

Emergency Response Information

For all products, call CHEMTREC at 1-800-424-9300.



Transportation Guide for

Telone[®] II

Telone[®] C-17

Telone[®] C-35

Telone[®] EC

Inline[®]

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Always read and follow label directions

Transportation Guide for Telone® Soil Fumigants

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To obtain additional copies of this Guide or other information about Telone® soil fumigants, go online at www.teleosagsolutions.com or contact your Teleos Ag Solutions Telone® Specialist

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Introduction

This Guide is intended for use in the United States of America. Consult Teleos Ag Solutions for guidance in other countries. This Guide includes information about the following fumigants:

- Telone® II soil fumigant
- Telone® C-17 soil fungicide and nematicide
- Telone® C-35
- Telone® EC
- Inline®

This Transportation Guide is part of the Product Stewardship Program of Teleos Ag Solutions. The Guide describes practices and equipment believed to be suitable for handling Teleos products as noted. This Guide also includes the Teleos requirements for new bulk systems and explains how to improve existing ones.

This Guide is not intended as, and should not be used as, a substitute for engineering or legal advice. Applicable legislation and regulations are constantly changing. Future regulatory and judicial developments may necessitate changes in the guidelines and procedures recommended in this Guide. Each user or handler of bulk products is responsible for compliance with all applicable federal, state, and local laws, regulations, and codes. Each user or handler of products is responsible to always read and follow product label directions.

For more information, contact your local government agencies responsible for regulating the operations in question.

NOTICE: The information, procedures, methods, and recommendations herein are presented in good faith and are believed to be accurate and reliable as of the publication date, but may well be incomplete and/or not applicable to all conditions or situations. No representation, guarantee, or warranty is made as to the accuracy, reliability, or completeness of said information, procedures, methods, and recommendations. Nor is any representation, guarantee, or warranty made that application or use of any of the same will avoid hazards, accidents, losses, damages, or injury of any kind to persons or property, or give desired results, or that the same will not infringe patents of Teleos Ag Solutions or others. Readers must satisfy themselves as to the suitability of said information, procedures, methods, and recommendations prior to use.

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Stewardship Guide

Product stewardship information is included in a separate document, the *Stewardship Guide for Telone® and InLine® Fumigants* (010-31486). The Stewardship Guide includes:

- Product Information, including:
 - Physical properties (e.g. product density, flash point, etc.)
 - Material Compatibility (i.e. product compatibility charts)
- Personal Safety, including:
 - Precautions, Education, Hygiene, and Protective Procedures
 - Personal Protective Equipment
 - Exposure Symptoms, First Aid, and Note to Physician
 - Safety Equipment Suppliers
- Environmental & Emergency Information, including
 - Environmental Fate and Wildlife Toxicity
 - Fire, Spills, and Clean-Up
 - CERCLA RQs, SARA Listing, & FIFRA Reporting

Contact Teleos or your Telone® Specialist for copies.

Storage and Handling Guide

Storage and handling information is included in a separate document, the *Storage and Handling Guide for Telone® and InLine® Fumigants* (010-31487). This document includes:

- Bulk Site Safety, Equipment and Best Practices, including
 - General Bulk Site Issues
 - Secondary Containment and Tank Design
 - Piping, Pumps, Meters, and Other Equipment Selection
 - Bulk Tank Filling and Cleaning
- Cargo Tanks and Rail Cars, including
 - General Requirements
 - Off-loading and Filling Cargo Tank Vehicles
 - Off-loading Rail Cars
- Cylinders & Mini-bulk Handling, including
 - General Requirements & Recommendations
 - Cylinder and IBC Filling, Cleaning, Storage, and Transport

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Selecting Transport Equipment

General Refillable Container Selection Information

This section applies to any tank vehicles with or without motor power, equipped with a mounted cargo tank, or rail car and used to transport Telone® fumigants. This includes tank trucks, nurse tanks, ISO containers, and rail cars. Certain parts also apply to vehicles carrying non-bulk containers, such as 110-gallon DOT 4BW cylinders.

Caution: Do not use equipment that contains magnesium, zinc, cadmium, aluminum, or alloys of aluminum or magnesium for parts that may come into contact with Telone® products and their vapors when purchasing equipment. Confirm the absence of these metals when equipment is delivered. Study the Material/Product Compatibility section of the *Stewardship Guide for Telone® and InLine® Fumigants* (010-31486) for other material compatibility information.

See the “Placard and Label Requirements” section of this Guide for “Hazardous Materials Shipping Descriptions.”

1. To prevent corrosion, containers must be thoroughly clean internally and externally, free of rust and debris, and dry before use.
2. Container design must comply with all applicable DOT regulations, and *NFPA 385: Tank Vehicles for Flammable and Combustible Liquids*. All other federal, state, and local laws and regulations must also be followed.
3. Container design must comply with this Guide, the *Storage and Handling Guide* (010-31487), and the *Stewardship Guide* (010-31486) for these products.
4. Filling of transport vehicles and containers must be done in compliance with all state and local pesticide handling laws and regulations.
5. Plastic containers may not be used with Telone® products.
6. Materials used for construction of tanks, screens, strainers, valves, fittings, hoses, meters, pipes, seals, gaskets, and pumps are compatible with products.
7. Piping, hoses, meters, and other equipment must comply with requirements in the *Storage and Handling Guide* (010-31487) for these products.
8. Top-loading of flammable liquids, including Telone® products, is not recommended. If top loading is used, a dip tube must extend to within six inches of the bottom of the tank to prevent free fall of the liquid.
9. Couplers on the bulk tank for receiving inbound shipments shall comply with the *Storage and Handling Guide* (010-31487). Customers have more discretion in selection of couplers for dispensing from the bulk tank into their own fleets, as long as the coupler meets requirements in this guide and the appropriate product label.
10. All temporary liquid connections must have a dry-disconnect adapter and cap.
11. Sight gauges with a spring-loaded, self-closing valve are permitted on transport vehicles if allowed by federal, local, or state regulations.
12. Containers should be designed to allow closed-dome loading.
13. The equipment must be provided with a bonding cable attachment.
14. The transfer pumps may be electric, hydraulic, PTO (power take-off), or gasoline driven. Gasoline driven systems should only be used where other power sources are impractical. If a gasoline engine is used, it must comply with NFPA requirements for flammable liquid service.

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Cargo Tanks (Trucks)

Reference DOT regulations at www.DOT.gov or via the Code of Federal Regulations at https://www.ecfr.gov/cgi-bin/text-idx?tpl=/ecfrbrowse/Title49/49tab_02.tpl

1. Cargo tank vehicles carrying Telone® II and Telone® EC must conform to 49 CFR 173.243 and special provisions listed in 49 CFR Table 171.101 under the proper shipping name for the material. At time of publication of this guide, this included MC 304, 307, 310, 311, 312, 330, 331, DOT 407, and 412 cargo tanks. Note that applicable Special Provisions include requirements that most of these cargo tanks have minimum tank design pressure of 172.4 kPa (25 psig) required and may need to comply with special requirements for pressure relief systems and bottom outlets.
2. Cargo tank vehicles carrying Inline®, Telone® C-17 and Telone® C-35 must conform to 49 CFR 173.244 and special provisions listed in 49 CFR Table 171.101 under the proper shipping name for the material. At time of publication of this guide, this included MC 312, 330, 331, and DOT 412 cargo tanks. Note that applicable Special Provisions include requirements that DOT 412 tanks must be insulated and top unload only, plus have an 87 psig maximum allowable working pressure (MAWP).
3. The cargo tanks must have a permanently affixed certification tag, must be DOT approved, electrically bonded, and firmly anchored to the truck chassis as required by law.

Rail Cars

1. Rail cars carrying Telone® II and Telone® EC must conform to 49 CFR 173.243 and special provisions listed in 49 CFR Table 171.101 under the proper shipping name for the material. At time of publication of this guide, this included DOT 103, 104, 105, 109, 111, 112, 114, 115, 120 and Class 106 and 110 rail cars. Note that applicable Special Provisions may include additional requirements or restrictions.
2. Rail cars carrying Inline® and Telone® C-17 and Telone® C-35 must conform to 49 CFR 173.244 and special provisions listed in 49 CFR Table 171.101 under the proper shipping name for the material. At time of publication of this guide, this included DOT 105 and 112 rail cars. Note that applicable Special Provisions may include additional requirements or restrictions.

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Cylinders & Other Portable Refillable Containers

Most Telone® fumigants are handled in DOT specification cylinders, but this section is also applicable to Portable Refillable Containers (PRCs) unless specifically noted. PRCs include, but are not limited to, mini-bulks, drums, and rigid intermediate bulk containers (RIBCs).

1. Comply with all federal, state, and local codes, laws, and ordinances including, but not limited to, those issued by the EPA, DOT, and OSHA. Containers must be inspected, tested, and marked to meet regulations as required by DOT. These inspections, tests, marking, and documentation are the responsibility of the mini-bulk owner; however, no shipper may offer any container for transport if it is not in compliance with regulations.
2. A valid EPA Establishment Number must exist for each location where the product will be repackaged.
3. Containers must be either (a) dedicated or (b) thoroughly cleaned prior to refilling according to applicable laws and regulations and this Guide's container cleaning procedures in order to prevent any cross-contamination.
4. Each container should be inspected by the Repackager prior to filling to assure it is clean and free of contaminants (including water). If contaminants are present, or the port seal is broken or missing, the tank must be cleaned in accordance with this Guide's container cleaning procedures.
5. A rigid, liquid-tight load pad must exist for transfer of product between the bulk tank and all delivery trucks, nurse vehicles, refillable containers, application equipment, or other containers. The load pad must hold at least 750 gallons, or at least 100 percent of the largest container on the pad up to 750 gallons per EPA; or meet state requirements – whichever are more stringent. Container cleaning must also be done over containment.
6. Containers should be stored within a contained area if required by state or local regulations.
7. A current Teleos repackaging agreement must be in place.
8. Container repackaging complies with the Teleos repackaging agreements.
9. Container filling system must be dedicated.
10. Containers must be compatible with the product, and allowed by DOT and NFPA regulations. NFPA #30 prohibits use of large plastic storage or transport tanks with flammable products.
11. Containers must be rated for the weight of the product. Telone® fumigants are heavier than water.
12. Liquid and vapor connections must meet the requirements of the couplers section of the storage and handling guide. The selected equipment and procedures used must meet or exceed the performance of a dry disconnect device.
13. Telone® II and Telone® EC fumigant packaging must conform to 49 CFR 173.243 (bulk) or 173.202 (non-bulk) and Special Provisions listed in 49 CFR Table 171.101 under the proper shipping name for these products. At time of publication of this guide, this included DOT 51 and DOT 60, Intermediate Bulk Containers, certain UN portable tanks, and DOT specification cylinders (such as DOT 4BW).
14. Inline®, Telone® C-17 and Telone® C-35 fumigant packaging must conform to 49 CFR 173.244 (bulk) or 173.227 (non-bulk) and Special Provisions listed in 49 CFR Table 171.101 under the proper shipping name for these products. At time of publication of this guide, this included certain DOT specification cylinders (including DOT 4BW) and various composite packaging.
15. DOT specification cylinders are the most common choice for containers with less than 1000-pound water capacity. We recommend consulting with Teleos before using any other container.
16. Bottom filling and unloading is preferred. Top loading is acceptable if a dip tube is used. In either case, the filling or unloading should be done without opening a hatch or port.
17. Use grounding cables during product transfers.
18. Do not allow Telone® fumigant vapors or liquids to backflow into nitrogen bottles. If possible, dedicate nitrogen bottles to Telone® use only. Consider placing a check valve between the nitrogen regulator and the Telone® container. Instruct users to open nitrogen valve prior to opening nitrogen regulator; never to empty nitrogen bottles to avoid backflow.

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19. Teleos recommends that each opening have a one-way check valve or a tamper-evident device to prevent unauthorized filling. This is required by EPA for Portable Refillable Containers. Cylinders are exempt from this EPA regulation.

Placard and Label Requirements

Regulations require documentation, labeling, marking, placarding, and package/container approval for Telone® soil fumigants.

DOT Transport Regulations

Each shipper and carrier is required to know whether a product is regulated by U.S. Department of Transportation (DOT). Telone® and InLine® soil fumigants are regulated for transport by DOT. Each shipper and carrier is required to assure that

- each package is approved,
- the proper shipping papers are prepared,
- packages are marked and labeled appropriately, and
- the vehicle is properly marked or placarded.

The Hazardous Material Shipping Description is listed in section 14, “Transport Information”, of the product Safety Data Sheet (SDS). Because shipping descriptions can change, refer to the current SDS for each product or the Code of Federal Regulations. The below Descriptions are current at time of publication:

Air and Vessel Shipments: Products containing chloropicrin are specifically prohibited from air shipments. Teleos recommends avoiding air shipments even where it is allowed. Consult DOT experts and/or the SDS before shipping by air or vessel.

NOTE: Shipment of a Marine Pollutant by ocean vessel must be marked and placarded as such. Shipping papers must also reflect the Marine Pollutant designation.

Hazardous Materials Shipping Descriptions

<p>Telone® C-17 Telone® C-35 InLine®</p>	<p>FOR ALL PACKAGE SIZES: DO NOT SHIP BY AIR</p> <p>FOR TRUCK-TANK, RAIL-TANK CAR, AND VESSEL:</p> <p>TOXIC BY INHALATION LIQUID, FLAMMABLE, CORROSIVE, N.O.S. (CHLOROPICRIN, 1,3-DICHLOROPROPENE)/6.1(3,8)/UN3489/PGI/RQ(1,3-DICHLOROPROPENE)/MARINE POLLUTANT/POISON-INHALATION HAZARD/ZONE B</p> <p>FOR LAND TRUCK-PACKAGE AND TRUCK-PARCEL:</p> <p>TOXIC BY INHALATION LIQUID, FLAMMABLE, CORROSIVE, N.O.S. (CHLOROPICRIN, 1,3-DICHLOROPROPENE)/6.1(3,8)/UN3489/PGI/RQ(1,3-DICHLOROPROPENE)/POISON-INHALATION HAZARD/ZONE B</p>
<p>Telone® II Telone® EC</p>	<p>FOR SAMPLE SHIPMENTS BY AIR:</p> <p>PESTICIDES, LIQUID, TOXIC, FLAMMABLE, N.O.S. (1,3-DICHLOROPROPENE)/6.1(3)/UN2903/PGII Authorization: DOT-9168; Packing Inst: 609</p> <p>FOR 1 GALLON CONTAINERS SHIPPED BY LAND:</p> <p>PESTICIDES, LIQUID, TOXIC, FLAMMABLE, N.O.S. (1,3-DICHLOROPROPENE)/6.1(3)/UN2903/PGII</p> <p>FOR QUANTITIES OF 102 POUNDS OR MORE SHIPPED BY LAND OR WATER:</p> <p>PESTICIDES, LIQUID, TOXIC, FLAMMABLE, N.O.S. (1,3-DICHLOROPROPENE)/6.1(3)/UN2903/PGII/RQ (1,3-DICHLOROPROPENE)</p>

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Note:	For shipments by vessel (IMDG) enter the product Flashpoint at the end of the shipping description like this (xx.x°C.c.c.). The flashpoint is found in Section 9 of the SDS.
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Cargo Tank Vehicle (Trucks) Placarding

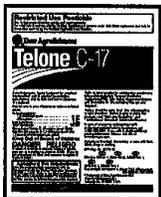
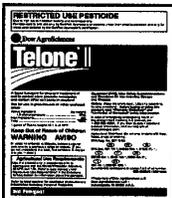
This section applies to vehicles carrying Telone® II either in a Bulk vehicle, or Non-Bulk vehicle carrying >1001 pounds gross weight or hazmat, or Telone® C-17 in a Bulk or Non-Bulk¹ Container or Tank. **The guidance below assumes no other hazardous materials are on board, i.e. it does not address mixed loads of hazardous materials. If you have other hazmat materials, such as nitrogen, be sure that you placard for those as well.** Other placarding options exist under DOT rules depending on load and container size. The chart below applies to ground shipments only for cargo tanks, nurse trucks, and trucks carrying:

- 250-gallon mini-bulks (Telone® II only).
- 110-gallon DOT 4BW cylinders
- Partial to full loads—even if containers are empty, but not cleaned.

Drivers should also have proper shipping papers and an SDS or Emergency Response Guide on board.

The EPA Product Booklet should be placed on or near the outlet valve.

Vehicles must placard on all 4 sides. Exceptions from placarding exist for vehicles carrying non-bulk containers with less than 1001 lbs. of certain products (Telone II); however, consult your DOT expert before choosing not to placard. (See Table 2 in 49 CFR 172.504.)

	EPA Label Booklet Combo	Placards
Telone® C-17 Telone® C-35 Inline®		 DOT Skull and Crossbones w/3489 Imprint Placard
Telone® II Telone® EC		 Poison Diamond with 2903 Imprint Placard

¹ For these purposes, U.S. D.O.T. defines a bulk container as having greater than 119 gallons liquid capacity. Non-bulk containers are less than or equal to 119 gallons.

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Cylinder and IBC Labeling & Repackaging Requirements

Department of Transportation regulations require documentation, labeling, marking, placarding, and approved containers for regulated products. These requirements must be met by the location filling containers, and anyone who offers, transports, or ships regulated product.

The compliance for transport vehicles and container design is covered in earlier sections of this guide.

Label Packets

Containers must have the current product labels that comply with the EPA Worker Protection Standard.

Teleos will provide a label packet if your facility meets all the repackaging requirements listed in this section.

Call your local sales representative or Teleos at 1-800-258-3033 for additional label packets.

Each Label Packet contains:

- Product label
- Product Information Booklet in a plastic bag
- DOT hazard labels as required.

The packet does NOT include truck or cargo tank placarding that may be required by DOT.

EPA Repackaging Requirements

1. A valid EPA Establishment Number must exist for each location where the product will be repackaged.
2. A current Dow Repackaging Agreement which is a written contract to repackage Dow product must be in place.
3. Refillable containers must be dedicated to Teleos product, or must be clean, dry, and free from contamination using a manufacturer's- approved cleaning procedure before filling.
4. Teleos supplied product labels and product information booklets must be attached to the container after filling (all old labels must be removed).
5. The filler's EPA Establishment Number and the net contents must be added on the product label or elsewhere on the container. EPA requires that net contents in the tank at the time of last shipment be recorded on the tank. This number does not need to be changed as product is withdrawn unless required by state law. For bulk storage tanks, check or write the EPA Establishment Number of the producing facility, on the product label. For refillable containers, write the EPA Establishment Number of the repacking or refilling facility, on the product label.
6. Records must be kept of the product you received, repackaged, and shipped. Report these records to the EPA annually on the appropriate forms.
7. Only refillable containers with a capacity in excess of 55 gallons are to be used unless specifically allowed by Repackaging Agreement with Teleos Ag Solutions.

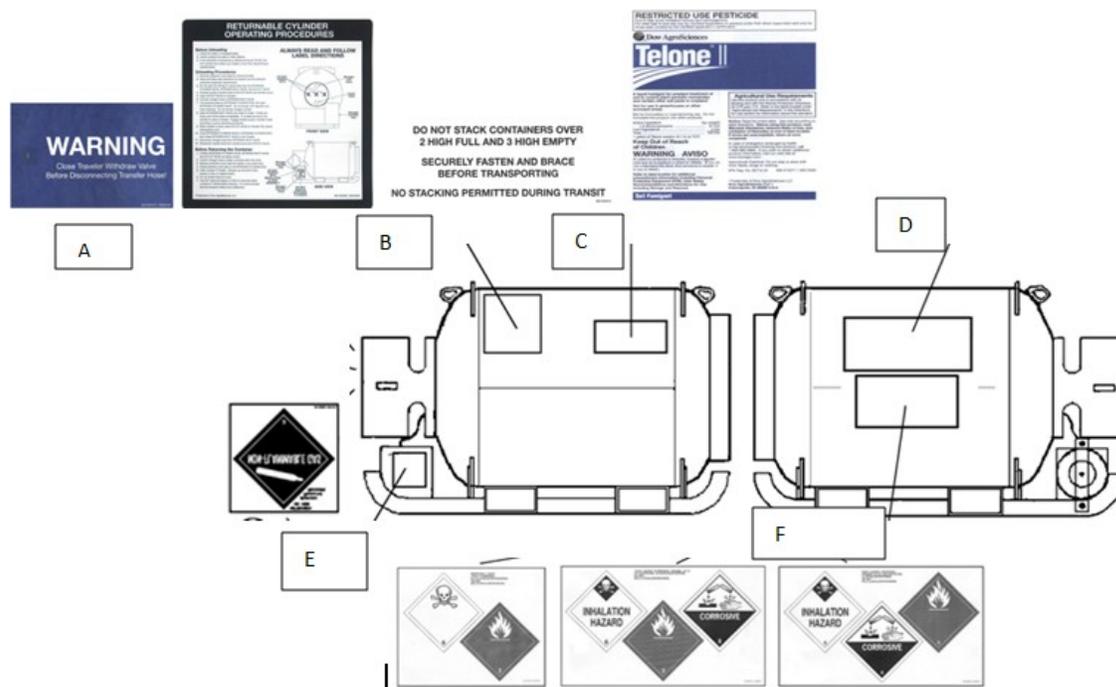
Product labeling and Placarding are available for order on the internet at www.teleosagsolutions.com

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110-Gallon DOT 4BW Cylinder Labels and Tags

Only labeling and tags which physically attach to the container are shown below. Vehicles must also be placarded according to DOT rules. This document applies only to ground shipments within the USA.² Label placement shown is approximate. EPA Container Label and DOT Hazard Label may be placed as shown, or stacked one above the other, but be sure both labels are easily visible from a side view.



Description	
A	Valve Warning Tag
B	Operating Procedures
C	Stacking Label
D	EPA Label Booklet Combo
E	Nitrogen Label (if present)
F1	DOT Hazard Label**
F2	
F3	

** NOTE: Containers filled with less than the Reportable Quantity of 100 pounds 1,3-dichloropropene must mark out or remove "RQ (1,3-DICHLOROPROPENE)" from the DOT Hazard Label. RQ for Telone® II is met at packages > 10 gallons of product. RQ for Telone® C-17 is met at packages >11 gallons of product.

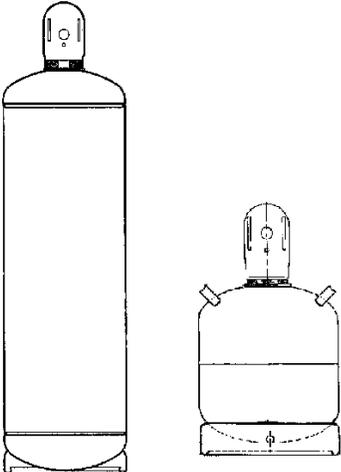
² Shipment of a Marine Pollutant (including Telone® C-17) by vessel must be marked and placarded as such. Shipping papers must also reflect the Marine Pollutant designation. The above is for ground shipments only and therefore does not reflect Marine Pollutant designation.

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5, 10, 15 and 20-gallon DOT 4BW and 4BA Cylinder Labels³

<p style="text-align: center;">A</p> <p style="text-align: center;">EPA Label Booklet Combo</p> 	<p>Container sizes and shape vary by region and supplier. Each container receives one each of A and B*</p> <p>Place as room allows, without obscuring or defacing any of the labels.</p> <div style="text-align: center;">  </div>	<p style="text-align: center;">B</p> <p style="text-align: center;">DOT Hazard Label Depending on product:</p> <div style="text-align: center;">  <p>00098072 or</p>  <p>00218943 or</p>  <p>00098070</p> </div>
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A	B
EPA Label Booklet Combo	DOT Hazard Label**

** NOTE: Containers filled with less than the Reportable Quantity of 100 pounds 1,3-dichloropropene must mark out or remove “RQ (1,3-DICHLOROPROPENE)” from the DOT Hazard Label. RQ for Telone® II is met at packages > 10 gallons of product. RQ for Telone® C-17 is met at packages >11 gallons of product.

³ Shipment of a Marine Pollutant (including Telone® C-17) by ocean vessel must be marked and placarded as such. Shipping papers must also reflect the Marine Pollutant designation. The above is for ground shipments only and therefore does not reflect Marine Pollutant designation.

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Rail Security

The Transportation Security Administration (TSA) published a final rule on November 31, 2008, to enhance rail transportation security of certain products. The Rail Transportation Security rule was effective December 26, 2008.

The rule is applicable to Telone® C-17 because it is a Toxic Inhalation Hazard (TIH) as defined by DOT. If you are involved with receiving or shipping Telone® C-17 fumigant in rail, be familiar with these rules and whether they apply to your facility and activities.

Primary requirements include:

- Procedures for secure chain of custody and control; including secure rail areas.
- Route requirements.
- Location & shipping information of material in transit.
- Addressing High Threat Urban Areas (HTUA's).
- Reporting requirements to TSA upon request and of potential threats
- Document requirements and retention.
- Designation of a rail security coordinator (RSC) and at least one alternate available to TSA on a 24-hour, seven days per week basis and providing this information to TSA.

Note that rail hazardous materials receivers not located in a high threat urban area (HTUA) are not subject to any of the requirements in this final rule. However, if you receive a hazardous material railcar covered under this final rule and then re-ship it, i.e. return or divert it, then you are subject to the requirements of this final rule. In addition, residue tank cars containing TIH (Toxic Inhalation Hazard) materials are excluded from these requirements.

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Common Carriers Information

General Considerations:

The common carrier and Teleos Ag Solutions have the responsibility to assure that Telone® fumigants are loaded properly into tanks suitable for transportation from the manufacturing facility. Because of the incompatibility of Telone® II, Inline® or Telone® EC with other chemicals such as fertilizers, dual use of tanks between Telone® II and other product is not recommended. All equipment requirements on the Teleos Ag Solutions Transportation Equipment Data Sheet must be followed.

Federal law (DOT) requires that all tanks transporting Telone® II, Inline® or Telone® EC on highways be certified. All tanks must have a certification tag permanently attached. All tanks must be secured or bolted to the frame as required by law. The carriers and their drivers have responsibilities with regard to the safe movement and the unloading operations. The drivers will have a primary involvement in the cases of accident or equipment malfunction while in transit or while unloading. Respect for the nature of the cargo, knowledge of emergency procedures, and the availability of protective equipment will reduce the changes of injury resulting from an accident or malfunction.

Driver Instruction

Each driver shall be required to read the safety and handling information and emergency instructions regarding Telone® soil fumigants. Oral clarification will be made by a Teleos employee, if requested.

Safety Equipment (on board truck)

Trucks transporting Telone® shall carry, as a minimum, the following safety equipment:

- A current Safety Data Sheet (SDS)
- Equipment as specified in the Federal Motor Carrier Safety Regulations – Subpart H393.95
- Slicker suit or other resistant body covering (information on the coverings can be found in the Product Stewardship Guide)
- Resistant gloves
- Resistant foot covering
- A face shield or safety glasses with brow and temple shields (do not wear chemical goggles)
- NIOSH -approved respiratory protection, either half-face or a full-facepiece unit. Either respirator must be equipped with a fresh NIOSH-approved cartridge or canister for organic vapors
- Portable eyewash bottle filled with potable water and having at least 1-quart capacity, or other portable eyewash equipment approved by OSHA
- A hard hat for overhead exposure

**Anyone within 50 feet of tank truck when it is being loaded or off-loaded must wear protective gear as above

Tank Cleaning

All tanks must be thoroughly cleaned and dried before receiving Telone® soil fumigants. This should be done by qualified tank cleaning companies to assure that all valving and hoses also are thoroughly cleaned and dried. Bulk tank cleaning can be done safely, but requires experienced personnel and proper equipment. Teleos Ag Solutions recommends hiring a commercial tank cleaning company.

In-tank cleaning of bulk tanks must be performed only by persons specifically trained according to OSHA guidelines described in 29 CFR 1910.146 (Permit-Required Confined Spaces).

A written cleaning plan that addresses, but is not limited to, the following considerations should be created:

- Telone® II and Telone® C-17 are typically flammable in air.

- Methods to control ignition sources and/or flammable vapor levels during all steps. These may include ventilation, water flooding, non-spark producing tools, and checking of atmospheric vapors with an explosimeter or oxygen sensor.
- Telone® and InLine® fumigants are considered moderately toxic when exposures are acute. Adequate measures must be taken to protect personnel from excessive exposure by vapor inhalation and skin contact. Compliance with PPE requirements of the specimen label is required at all times.
- Written procedures for entering, isolating, and rescue must be in place prior to entry. All tank entry operations must follow OSHA 29 CFR 1910.146. For instance, only personnel, including rescuers, with proper respiratory and PPE, including a harness and safety line, may enter the tank. Another person must attend the safety line and a third person must be within hailing distance.
- Remove as much product as possible prior to start of cleaning. This material may be used for application according to labeled Telone® rates, if state rules allow. Purge the tank with nitrogen into a carbon capture system.
- The plan should include predetermined methods for collection and disposal of any waste (flush material, corrosion products, sludge, etc.).
- The inside of the cleaned tank must be absolutely dry and free of loose scale or solids prior to putting it back into service for Telone® products. Water will react with these products to form acid, which can attack mild or stainless steel.
- Before placing the tank back into service, any fittings removed and electrical service disconnected should be replaced and restored. Also, the tank should be tested and inspected as required by any applicable codes prior to filling the tank.
- If the tank is to be used for other products, EPA required clean out limits for product integrity must be met per PR Notice 96-8.

Acknowledgement

Before leaving the Teleos premises, drivers will sign and date statements that they have read and understood the handling and emergency instructions

-Have the prescribed safety equipment on board and understand its use and operation

-Have received a copy of the Emergency Response Information Sheet for attachments to the Bill of Lading

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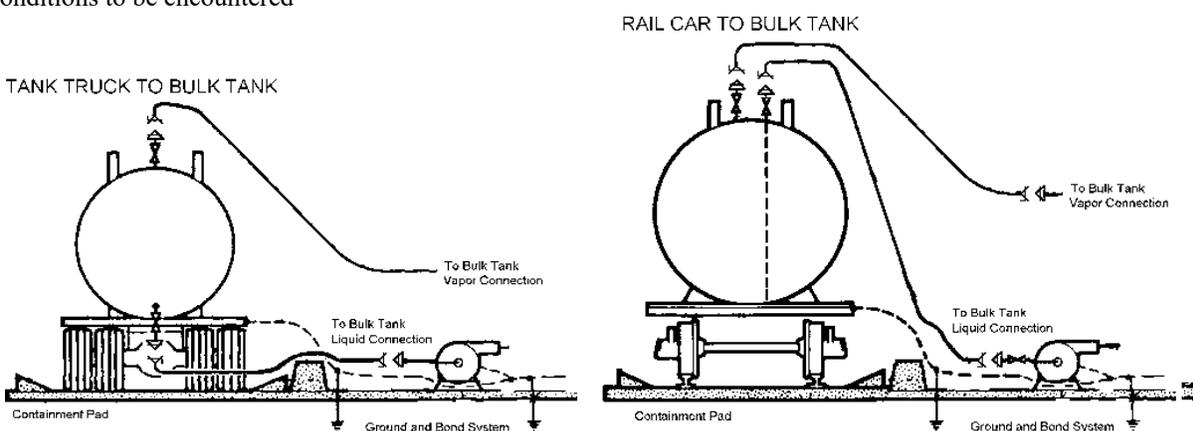
Bulk Tank Filling from Truck or Rail

General Requirements for Bulk Tank Filling

1. Transfer procedures must follow the practices by the DOT, CFR 49, Chapter 1, Part 174, Subpart C, 174.67.
2. For truck shipments from Teleos Ag Solutions or its terminals, the driver and at least one qualified employee of the receiver shall be present and attentive to the operation as long as the truck is connected to the system. Rail car unloading requires two qualified and attentive persons to be present.
3. Product from such trucks or from a railcar should be transferred directly into Teleos approved bulk tanks and is not to be directly loaded into other trucks, cylinders, or other portable containers.

NOTE: There may be instances when filling non-bulk containers from a tank railcar is necessary such as when fixed storage is full or a heel needs to be depleted. To develop general guidelines/procedures for filling non-bulk containers, contact your Teleos Ag Solutions Telone® Specialist or go online at www.teleosagsolutions.com to obtain your contact's information.

4. Personnel conducting the unloading operation must wear protective clothing as required by the product label. They must understand the safety precautions and know the location and how to use the eye washes, emergency showers, and fire extinguishing equipment.
5. Do not off-load product directly from Teleos delivery trucks into portable refillable containers (cylinders). Product should be transferred directly into stationary bulk tanks located within a diked area.
6. If the unloading process is suspended, all valves and openings on the delivering container must be securely closed and disconnected from the unloading system.
7. A nitrogen pad is added to the shipment from production facilities or terminals. Receiving sites must protect the integrity of this nitrogen pad by vapor exchanging if the receiving bulk tank is nitrogen padded or providing make-up nitrogen to the headspace of the delivering vehicle.
8. Dry disconnects are required on all product transfer hoses for bulk deliveries. See the section on piping and hoses in this Guide for details on style and size.
9. Personnel conducting the transfer operation must wear Personal Protective Equipment (PPE) as specified on the product label. The label specifies PPE requirements for everyone within proximity of transfer activity as well as workers opening or closing valves, hatches, or other closures that could release product liquid or vapor.
10. Permanent truck loading/unloading platforms, ladders, or other fall protection are to be used for any work above ground level.
11. Do not use the truck pump and hose unless specifically approved. Air unloading is strictly prohibited.
12. All product transfers must use connecting hoses, pipes, and/or couplings sufficiently tight to prevent workers or other persons from coming in contact with product.
13. All hoses, piping and tanks used in connection with product shall be rated for the pressure and vacuum conditions to be encountered



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Always read and follow label directions.

General Procedure for Filling Bulk Tanks from Trucks (Cargo Tanks)

The facility should use the below example to create site-specific procedures. Format and content will vary according to site needs and requirements.

1. Spot the truck on a loading/unloading containment pad. Chock wheels and set brakes. Secure ignition key, or place placard in windshield with notice: DO NOT MOVE TRUCK DURING UNLOADING.
2. Post signs which state NO SMOKING WITHIN 50 FEET along with required traffic barricades.
3. Connect grounding and bonding cables.
4. Inspect the truck, check flanges, piping, and valves for tight seal. Examine the dry disconnect fittings for good condition and good gaskets. Visually check the truck for any other hazards.
5. Verify the contents (material and quantity) by the bill of lading and outlet tag. Inspect for intact seals and record seal numbers.
6. Verify bulk tank has the current label with the EPA Establishment Number corresponding to the location where product was produced. If not, attach the Teleos-supplied bulk tank labels per the Bulk Tank Label Requirements section of this Guide.
7. Check and record the receiving tank contents and initial level. With bill of lading, verify the tank will contain contents of full truck without overflow and the truck unloading line is dedicated and in good condition (no external cracks). Verify that the unloading line is labeled and goes to the proper tank.
8. If a vapor return line is used, connect it to the truck. Open valves in the vapor line between the truck and bulk tank. If the truck supplies its own nitrogen make-up gas supply (or any other system), follow the carrier's procedure.
9. Connect the liquid transfer hose between the truck and the pump suction connection. Open the proper valves on the truck and tank to transfer.
10. Prime and start the pump. Double check the lines, truck, and tank for leaks and proper alignment. If leaks are discovered, stop the operation and repair. During transfer, verify that the bulk tank level is increasing and the vent is functioning.
11. When transfer is complete, elevate the hose and "walk" it toward the pump suction. Pump the hose dry. Close the liquid line valves, starting from the truck toward the bulk tank. Shut down the transfer pump.
12. Disconnect the transfer hose from the truck. Close vapor line valves and disconnect the vapor line.
13. Check that the volume increase in the bulk tank is equal to the billed truck contents.
14. Ensure that transfer lines are not hydrostatically filled with product.
15. Cap or plug all connections on the bulk tank, hose, and truck. Stow the transfer hose.
16. Remove wheel chocks, ground cable, signs, and barricades. Return ignition key or remove windshield placard and release truck for departure.

General Procedure for Filling Bulk Tanks from Tank Cars (Rail)

The facility should use the below example to create site-specific procedures. Format and content will vary according to site needs and requirements.

1. Spot and protect the rail car with derails or switch closure and blue flags or blue lights. Blue flags are required for rail car loading/unloading per DOT or NTA regulations. Chock wheels in both directions and set hand brakes, if applicable.
2. Post signs which state NO SMOKING WITHIN 50 FEET along with required traffic barricades.
3. Connect grounding and bonding cables.
4. Properly position the gangway or loading platform, if present.
5. Inspect the rail car, check flanges, piping, and valves for tight seal. Examine the dry disconnect fittings for good condition and good gaskets. Visually check the rail car for any other hazards.
6. Verify the contents (material and quantity) by the bill of lading and outlet tag or rail car commodity stenciling. Inspect for intact seals and record seal numbers.
7. Verify bulk tank has the current label with the EPA Establishment Number corresponding to the location where product was produced. If not, attach the Teleos-supplied bulk tank labels per the Bulk Tank Label Requirements section of this Guide.

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8. Check and record the receiving tank contents and initial level. With bill of lading, verify the tank will contain contents of full rail car without overflow and the rail car unloading line is dedicated and in good condition (no external cracks). Verify that the unloading line is labeled and goes to the proper tank. High liquid level detection should be interlocked to avoid overfilling tanks.
9. If a vapor return line is used, connect it to the rail car. Open valves in the vapor line between the rail car and bulk tank. If vapor exchange is not used, the rail car must be supplied with nitrogen make-up gas supply.
10. Connect the liquid transfer hose between the rail car and the pump suction connection. Open the proper valves on the rail car and tank to transfer.
11. Prime and start the pump. Double check the lines, rail car, and tank for leaks and proper alignment. If leaks are discovered, stop the operation and repair. During transfer, verify that the bulk tank level is increasing and the vent is functioning. Reminder: Rail car unloading requires two qualified persons to be present and attentive during entire transfer.
12. When transfer is complete, elevate the hose and “walk” it toward the pump suction. Pump the hose dry. Close the liquid line valves, starting from the rail car toward the bulk tank. Shut down the transfer pump.
13. Disconnect the transfer hose from the rail car. Close vapor line valves and disconnect the vapor line.
14. Confirm that residual excess pressure is not present in the rail car. A slight (<1 psig) pressure is preferred.
15. Check that the volume increase in the bulk tank is equal to the billed rail car contents.
16. Ensure that transfer lines are not hydrostatically filled with product.
17. Cap or plug all connections on the bulk tank, hose, and rail car. Stow the transfer hose.
18. Make final visual check of rail car valves, rupture disc, safety vents, gauging devices, internal valve rod packing gland, and caps. Gauging devices and thermowell covers must be tightened against O-ring seal. All other plugs and fittings must be tight.
19. Assure placards are in place. If appropriate, reverse DOT placards to show residue on cars that have been unloaded of DOT-regulated products.
20. Raise or clear any loading platform or gangway.
21. Remove derails, blue flags, and chocks. Release hand brakes. Remove ground cable, signs, and barricades.
22. Release rail car for departure.

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Emergency Procedures

The procedures that follow are intended primarily for immediate, temporary control of emergencies such as fire, spill, leak, exposure, or accident involving Telone® II soil fumigant. In all such cases, call day or night, toll free, CHEMTREC at 1-800-424-9300. You will be put in touch with personnel who will provide advice and arrange for professional help as needed to assist with the emergency.

Leaking Containers

- Isolate the area and keep people away. Do not smoke. Do not allow open flames or any sources of ignition in the vicinity. Stay upwind.
- If the leak is indoors, evacuate and ventilate the area thoroughly to minimize vapors.
- If it can be done safely, invert or reposition the leaking container so that the area with the leak is up and the flow is reduced. If possible, put the container into an overpack.
- PPE for a small leak outside: Wear chemical-resistant apron over coveralls; chemical-resistant gloves and footwear plus socks; chemical-resistant headgear for overhead exposure; a face shield or safety glasses with brow and temple shields (Do not wear chemical goggles). For respiratory protection, wear a half-facepiece respirator with either an organic-vapor-removing cartridge with a prefilter approved for pesticides or canister approved for pesticides. For Telone products containing chloropicrin, wear a full-facepiece air-purifying respirator instead of the half-facepiece respirator with face shield or safety glasses.
- PPE for a small spills in a confined area or large spills: Wear chemical-resistant suit; chemical-resistant gloves and footwear plus socks; chemical-resistant headgear. For respiratory protection, wear a NIOSH-approved positive-pressure supplied-air respirator or positive-pressure self-contained breathing apparatus (SCBA).
- Cover or confine the leak with an absorbent such as diatomaceous earth, clay, sand or other noncombustible, absorptive material. Dispose of used material as directed by local, state and federal regulations.
- If anyone has been overcome by Telone® II, move the person to fresh air and immediately call 9-1-1.

Fire

- Call 9-1-1 immediately.
- Move all personnel from the immediate area to a safe distance, upwind from the smoke and vapors. Reroute traffic if necessary.
- Firefighters should wear full turnout clothing including heavy neoprene or rubber boots, neoprene gloves, and positive-pressure, self-contained breathing apparatus.
- Use usual techniques and equipment to combat the fire.
- Keep containers of Telone® II cool, if possible, with a water spray.
- Dike or trench around the area or otherwise keep contaminated water from reaching streams, water supplies, and sanitary or storm sewers.

Vehicle Wrecks

- Immediately notify local police and fire departments and CHEMTREC at 1-800-424-9300.
- Keep upwind and isolate the affected area or vehicle. Keep people away. Stop traffic if necessary. Allow no smoking, open flames, or other source of ignition in the vicinity.
- Quickly get medical help for anyone affected by the spilled pesticide. Remove affected people to fresh air. Render first aid until they are under care of a physician or hospital. Call CHEMTREC at 1-800-424-9300.
- Make every effort to keep spills or leaks from spreading contamination, but in doing so, do not inhale or contact Telone® II soil fumigant. Wear protective clothing: polyethylene or neoprene gloves and boots, and positive-pressure self-contained breathing apparatus if exposed to liquid or vapors for any length of time.
- Spill or leak in a vehicle: if the vehicle can be moved without spreading the contamination, move it to an area equipped with a pesticide sump and water supply. Do not move the vehicle by starting the engine when vapors are present as a spark could ignite the vapors of Telone® II.

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- Spill on the roadway or ground: Confine the spill as much as possible with a dike or dam or any available material such as soil, clay, sand, etc. Avoid inhalation of vapor and personal contact. Wear protective gear as described above.
- If spilled Telone® II reaches or threatens to reach a stream, any other body of water, a water supply, or an area that might lead to water supply, notify local health department authorities, the EPA and/or the U.S. Coast Guard immediately. Use dams, ditches, or other means to stop the flow until decontamination can be carried out. A spill of ≥ 10 gallons of Telone® II and ≥ 11 gallons of Telone® C-17 is a reportable quantity and must be reported to federal, state and local emergency agencies.

Cleanup and Decontamination

It is preferable to leave this task to a properly equipped and trained decontamination team.

Personal Safety: wear suitable protective clothing, bearing in mind that Telone® II soil fumigant can be hazardous to the skin or eyes, and vapor can be hazardous if inhaled. Wear heavy rubber or polyethylene boots to protect feet. Wear adequate respiratory and eye protection. Make sure cartridge date on the respirator being used has not expired.

Recovery and Salvage: After thoroughly rinsing them with water, remove undamaged containers from area of contamination and isolate them for later processing. Transfer remaining Telone® II soil fumigant from leaking containers to clean containers by gravity flow or pumping.

Cleanup of Spill Area: If a small amount of Telone® II is involved, spread a generous amount of noncombustible absorbent material (such as diatomaceous earth, clay, soil, etc.) on the spill area. Collect the spent absorbent material in a disposal drum. Repeat as needed to collect all the liquid. A suitable drum for disposal of absorbent and expendable contaminated materials can be purchased from most drum suppliers.

If the spill is on the ground, dig up enough of the soil to eliminate the contamination and place the soil in a disposal drum.

Wash exterior equipment surfaces with a detergent solution, and rinse with water. For spills on solid surfaces, collect the washings with absorbent material as described above. For porous surfaces such as wood, the contaminated wood should be torn out, properly disposed of in an approved landfill, and replaced. Dispose of washings, contaminated materials, and used absorbents as directed by local, state and federal regulations.

Cleanup of Intact Containers: Wash the outsides of contaminated intact containers with detergent solution. Collect washings and rinse water in a disposal drum. If the container finish of the label is damaged, it will be necessary to touch up the paint, relabel the container, or repackage the product.

Decontamination and Disposal of Empty Containers: Reuse of drums and containers is not recommended unless proper recycling methods are followed. All product and labeling must be removed from drums. When disposing of drums, rinse empty containers several times with water or other appropriate solvent such as detergent, kerosene, or diesel oil, collect the rinses, and aerate wash drums several hours until free of odor. Rinsing and complete aeration are necessary prior to puncturing to avoid possible ignition of fumigant vapors. Puncture or crush used drums to prevent reuse, and dispose of drums in approved landfill or by other procedures approved by the state and local authorities.

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References

Pesticide Handling

NFPA: National Fire Protection Association Battery March Park (Main Office)
Quincy, MA 02269 Publications:
NFPA 30: Flammable and Combustible Liquids Code
NFPA 385: Standard for Tank Vehicles for Flammable and Combustible Liquids
1-800-344-3555

Department of Transportation (DOT)

DOT regulations can be found at www.DOT.gov or via the
Code of Federal Regulations at
https://www.ecfr.gov/cgi-bin/text-idx?tpl=/ecfrbrowse/Title49/49tab_02.tpl

Environmental Protection Agency

U.S. EPA web site at: <https://www.epa.gov/pesticides>
Also contact your state EPA, state chemist, agricultural or environmental departments.

Emergency Response Information

FOR CHEMICAL EMERGENCY (Spill, Leak, Fire, Exposure, or Accident)
Call CHEMTREC at **1-800-424-9300** for both Teleos and non-Teleos products.

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Telone® is a Restricted Use Pesticide. Before using any
Telone® product in any region, always check all
federal, state and local labels, regulations and
requirements.
Always read and follow label directions.