



Terms and Conditions for Land Transportation

A	Generic requirements for ALL products.
1.	The driver will not take any samples (applicable to road transport only) and Buyer will not request the driver to do so.
2.	Discharge of product takes place within customer premises only (e.g. not on public roadways).
3.	Personnel can readily escape from the discharge area in case of an emergency.
4.	An eyewash facility is available in the discharge area.
5.	Buyer is responsible (and has documented procedures) for unloading. Buyer's operator is present during the critical parts of discharge, including (hose connection, valve operation, unloading start and end, and hose disconnection).
6.	Checks are done before discharge starts to ensure that the storage vessel has sufficient free space to receive the entire delivered quantity. For liquids, discharging into 2 or more storage tanks during one discharge operation is not allowed unless via a manifold.
7.	Checks are done before discharge starts to ensure that the correct product is discharged into the correct storage vessel.
8.	The discharge system / line-up prevent backflow of product from storage vessel to the tanker.
9.	In the event the hoses / loading arms used for discharging are owned by Buyer, such equipment is suitable for the product and in good condition.
10.	In case of pressurized discharge, there is a pressure regulator device or system installed and used to prevent over-pressurisation of the cargo tank during product discharge.
11.	There is no direct discharge from the tanker into Intermediate Bulk Containers (IBCs) or drums unless it is done via a suitably fixed or engineered discharge / drumming facility.
12.	Buyer will not discharge product directly to reactor unless it is empty, cleaned and off-line.
13.	In situations where trans-loading of product will occur (defined as the transfer of product between transportation containers), Buyer must have documented procedures in place to mitigate the risks associated with the trans-loading activity, which may include (by way of example and not limitation) spills, static electricity, working at heights or exposure to product; provided, however, that trans-loading of certain products identified by Seller to Buyer may be prohibited based on the hazards involved.
B	Additional requirements for Flammable Products (flashpoint up to 60 oC / 140 oF).
14.	The tanker can be connected to a suitable earthing point.
15.	The use of compressed air for the discharge of flammable product is prohibited.
16.	Vent outlets of storage vessels terminate in a safe location.
17.	Storage vessel and pipe work are electrically bonded and grounded (connected to earth).

18.	There are no ignition sources in the discharge and storage areas, and all electric equipment is suitably rated, inspected and in visibly good condition.
19.	For non-conductive liquids (conductivity < 100 pS/m) the discharge line velocity is restricted and splash filling is avoided to prevent generation of electrostatic charges.
C	Additional requirements for Products with high acute toxicity (skull and crossbones label) or corrosive to the eye and/or skin properties.
20.	There is an emergency shower and an eye wash immediately available with reliable and regularly tested water supply, which is frost protected where appropriate.
21.	There is a closed discharge system. Any displaced vapors are vented to atmosphere through a suitable abatement system or to a safe location.
22.	There are dedicated lines or effective cleaning procedures in place to avoid cross product contamination.
D	Additional requirements for liquefied flammable gases. For Shell Chemicals portfolio these are ethylene, propylene, butenes, butadiene and ethylene oxide (EO).
23.	All equipment used in liquefied gas service is designed and manufactured according to internationally recognized pressure vessel design codes (e.g. ASME, API, PED etc...) and suitable for the operating conditions.
24.	The following devices are fitted on storage vessels and periodically inspected: pressure relief valves, pressure indicator, high pressure alarm, liquid level indicator, high level alarm, temperature indicator and high temperature alarm.
25.	There is a water deluge system over tanker unloading area and storage vessel and/or fire water hoses/monitors readily available to cool storage vessel and tanker in the event of a fire.
26.	There is a closed discharge system. No vapors are emitted to atmosphere during unloading. Dry breaks couplings are highly recommended (mandatory if agreed with customer).
27.	A positive vapor pressure of minimum 0.3 barg (5 psig) is maintained in the truck/rail car at all times to keep air (oxygen) out of the tanker during handling and return to the supplier.

D	Additional requirements for liquefied flammable gases. For Shell Chemicals portfolio these are ethylene, propylene, butenes, butadiene and ethylene oxide (EO).
23.	All equipment used in liquefied gas service is designed and manufactured according to internationally recognized pressure vessel design codes (e.g. ASME, API, PED etc...) and suitable for the operating conditions.
24.	The following devices are fitted on storage vessels and periodically inspected: pressure relief valves, pressure indicator, high pressure alarm, liquid level indicator, high level alarm, temperature indicator and high temperature alarm.
25.	There is a water deluge system over tanker unloading area and storage vessel and/or fire water hoses/monitors readily available to cool storage vessel and tanker in the event of a fire.
26.	There is a closed discharge system. No vapors are emitted to atmosphere during unloading. Dry breaks couplings are highly recommended (mandatory if agreed with customer).
27.	A positive vapor pressure of minimum 0.3 barg (5 psig) is maintained in the truck/rail car at all times to keep air (oxygen) out of the tanker during handling and return to the supplier.

E	Product specific requirements in addition to 1-24 for ethylene oxide (EO):
28.	Adequate pressure control and safeguards are in place for the nitrogen supply to avoid overpressure of storage vessel, tank car and other connected equipment.
29.	The storage vessels are fitted with a nitrogen padding system to ensure that EO in the vapor space is maintained in the non-explosive region. <i>NOTE: See ACC or CEFIC Guidelines for details.</i>
30.	Unloading hoses or unloading arms are purged with nitrogen before and after discharge and a leak test is carried out with nitrogen before beginning the unloading of EO. (Purpose of purging after discharge is to remove any residual EO from unloading line).
31.	Nitrogen supply is available with a purity of 99.95%. All lines from nitrogen supply system towards EO storage and other connected processes are dedicated or fitted with adequate backflow protection.
32.	Positive nitrogen pressure of minimum 2.7 barg /40 psig is maintained in the tanker at all times to ensure that EO in the vapor space is maintained in the non-explosive region during unloading and return to the supplier.
33.	If a pump is used for discharge, this is fitted with at least one of the following safeguards to prevent an abnormal temperature rise: <ul style="list-style-type: none"> • low flow shutdown device (trip) and alarm • high temperature shutdown device (trip) and alarm for pump case temperature and/or seal fluid temperature • minimum flow recycle either through an external cooler or back to the storage vessel.
34.	EO-selective dry-break couplings are used (applicable in Europe only).
35.	The unloading station is dedicated to EO or shared with compatible products only (e.g. PO).

F	Product specific requirements in addition to 1-20 for propylene oxide (PO):
36.	The following devices are fitted on storage vessels and periodically inspected: pressure relief valves, high pressure alarm, liquid level indicator, high level alarm, temperature indicator and high temperature alarm.
37.	All lines from nitrogen supply system, towards PO storage and other connected processes, are fitted with adequate backflow protection.
38.	There is a water deluge system over storage vessel and truck/rail car unloading area and/or fire water hoses/monitors readily available to cool storage vessel and tanker in the event of a fire.
39.	PO-selective dry-break couplings are used (applicable in Europe only)

40.	A positive nitrogen pressure of minimum 0.07 barg (1 psig) is maintained in the tanker at all times to keep air (oxygen) out of the tanker during handling and return to the supplier.
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G	Product specific requirements in addition to 1-11 and 18-20 for CARADATE 80 (TDI):
41.	Safe working at height provisions are in place for driver/operator.
42.	There is sufficient stock (200 kg) of decontamination solution and absorbent material available on site to provide adequate spill response.
43.	A safety review using the ISOPA assessment scheme is accepted as part of the overall assessment. <i>NOTE: see www.isopa.org for details and the questionnaire.</i>

H	Product specific requirements in addition to 1-11 and 18-20 for Phenol:
44.	Pressure/Vacuum valves on storage vessels are heat traced to prevent crystallization of phenol.
45.	In case of pump discharge, splash-guards are fitted over pump seal areas.

I	Product specific requirements in addition to 1-11 for Mono Propylene Glycol and/or Di Propylene Glycol Pharmaceutical grades (MPG-USP, and/or DPG-LO), and for Acetone National Formulary (Acetone NF) and Isopropyl Alcohol Excipient Pharmaceutical grade (IPA USP):
46.	Each piece of equipment in contact with the Product is made of suitable materials and cleaned and maintained according to written procedures in compliance with the Cefic Propylene Oxide/Propylene Glycols Sector Group Guidelines for Handling and Distribution of Propylene Glycol USP/EP (the "Guidelines") [1].
47.	There are written procedures and documentation for both unloading and loading/packaging operations of the Product. These procedures include: working in a clean area cleanliness inspection of the transport equipment and all other equipment in contact with the Product checking of the integrity of the seals before unloading performing key points analysis for positive identification and contamination detection sealing of all valves and openings after loading retaining samples from unloading, loading and packaging operations draining and capping of the equipment after the operation
48.	Customer is able to provide full traceability on product origin, packaging material origin, operations on site and subsequent destinations.

49.	Every Product (excluding Acetone NF and IPA USP) lot includes a quality certificate expiry date/shelf life. Every product is checked and/or tested for quality and positive identification.
50.	There is a written procedure for Product recall in case of quality concerns.
51.	There is a training program and training records of all personnel involved in handling of the Product, to demonstrate the appropriate knowledge level to deal with GMP produced material.
52.	A safety and quality review (self-assessment of independent third party) shall be conducted periodically using the relevant Cefic assessment questionnaire, which can be found in Appendix 2 of the Guidelines [1].

Where necessary, Seller will furnish Buyer with Safety Data Sheets (“SDS”), which include health, safety, security and environment (“HSSE”) information on Product consistent with regulatory requirements. Buyer will comply with all applicable Laws concerning the availability and use of the Product SDS and Buyer will disseminate appropriate HSSE information to all persons (including but not limited to Buyer’s employees, contractors and customers) as required by applicable law or which Buyer foresees may be exposed to Product. When Buyer further processes, mixes or incorporates the Product into another material, resells, exchanges and/or transfers or otherwise deals with the Product, Buyer agrees to develop and use its own branded SDS and certificates of analysis consistent with the regulatory requirements of the jurisdiction(s) in which Buyer markets the Product, and Buyer shall not use any of Shell’s trademarks, the Shell name, Shell contact numbers and emergency numbers or the Shell Branded SDS on the Buyer’s SDS or certificates or analysis for the Product without obtaining the prior express written consent of Seller. Buyer will take reasonable steps to obtain obligations similar to those in this paragraph from its customers to whom it sells the Products. Seller as a Responsible Care® Company requires that appropriate minimum controls shall be in place at all loading and discharge locations where Product is delivered to protect Seller’s employees and contractors from injury and/or exposure during handling of Product. Upon reasonable prior notice to Buyer, Seller shall be entitled but never required to (i) conduct a health and safety appraisal of Buyer’s unloading and storage facilities and discharging operations in accordance with Seller’s requirements, performed by Seller or a third party designated by Seller, and in addition or as an alternative (ii) require that Buyer perform a health and safety self assessment of Buyer’s unloading and storage facilities and discharging operations. If for any reason Seller discovers that Buyer has failed to implement one or more of the applicable minimum requirements listed in the attached Terms and Conditions for Land Transportation, which are incorporated in this Contract, Seller may notify Buyer in writing of Seller’s recommended actions to remedy the failure (the “Notification”). Within seven (7) days of the Notification, Buyer shall provide a plan for immediate mitigation of the identified risks and timing for the implementation of the mitigation steps. If after the expiry of the 7 day period, either no plan is received or the received plan does not adequately address the Notification, Seller (and/or Seller’s Affiliates, as the case may be) shall be entitled to immediately suspend any further supply of Product (and/or any other product covered by other contracts between Seller and/or its Affiliates and Buyer) to Buyer until such time as Buyer delivers a plan acceptable to Seller. Seller shall have the right to terminate this Contract with immediate effect by giving a written termination notice to Buyer if Buyer fails to mitigate the identified risks in a manner acceptable to Seller within 60 days after the Notification.

Additionally, if any major incident occurs at Buyer’s facilities in connection with the delivery or unloading of the Product at Buyer’s facilities, including the release of any hazardous substance, the death or lost time injury of any person, or loss of primary containment of any product exceeding one hundred kilograms, Buyer shall promptly notify Seller of such event and allow Seller and Seller’s delivery contractor the option to provide input to the investigation of such incident. Buyer shall notify Seller of at least the preliminary results of its incident investigation and its plan to remediate the cause of the incident within seven (7) days of the date of the incident. Seller (and/or Seller’s Affiliates, as the case may be) shall be entitled to immediately suspend any further supply of Product (and/or any other product covered by other contracts between Seller and/or its Affiliates and Buyer) to Buyer from the date of the incident until such time that Buyer’s plan is acceptable to Seller. Seller shall have the right to terminate this Contract with immediate effect by giving written notice of termination to Buyer if Buyer fails to mitigate the cause of the incident in a manner acceptable to Seller within 60 days of the date of the incident.

By conducting an appraisal, requesting Buyer to perform a self-assessment of Buyer’s facilities, or specifying recommendations to be implemented by Buyer, neither Seller nor any designated agent assumes any obligation or liability regarding the HSSE obligations of Buyer or any obligation or liability for personal injury or property damage resulting from the Buyer’s operation.

Buyer’s arrangement of transportation by land for collection of Product at Seller’s location is conditional upon Buyer’s nominated transportation personnel and equipment meeting Seller’s “On-Site Collection Requirements” as defined on the following website:

<https://www.shell.com/business-customers/chemicals/safe-product-handling-and-transportation/on-site-collection-requirements.html>

These general requirements are to be interpreted in conjunction with site specific requirements for the particular collection location. For avoidance of doubt, site specific requirements precede over the general requirements.