

DESCRIPTION OF ACCEPTABLE PORTABLE REFILLABLE CONTAINERS (PRC)

Purpose of this Document

The federal EPA requires each registrant to provide a description of acceptable portable refillable containers (PRCs). This document provides that information, plus other information necessary for the use of portable refillable containers with Dow AgroSciences products.

The container portion of the federal EPA Pesticide Container and Containment rule is in effect August 2011. Learn more at www.epa.gov.

PRCs include mini-bulks, Intermediate Bulk Containers (IBCs), drums and other containers which are refilled with pesticides.

Requirements

1. Containers must meet applicable state and federal requirements. Dealers comply with all federal, state and local rules, regulations and standards regarding handling of Dow AgroSciences products.
2. PRCs must meet DOT Packing Group III requirements. The PRC must be inspected, tested, and marked with the UN/DOT markings. There are exceptions, including for N-Serve[®] nitrogen stabilizer, which may use non-DOT specification stainless steel containers which comply with other requirements listed here. Other acceptable non-DOT Specification portable returnable containers without UN/DOT markings are listed in **Attachment A**.
3. The refiller and/or shipper is responsible for inspections, tests, marking, and documentation
4. The EPA requires a one way check valve or tamper evident device on each opening other than a vent on refillable containers.
5. Each PRC must be inspected prior to refilling. If contaminants are present, or tamper evidence is broken or missing, or the tank is being rededicated to a different product, the tank must be cleaned.
6. PRCs must be compatible with the product, and allowed by DOT and NFPA regulations. Consult Dow AgroSciences product-specific supplements for material compatibility and other special requirements at http://www.dowagro.com/stewardship/agchemicals/handling_guides.htm.
7. Only refillable containers with a capacity in excess of 5 gallons are to be used.
8. Filling and cleaning of containers must take place on rigid, liquid-tight containment.
9. Refillable containers should be stored within containment if required by state or local regulations.
10. Certified weigh scales or certified meters are used for filling containers intended for retail sale. Document the calibration as required by state and local regulations.
11. Repackaging must comply with the Dow AgroSciences repackaging agreement.
12. Tank filling system must be dedicated, or have written rededication procedures in place.
13. A valid EPA Establishment Number must exist for each location where the product will be repackaged.
14. Refillers must have a current written contract to repackaging Dow AgroSciences product (Repackaging Agreement), unless all repackaged product is for custom application only.

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15. Attach Dow AgroSciences supplied product labels and product information booklets to the container after filling. Insert your EPA Establishment Number and the net contents and lot code on the product label. Add DOT labeling as required.
 16. Per EPA, Refillers must keep a record of the EPA product registration number, the date of repackaging, and the serial number of the container for at least three years from date of repackaging. Production must be reported annually to the EPA on appropriate forms.

General Recommendations

1. Where allowed at all, polyethylene refillable containers greater than 5 years old are not recommended. Polyethylene refillable containers should be free of cracks, UV degradation or other signs or aging or structural defects. Dow AgroSciences shall bear no risk or liability associated with the use of polyethylene containers.
2. Use grounding cables during product transfers of products with flash points below 110 °F. Cables are required for products below 100 °F or where temperatures are above the product flash point.

OTHER INFORMATION

DOT Transport Regulations

In addition to EPA requirements, each shipper and carrier is required to know whether a product is regulated by U.S. Department of Transportation (DOT). If the product is 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 MSDS. Because shipping descriptions may change from time to time, refer to the current MSDS for each product. Consult the Code of Federal Regulations.

PRC Inspection and Testing: Containers can not be filled unless they are inspected, tested, marked, and documented in accordance with the DOT rules for Packing Group III or higher, as appropriate for the container. Requirements vary by type of container. In general, this will include

- a. Visual Inspection – before being filled.
- b. Leakproofness Testing – every 2.5 years.
- c. External Visual Inspection – every 2.5 years.
- d. Internal Inspection – every 5 years.

Air and Vessel Shipments: Some DOT regulated products are specifically prohibited from air or vessel shipments. Dow AgroSciences recommends avoiding air shipments even where it is allowed. Consult DOT experts and/or the MSDS before shipping by air or vessel.

Example UN/DOT Marking: Exact container markings will vary by container type and manufacturer, but markings will be similar to below.



Labels and Placards:

Dow AgroSciences will make available the product label and DOT labeling through the label ordering web site, (www.dowagrolabels.com), or call your sales representative or Dow AgroSciences at 1-800-258-3033 to obtain an additional bulk tank label packet. Dow AgroSciences does not provide truck or cargo tank placarding that may be required by DOT.

Disposal and recycling

Many states offer general reclamation and recycling programs. Dealers and distributors are encouraged to:

- 1) Call the container original container manufacturer take-back program, if one exists.
- 2) Use state reclamation programs sponsored by regulators or industry, if one exists.
- 3) Contact your local DAS rep for guidance if neither of the first two options are available.

Refillable Container Mixing

Most Dow AgroSciences' products do not require mixing while in a refillable container. General good practices include:

1. Do not use air to mix tank contents as it may cause air entrapment or changes in physical characteristics of the product.
2. Keep ports and vents closed to avoid moisture loss.
3. Avoid mixing that causes splashing of the liquid to prevent air entrainment.

Suspensions: The solid particles of any suspension formulation have the potential to settle over time. The amount of settling and difficulty of re-suspension depends on the characteristics of the particular formulation. Also, suspensions tend to be higher viscosity than other formulations. In general, circulating when the product is warmer helps.

Emulsifiable Concentrates (ECs): ECs generally do not require circulation. Some products have the potential to form crystals if stored below their minimum storage temperature, or if solvent is allowed to evaporate. In general, if crystallization occurs, place the container in a warm area (sunlight or heated storage), then circulate the product until crystals are dissolved.

Specific Product Requirements: Refer to the product-specific Supplement to this Guide.

Examples of Compliant Containers

Any container which complies with the Requirements section of this document may be used. Common containers likely to be encountered include, but are not limited to:

- **Snyder Industries:** Standard Square Stackable series. Excaliber series. Next Generation series. Transpak series.
- **Promens (Bonar):** RAZ series. Payloader series
- **Schutz:** Cage IBCs

Attachment A

Dow AgroSciences Acceptable Portable Refillable Containers

 A white plastic container with a red protective frame.	<p><u>Shuttle 120</u></p> <p>Frame: Green, Red, or Gray</p>	<ul style="list-style-type: none">• 120 gallon capacity.• Tamper evident 3” one-way dip-tube valve, either a 5” tamper evident closure or 3” tamper evident fill valve, and tamper evident vent.
 A white plastic container with a green protective frame.	<p><u>Shuttle 150</u></p> <p>Frame: Green, Red, Gray, or Black</p>	<ul style="list-style-type: none">• 150 gallon capacity.• Tamper evident 3” one-way dip-tube valve, either a 5” tamper evident closure or 3” tamper evident fill valve, and tamper evident vent .
 A white plastic container with a green pallet base.	<p><u>Shuttle 250</u></p> <p>Pallet Base: Green or Blue</p>	<ul style="list-style-type: none">• 250 gallon capacity• Tamper evident 3” one-way diptubevalve, either a 5” tamper evident closure or 3” tamper evident fill valve, and tamper evident vent .
 A gray plastic container with a galvanized steel frame.	<p><u>CUBE</u></p> <p>Bottle: Gray</p> <p>Frame: Galvanized Steel</p>	<ul style="list-style-type: none">• 275 gallon capacity• Tubular frame with protective galvanized steel shell.• Lockable one-way valve & tamper evident vent; auto-vent cap.• Gravity flow or bottom pump capable.



225 Square Stackable

Frame: Green

- 220 gallon capacity
- Snyder B4096 Square Stackable
- Rotationally molded
- Tamper evident on one 2" opening and tamper evident on one 6" fill opening.



110 EZ Handler

Frame: Green

- 110 gallon capacity
- Snyder D2282 EZ minibulk tank
- Rotationally molded
- Tamper evident on two 6" openings.



225 Shuttle

Frame: Blue

Bottle: White

- 225 gallon capacity
- Minibulk tank
- Rotationally molded
- Tamper evident on four 2" openings.



120 Shuttle

Frame: Black

Bottle: White

- 120 gallon capacity
- Snyder Minibulk tank
- Rotationally molded
- Tamper evident on two 2" openings and 6" center fill opening.



120 Square Stackable

Frame: Black

- 120 gallon capacity
- Snyder Square Stackable
- Pump Protector
- Rotationally molded
- Tamper evident on 2" & 6" opening

Residue Removal Procedure for Portable Refillable Containers

In 49 CFR 165 Subpart D, the federal EPA requires each registrant to provide a residue removal procedure for portable refillable containers (PRCs). This document provides that procedure for PRCs intended for refilling with Dow AgroSciences LLC products.

The facility should use this information to create site-specific cleaning procedures. Format and content will vary according to site needs and requirements, but should include the elements below. Any procedure must result in the following:

- No visible solids on the interior or exterior of the PRC.
- Residue limits below the EPA requirements in EPA PR Notice 96-8.
- Residue limits below Dow AgroSciences minimum requirements for product integrity.

Prior to Residue Removal

Confirm and understand all disposal methods and costs before any cleaning operation begins. Segregation and use of cleaning rinsate as spray solution is preferred over disposal.

Wear the proper protective equipment as required by the product MSDS during inspection and cleaning.

Perform all residue removal within secondary containment.

Procedures

1. Drain all liquid into a DOT approved disposal drum.
2. Remove any solid matter.
3. Close bottom drain if applicable and rinse inside walls with water. The use of a pressure washer is recommended
4. Drain and properly dispose of the wash water.
5. Inspect inside of container with flashlight.
6. Repeat washing procedure with hot water and detergent, and brush if residues remain.
7. Disassemble flanges, valves, pumps, meter, conservation vents, and other equipment on the tank if residues may be trapped. Replace all gaskets.
8. Rinse and circulate with clean water. Repeat this step until the water remains clean and residue free.
9. Drain interior of container, hose, meter, pump, etc., completely.
10. Dispose of residues and wash water in accordance with federal, state, and local laws and regulations.

Notes:

Using a solvent such as diesel fuel for products which are solvent based solutions of crystals may produce better results than water because the solvent will dissolve crystals.

Pay special attention to the top interior of the PRC. This area is usually the most difficult to clean.