information shall clearly identify the use of the solvent and not only give the industry sector to describe the application. |  |  |
|  |  |  | The distributor shall not knowingly sell chlorinated solvents to: |  |  |
|  |  |  | 1. any customer who: |  |  |
|  |  |  | - intends an unsafe or improper end-use application or |  |  |
|  |  |  | - does not maintain adequate equipment or procedures for the safe storage, handling, use and disposal of chlorinated solvents |  |  |
|  |  |  | - and is not willing to take suggested corrective measures. |  |  |
|  |  |  | 1. any sub-distributor who is not willing to apply these guidelines. |  |  |
|  |  |  | Check for procedure(s), working instructions, database(s), role descriptions, contracts, etc. which give evidence of above. |  |  |
| 2.1.1. | Is a system/procedure in place to identify and record the customer product applications, volume and proper description of the end-use for each chlorinated solvent used? (Applications not disclosed by customer should be recorded as such) |  |  |  |  |
| 2.1.2. | Is this information available to support specific Product Stewardship initiatives of the suppliers? |  |  |  |  |
| 2.1.3. | Is a procedure in place which checks for obvious non-compliance to REACH (misuse or unsafe use, handling or disposal of chlorinated solvents), and avoid delivery of CS in case the customer refuses to take corrective measures? |  |  |  |  |
| 2.1.4. | Does the distributor - upon supplier request - offer special services to facilitate safe handling, use, and disposal of chlorinated solvents? |  | Distributors may provide to their chlorinated solvents customers any reasonable special services which Supplier(s) might request in order to facilitate the safe handling, use, and disposal of chlorinated solvents. Such special services may include, for example, the provision of tools, equipment, or recycling services. |  |  |
| 2.1.5. | Are customers supplied in addition to SDS with other SHE information (e.g., technical guidelines) important to ensure proper and safe handling, use and disposal of chlorinated solvents by customers? |  | 2.1.5a/c: Distributors shall have a system in place to ensure dissemination of updated product safety, health, and environmental information to their customers. Dissemination of important literature (e.g., Safety Data Sheets (SDS) and ECSA (European Chlorinated Solvents Association) or producer handling guidelines) shall take place at the time of any initial product distribution. Dissemination of SDS shall be repeated periodically thereafter. Updates of important literature shall automatically trigger a new dissemination. |  |  |
| 2.1.6. | Is a procedure in place to ensure that letters with important SHE information sent by the supplier to the distributor for distribution to current chlorinated solvent users, are dispatched in a timely manner? |  | Records of SDS dissemination and preferably also the dissemination of all additional important product safety, health, and environmental information or literature shall be recorded. SDS dissemination records should, in an optimal set-up, include proof of receipt by the customer. System(s) in place shall give evidence of above. |  |  |
| 2.1.7. | Is the dispatch of the SDS and other SHE information recorded? |  | For the safe use of chlorinated solvents, the availability of up-to date product Safety Datasheets (SDS) at all current end-users is of prime importance. The standard requirements which shall all be fulfilled for distributing chlorinated solvents are covered by SQAS Core plus ESAD supplement sections 6.4 and 6.5. It includes the requirements that the distributor shall have a system for SDS dissemination in place, which ensures: |  |  |
|  |  |  | - timely dissemination of SDS to new end-users, in order to have SDS available when product use starts |  |  |
|  |  |  | - timely dissemination of revised SDS versions to current end-users (time frame for dissemination of revisions may be given by legislation) |  |  |
|  |  |  | - dissemination of SDS in local language |  |  |
|  |  |  | - the dispatch of the SDS is recorded by addressee and date |  |  |
|  |  |  | - the desirable option to re-send SDS to current customers on a periodic basis |  |  |
|  |  |  | Given the specific hazards of chlorinated solvents and the potential serious risks if not properly handled, the following additional, more stringent requirements are asked for: |  |  |
|  |  |  | - the system shall include the option to re-send SDS periodically and the distributor should use this option |  |  |
|  |  |  | - proof of receipts from SDS recipients should be recorded. |  |  |
|  |  |  | Beside the availability of up-to-date SDS at end-users it is also important to make sure that users of chlorinated solvents have all important additional up-to-date product information from producers (e.g., overall product Stewardship guidelines or specific guidelines like for safe handling and storage,) available. This is essential to allow customers to use, handle, store and dispose of chlorinated solvents in a safe way. Local language is desirable (especially for important documents like Safety and Environmental Guidelines e.g., issued by ECSA or suppliers), but not mandatory as for SDS. These requirements are also covered in SQAS Core plus ESAD Supplement 6.4.7. Because of the essential importance of these requirements for a safe use of chlorinated solvents, the auditor shall check if the questions SQAS Core plus ESAD Supplement 6.4.7 are specifically fulfilled regarding chlorinated solvents. In addition, distributors shall respond in a timely manner to all special requests of the supplier to dispatch special SHE information issues. All this literature dissemination should be preferably recorded. |  |  |
| 2.1.8. | In addition to the dispatch procedure for SHE information, does the company have additional procedures in place to actively urge and advice customers (e.g., during customer contacts) about: |  | Distributors shall strongly urge users to handle, store, use and dispose of chlorinated solvents in a safe way. Distributors shall inform and advise end-users about the specific risks of chlorinated solvents, their duty to monitor workforce exposure, the need to care for safe use, storage and handling and the obligation to care for proper waste disposal. Furthermore, the end-user has to be informed about state-of-the-art possibilities to use, handle and store chlorinated solvents safely e.g., in closed loop systems and the distributor shall urge their use. Procedure(s) in place shall give evidence of the above. |  |  |
| 2.1.8.a. | - the necessity to properly monitor worker exposure to chlorinated solvents? |  | Users of CS should monitor exposure of their workers according to national requirements and product stewardship principles. |  |  |
| 2.1.8.b. | - the need to handle and store chlorinated solvents in a safe way using best practice? |  |  |  |  |
| 2.1.8.c. | - proper waste disposal and the need and obligation to follow it? |  |  |  |  |
| 2.1.9. | Does the distributor offer a "state of the art" technique for the safe handling, filling, transport and take back of chlorinated solvents e.g., by supplying safety containers or equivalent closed loop systems? |  | Closed loop systems or safety containers include equipment such as fix connections for liquid transfer to avoid spills / leakages, vapour return lines to minimize air emissions, appropriate control equipment to avoid overfilling, double walled IBC or safety drum container |  |  |
| 2.1.10. | Exceeding the general requirements on incident reporting, is a procedure in place to record and document any incidents with chlorinated solvents and report it to the supplier(s), including incidences at customer sites which become known to the distributor? |  | 2.1.9/10: Distributors shall promptly notify the appropriate supplier(s) of any accident or incident involving the storage, handling, transportation, or disposal of chlorinated solvents at their site or any incidents with chlorinated solvents at customer sites they get knowledge of. Distributors shall also cooperate with any remedial instructions or recommendations that Supplier(s) provide in such circumstances, as described in the SDS. Procedure(s) in place shall give evidence of above. |  |  |
| 2.1.11. | Is a procedure in place to allow full product traceability also in cases where sub-distributors are involved? |  | PRODUCT TRACEABILITY: Distribution records shall be kept for all shipments of chlorinated solvents, including, as a minimum, product name, lot number (if available), name and location of receiving party, quantity, carrier and date of shipment. For shipments of products repacked at the distributor site, the repackaging date shall be recorded in addition. Furthermore, filling of bulk-tanks shall be traceable (e.g., records of product name, lot number, supplier, carrier, date).  Further sub-distributions are expected to be done under the same safe conditions as at distributor sites if exceeding 200 Kg in the stock of the sub-distributor. |  |  |
| 2.1.12. | Are receiving customers made aware of specific requirements for unloading chlorinated solvents? |  | Since many receiving customers of chlorinated solvents are non-chemical companies, the distributor shall make sure, prior to the first unloading operation at the customer site, that the customer has been informed about and is aware of the specific hazards of chlorinated solvents and the specific requirements to properly manage all risks during unloading. |  |  |
| 2.1.13. | Is (un)loading supervised continuously by qualified personnel to interact in case of unintentional release? |  |  |  |  |
| 2.1.14. | Is the distributor requesting the receiving customer, to have the responsible person of the customer present during the entire unloading operation? |  | The distributor should clearly request that the responsible person at the receiving customer is present during the entire unloading operation. |  |  |
| 2.1.15. | Is a procedure in place ensuring that the receiving customer is requested to check all necessary precautionary measures prior to unloading? |  | The distributor should also request from the receiving customer that all necessary precautionary measures, as laid down in a valid unloading procedure, are checked prior to unloading. |  |  |
|  | **CONTRACTORS MANAGEMENT** |  | **CONTRACTORS MANAGEMENT** |  |  |
| **2.2.** | **Is it ensured that contractor companies are also following Product Stewardship guidelines relevant to their operations?** |  | **Is it ensured that contractors are following Product stewardship guidelines relevant to their operations?** |  |  |
|  |  |  | Distributors shall check that contractors are operating according to the relevant requirements of these guidelines. |  |  |
| 2.2.1. | Are additional requirements about safety, quality and environmental criteria for contractor (sub-distributor and/or logistics service provider) on top of the requirements defined in section 2.4.9 of (SQAS Core + ESAD supplement and ECSA Storage handling recommendation: Link: https://www.chlorinated-solvents.eu/safety-technology/storage-handling/ |  | Distributors shall have a carrier selection process to ensure, for the transport of any chlorinated solvent, that their carriers comply with applicable laws and regulations, the spirit of the Product Stewardship Principles and with the relevant ESAD assessment guidelines. It is important that the requirements of the ESAD appendix “Chlorinated Solvents” are part of the quality criteria for the carrier selection. Existing SQAS assessments, as far as applicable, shall be taken into account. Procedure(s) or systems(s) in place shall give evidence of the above. |  |  |
| 2.2.2. | Are the selection and assessment results for major contractors (sub-distributor and/or logistics service provider) open to the supplier? |  |  |  |  |
| 3. | General Characteristics of the distribution chain |  | **General Characteristics of the distribution chain** |  |  |
|  | **SAMPLING** |  | **SAMPLING** |  |  |
| **3.1.** | **Is there a procedure in place to ensure safe sampling of chlorinated solvents by taking into account their specific risks for environment and human health?** |  | **Is there a procedure in place to ensure safe sampling of chlorinated solvents by taking in account their specific risks for environment and human health?** |  |  |
| 3.1.1. | Are appropriate sample containers and appropriate sampling equipment in use? |  | Aluminum in any form shall not be used as construction material, neither for sampling equipment, nor for containers and/or closures. Brown glassware with solvent resistant sealant is recommended for sample containment. |  |  |
| 3.1.2. | Is sampling performed in appropriate areas only? |  | Chlorinated solvents have a special risk for ground and ground water pollution. They may penetrate through concrete. Therefore, sampling shall only take place in areas where there is proper ground protection using approved chlorinated solvent resistant materials is (For details on materials refer to ECSA technical document “Storage and Handling of chlorinated solvents” – link provided in 2.2.1). Due to the high volatility and the high vapour density of chlorinated solvents, sampling shall only take place in good ventilated and non-confined areas where solvent vapours cannot accumulate. |  |  |
| 3.1.3. | Are the specific safety rules followed and are people properly trained? |  | Sampling shall only be done by people who are sufficiently trained on the specific properties and risks of chlorinated solvents by respecting occupational exposure limits and the need for minimised emissions. |  |  |
|  | **TRAINING** |  | **TRAINING** |  |  |
| **3.2.** | **Is the training of employees on specific knowledge regarding chlorinated solvents ensured?** |  | **Is the training of employees on specific knowledge regarding chlorinated solvents ensured?** |  |  |
|  |  |  | Distributors shall be knowledgeable about general principles of product stewardship and be familiar with chlorinated solvents specific safety, health, and environmental information / literature, including warning labels, product Safety Data Sheets (SDS) or local equivalent, commonly available from suppliers and trade associations (e.g., ECSA). |  |  |
| 3.2.1. | Has a chlorinated solvent specialist, acting as the focal point, been appointed in the company? |  | Distributors shall appoint at least one employee as technical expert, who acts as a focal point internally as well as externally. |  |  |
| 3.2.2. | Have all employees handling chlorinated solvents received a specific training on the specific requirements of chlorinated solvents? |  | Distributors shall train all their relevant employees enabling them:  - to handle and store chlorinated solvents safely in order to comply with all legal requirements and to be in compliance with professional guidelines. The training shall make reference to product environmental information literature as provided by the supplier(s), trade associations, and other recognised sources. |  |  |
| 3.2.3. | Is the training package making use of specific technical guidelines for safe handling and storage of chlorinated solvents issued e.g., by ECSA or the supplier(s)? |  | - to give advice to customers on safe handling, storage, use and disposal of chlorinated solvents. |  |  |
| 3.2.4. | Are the sales staff and are technical service staff trained to give advice on safe handling, use, storage, disposal of chlorinated solvents and the associated "state of the art" technology? |  | The training shall be based on up-to date information and shall be recorded. |  |  |
| 3.2.5. | Is the 24-hr emergency service also available for emergency situations at customer sites involving chlorinated solvents without being directly linked to the distributor activity? |  | The company shall have appropriate twenty-four-hour emergency plans consistent with governing regulations for on-site activities and be able to give help to customers for all emergency situations at customer sites involving chlorinated solvents. |  |  |
| 3.2.6. | Have all persons, providing the 24-hr emergency service, been properly trained on the specific requirements for chlorinated solvents in emergency situations? |  | *Distributor employees* need to be trained and prepared to respond to emergency situations involving the storage, handling, transportation, disposal, or use of chlorinated solvents at their own site and to support customers in similar situations. |  |  |
| 4. | Legal requirements and important guidelines |  | **Legal requirements and important guidelines** |  |  |
|  | - |  | Distributors shall be knowledgeable about and follow all applicable laws and regulations governing the storage of chlorinated solvents in the regions they are active in. In addition, distributors shall be knowledgeable about and follow relevant important guidelines and information that may be provided by the supplier or ECSA regarding the proper procedures for safe storage of chlorinated solvents (e.g., ECSA technical documents – link provided in 2.2.1). |  |  |
|  |  |  | The distributor shall have an accessible library containing above information related to chlorinated solvents. The information shall be kept up-to-date. For this, the distributor shall have a person, or a source assigned to keep abreast of legislation **and** guideline developments. In addition to impact assessment of legislative developments (see Di-1.2.2), also relevance, importance and impacts of new/changed guidelines or supplier information shall be assessed. |  |  |
|  |  |  | Check library for content related to chlorinated solvents and for means to ensure that legislation and important guidelines are followed.  *https://www.chlorinated-solvents.eu/safety-technology/storage-handling/* |  |  |
| **4.1.** | **Is the distributor aware of current legislation and important guidelines relevant to chlorinated solvents?** |  | **Is the distributor aware of current legislation and important guidelines relevant to chlorinated solvents?** |  |  |
| 4.1.1. | Does the distributor'sdatabase of relevant SHE regulations include important guidelines relevant to chlorinated solvents e.g., issued by ECSA or the supplier(s)? |  |  |  |  |
| **4.2.** | **Does the company have a means of ensuring that it keeps abreast of new or changed guidelines regarding chlorinated solvents in addition to the legislative developments?** |  | **Does the company have a means of ensuring that it keeps abreast of new or changed guidelines regarding chlorinated solvents in addition to the legislative developments?** |  |  |
| 4.2.1. | Is a person designated, with responsibility for assessing the impact of legislative requirements and for proposing actions to comply with these, also considering the above guidelines and supplier information relevant to chlorinated solvents?" |  |  |  |  |
| 4.2.2. | Are downstream users kept updated about new guidelines of CS? |  |  |  |  |
| 5. | Storage |  | **Storage** |  |  |
|  | **DESIGN AND CONSTRUCTION OF EQUIPMENT** |  | **DESIGN AND CONSTRUCTION OF EQUIPMENT** |  |  |
| **5.1.** | **Is the basic design and the construction of equipment adequate to the special needs of chlorinated solvents?** |  | **Is the basic design and construction of equipment adequate for the special needs of chlorinated solvents?** |  |  |
| 5.1.1. | Do tanks for chlorinated solvents have a double wall or are they erected in a retention basin(secondary containment)of adequate design (made of chlorinated solvent tight material and with sufficient retention capacity)? |  | 5.1.1/3: Because of their high specific gravity and low surface tension, chlorinated solvents need special care to avoid ground contamination and structural damage. Tanks shall be of suitable design and material, visibly in good condition and well maintained. They shall have a double wall or erected in a chlorinated solvent tight basin of adequate design, material and retention capacity. Wall thickness measurements shall be done on a regular basis. For double wall tanks, it is recommended to monitor wall space for leakage detection. A leak detection alarm device shall be installed. |  |  |
| 5.1.2. | Are wall thicknesses measured on a regular basis? |  |  |  |  |
| 5.1.3. | Is a leak detection alarm device installed? |  |  |  |  |
| 5.1.4. | Are tanks equipped with an appropriate nitrogen pad or air dryer system? |  | Tanks need to be equipped with a nitrogen pad or air dryers. These should be preferably independent systems. |  |  |
| 5.1.5. | Are tanks equipped with an appropriate level measurement system and /or overfill alarm? |  | Tanks have to have site level measurements, which are protected against potential damage to avoid overfilling. |  |  |
| 5.1.6. | Has an explosion risk assessment for DCM been made and documented? |  | DCM have like PER no flash point according to standard methods. But contrary to PER they have in air explosive limits and require explosion risk evaluation. This risk evaluation shall however take into account that compared to flammable solvents DCM and TRI need very high ignition energies. Installation of electrical equipment for tanks shall take into account the results of the explosion risk evaluation. |  |  |
| 5.1.7. | Are packaged chlorinated solvents (with exception of such in Safety Containers) stored in adequate ground protected areas only? |  | Packed material shall only be stored in areas where contamination of the ground is protected, unless special safety packaging (e.g., double walled safety containers) are used. For details on adequate ground protected areas, refer to the ECSA technical document “Storage and Handling of chlorinated solvents” - link provided in 2.2.1. |  |  |
| 6. | Repackaging / Handling |  | **Repackaging / Handling** |  |  |
|  | **DESIGN AND CONSTRUCTION OF EQUIPMENT FOR REPACKAGING** |  | **DESIGN AND CONSTRUCTION OF EQUIPMENT FOR REPACKAGING** |  |  |
| **6.1.** | **Are adequate spillage precaution measures in place to protect workers and to avoid ground and ground water pollution?** |  | **Are adequate precaution measures in place to protect workers and to avoid ground and ground-water pollution?** |  |  |
| 6.1.1. | Is the area and the equipment for repackaging properly designed and made of suitable material? |  | 6.1.1/4: Because of their high specific gravity and low surface tension, chlorinated solvents and chlorinated solvent containing waste request special care to avoid ground contamination and structural damage. Areas and equipment for repackaging shall be of suitable design and material, visibly in good condition and well maintained. Adequate precautionary measures have to be taken to protect workers and to avoid ground and ground water pollution. Repackaging has to be done only over adequately protected ground. For details on adequate ground protected areas, refer to the ECSA technical document “Storage and Handling of chlorinated solvents”. Link provided in 2.2.1. |  |  |
| 6.1.2. | Are the areas and the equipment for repackaging visibly in good condition and well maintained (good housekeeping)? |  | Good housekeeping means, for example, general tidiness of the site/plant, no leakages, no dripping flanges and hoses, no waste or scrap lying around, equipment & containers properly labelled and segregated. |  |  |
| 6.1.3. | Is repackaging only done over adequately protected, chlorinated solvent tight ground to avoid ground contamination by spills? |  |  |  |  |
| 6.1.4. | Is repackaging into drums and containers done with appropriate exposure control to ensure compliance with exposure limits? |  |  |  |  |
| 6.1.5. | Is there equipment in place to prevent overfilling? |  | 6.1.5/7: Furthermore, repackaging into drums and containers shall be done with appropriate exposure control assuring compliance with exposure limits. To minimise air emissions, preferably a closed vapour system (vapour return line) or a vapour adsorption system should be used. To avoid overfilling, appropriate control equipment need to be installed. For details refer to ECSA technical document “Storage and Handling of chlorinated solvents” (Link provided in 2.2.1). Also, since TRI and DCM have explosive limits in air, an explosion risk evaluation is required for refilling operations as it is for storage (see 5.1.6). |  |  |
| 6.1.6. | Is repackaging into containers done using a vapour return line? |  |  |  |  |
| 6.1.7. | Is there adsorption equipment in place to prevent vapour loss to the atmosphere? |  |  |  |  |
| 6.1.8. | Has an explosion risk evaluation been performed and documented for repackaging activities regarding DCM? |  |  |  |  |
|  | **CONTAINERS** |  | **CONTAINERS** |  |  |
| 6.2. | To ensure suitable packaging materials are used and best practice technologies for safe handling at the customer site are in place |  | **To ensure suitable packaging materials are used and best practice technologies for safe handling at the customer site are in place.** |  |  |
| 6.2.1. | Are the containers used for repackaging or product delivery made of material which is tight and diffusion resistant to and compatible with chlorinated solvents? |  | Containers shall be made of material which is compatible with and resistant to chlorinated solvents and which presents a diffusion barrier. Most of today’s generally used plastic containers are regarded as not suitable as long as their suitability has not been specially proven. Metal containers are preferred as packaging containers. For detailed info, please refer to guidance safety and handling.  Reconditioned metal drums are not recommended for use with chlorinated solvents. Undiscovered material defects could increase the risk for spills. |  |  |
| 6.2.2. | Does the distributor use safety container or equivalent closed loop systems to ensure safe handling and use of the chlorinated solvents by customers (end-users)? |  | Distributors are strongly encouraged to use and promote containers which as such assure in all cases safe handling, transport and storage of the chlorinated solvents by end-users. This is of special importance if storage and handling premises and equipment at the customer site are not specifically designed for safe handling and storage of chlorinated solvents (e.g., missing ground protection measures, missing training, missing equipment preventing air emission). |  |  |
| 7. | Bulk Transport and Loading / Unloading |  | **Bulk Transport and Loading / Unloading** |  |  |
|  | **EQUIPMENT [TRUCKS, RAIL CARS, HOSES, PUMPS]** |  | **EQUIPMENT [TRUCKS, RAIL CARS, HOSES, PUMPS]** |  |  |
| **7.1.** | **Is equipment in place and used to ensure safe transport and low emission and safe loading and unloading of bulk chlorinated solvent deliveries?** |  | **Is equipment in place and used to ensure safe transport and low emission and safe loading and unloading of bulk chlorinated solvent deliveries?** |  |  |
| 7.1.1. | Are unloading and loading installations for bulk delivery designed to allow loading/unloading using a vapour return line or a vent abatement system? |  | Emissions of chlorinated solvents and worker exposure need to be minimized. Tank cars should be preferably equipped to allow loading and unloading using a closed vapour system or a vapour abatement system (e.g., carbon adsorption). |  |  |
| 7.1.2. | Is suitability of hoses checked before any unloading operation? |  | 7.1.3/6: Pumps and hoses including those at the distributor site and those in use at customer sites, shall be:  - compatible with chlorinated solvents  - fitted with proper flanges / couplings  - shall be visibly in good conditions.  - shall be preferably use dry-break couplings. |  |  |
| 7.1.3. | Are distributor owned hoses (including those used for unloading at customer sites) regularly maintained and is maintenance documented? |  |  |  |  |
| 7.1.4. | Do the documented and recorded pressure tests include the hoses used for discharge operations of chlorinated solvents at the customer site? |  |  |  |  |
| 7.1.5. | Is there a policy not to use aluminum, zinc and plastics as a construction material for parts in contact with chlorinated solvents? |  | Please refer to ECSA guideline for further information: link provided in 2.2.1. |  |  |
|  | **LOADING / UNLOADING OPERATIONS** |  | **LOADING / UNLOADING** |  |  |
| **7.2.** | **Procedures and equipment should be in place to ensure low emission and safe transfer of chlorinated solvents during loading/unloading operations at distributor site** |  | **The distributor shall have procedures in place and in use covering the following important requirements to avoid ground and water contamination and to minimize emissions during transport and at the distributor and the customer site during loading and unloading operations** |  |  |
| 7.2.1. | Is a procedure in place to ensure that hoses are fully drained and residual products captured in a proper containerafter use and capped? |  |  |  |  |
| 7.2.2. | Are loading procedure available at the point of (un)loading and is a checklist used to ensure compliance? |  |  |  |  |
| 7.2.3. | Do the (un)loading operations only take place over properly protected, chlorinated solvent tight ground? |  | Loading and unloading shall only take place over properly protected ground to catch spillage. Details on the design and materials for proper ground protection is e.g., given in the ESAD technical document on handling and storage of chlorinated solvents. |  |  |
| 7.2.4. | Is there a spillage containment system in place to capture solvent spills from bulk (un)loading operations to prevent immediate loss to water and soil? |  |  |  |  |
| 7.2.5. | Are emission reduction systems (like vapour return lines or vent abatement systems) in use during (un)loading operation? |  | Emissions during unloading or loading shall be reduced to a minimum, following the permitted emission levels using e.g., vapour return lines or a vapour abatement system (e.g., activated carbon adsorption) |  |  |
|  |  |  |  |  |  |
| 8. | Packed products transport and delivery |  | **Packed products transport and delivery** |  |  |
| **8.1.** | **Are equipment and procedures in place and used to ensure safe transport of packed chlorinated solvent deliveries and their loading and unloading?** |  | **Are equipment and procedures in place and used to ensure safe transport of packed chlorinated solvent deliveries and their loading and unloading?** |  |  |
| 8.1.1. | Is appropriate equipment (e.g., drum lifters) available or requested to be made available by the receiving customer to ensure safe loading and unloading of chlorinated solvent containers? |  | Loading and unloading of chlorinated solvent containers shall be done if required with equipment and/or tools allowing to avoid any damage of the containers (e.g., drum lifters). These equipment/tools shall be made available by the distributor or requested by the distributor to be made available by the receiving customer. Unloading of drums by dropping them on a pillow is not considered appropriate! |  |  |
| 8.1.2. | Are load securing tools available and used on the trucks? |  | Load securing tools shall be available and used on the trucks.  See Cefic/ECTA/FECC “Best Practice Guidelines for Safe (Un)Loading of Road Freight Vehicles” <https://cefic.org/app/uploads/2021/09/Best-practice-guidelines-for-safe-Un-Loading-of-road-freight-vehicles-Corrigendum-2021-GUIDELINES-ROAD.pdf> |  |  |
| 9. | Waste Management |  | **Waste Management** |  |  |
| **9.1.** | **Does the Distributor take his responsibility to help customers to have chlorinated solvent waste handled and disposed of properly?** |  | **Does the Distributor take his responsibility to help customers to have chlorinated solvent waste handled and disposed of properly?** |  |  |
| 9.1.1. | Are procedures in place that the distributor passes all necessary information (i.e., SDS and ECSA Guideline - link provided in 2.2.1) regarding proper waste disposal (e.g., received from suppliers) on to his chlorinated solvent customers? |  | The distributor has the responsibility to disseminate all necessary information on proper waste disposal to end-users. Established procedures shall give evidence of that. E.g., the end-user shall be informed that landfill is not an appropriate disposal method. |  |  |
| 9.1.2. | Is the distributor offering retake of spent chlorinated solvents for appropriate recycling or disposal as a service? |  | In order to ensure proper waste disposal, it is desirable that the distributor offers a waste recovery service to end-users. He can also offer this in co-operation with the supplier and/or a waste manager. |  |  |
| 9.1.3. | Is the distributor offering the use of special safety container or equivalent closed loop systems for the recovery of chlorinated solvent waste? |  | To ensure safe chlorinated solvent waste handling, it is desirable that the distributor offers special safety containers for the recovery of the waste. |  |  |
| 9.1.4. | Are all waste shipments and waste recovery and disposal activities properly documented and recorded according to national waste law? |  | It is mandatory that all shipments and waste recovery and disposal activities are properly documented and recorded. Established procedures shall give evidence of that. Because of the specific public sensitivity regarding chlorinated products, auditors shall re-check fulfilment of these general requirements specifically regarding chlorinated solvents. |  |  |