

**Oak Ridge National Laboratory (ORNL)
Transportation and Packaging Management (TPM)
Container Preparation and Filling Instructions/Checklist**

UN 1 Gallon Open Head (OH) Steel Drum

ORNL-CHK-34, Rev. 1

Issued: 5/15/1997

Revised: 6/22/2001

Page 1 of 3

INSTRUCTIONS: Complete the activities below following the instructions in Section A. Activities should be checked off as performed. The completed checklist should then be signed by the Operating Personnel completing the checklist and submitted to the Operations Supervisor for approval for shipment.

NOTE 1: The 1 gallon open head steel drum is UN marked for filling with liquid hazardous materials.

NOTE 2: The maximum allowable density is embossed (bottom) and marked (side) on each drum [ex., 1.2]. Allowable density applies to Packaging Groups II and III liquid materials.

NOTE 3: The maximum allowable vapor pressure is embossed (bottom) and marked (side) on the drum in kilopascals [ex., 100 kPa (15 psig)]. Allowable vapor pressure applies to Packaging Groups II and III liquids

NOTE 4: For filling with solid materials, the authorized conversions must be made from the liquid density markings to solid maximum gross weights allowable. Reference 49CFR ¶173.24a(b)(3). [Ex., for 1.2 density, it would be 4.5 kilograms (10 lbs) of Packaging Group II and 6.75 kilograms (15 lbs) for Packaging Group III.]

NOTE 5: Drums must be closed in accordance with the specific instructions furnished, and tested, by the manufacturer for each specific type/size drum, in order to be in compliance with DOT HAZMAT regulations. [49 CFR, ¶178.2(c)(1)]

**A. UN 1A2/Y 1 Gallon Carbon Steel OH Drum
Stores Catalog No. 02-112-6105**

Note: Items marked (#) are solely generator's/filler's responsibility.

**Operating
Personnel**

- _____ 1. (#) Inspect the drum to be filled to ensure that it is in good physical condition and that no critical dents/damages, severe corrosion, etc. exist that could cause or develop into a leak during normal storage or in transportation.
- _____ 2. (#) Ensure that the material being filled into the drum is compatible with (will not react, soften, or attack) the drum's internal phenolic lining.
- _____ 3. **IF** the drum is to be filled with solid hazardous materials/waste, **THEN** Fill the drum according to the requirements/limitations specified in **NOTE 4** above.

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Page 2 of 3

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Operating
Personnel

- _____ 4. IF the drum is to be filled with liquid hazardous materials/waste, **THEN** Fill the drum according to the requirements/limitations specified in **NOTE 2** and **NOTE 3** on page one.

NOTE: For liquid hazardous materials/wastes, sufficient void **MUST BE** left in the drum such that the drum will not completely fill if the contents were to reach a temperature of 55°C (131°F) in storage or transit.

- _____ 5. (#) Ensure that the gasket is in place, is in good condition, and is adhered to the drum lid prior to placing the lid on the filled drum.

- _____ 6. Close the drum's 8-lug crimp tab lid by exerting a downward pressure on the drum lid and crimping the lid tabs securely under the drum rim using an appropriate crimping tool (size, manufacturer, etc.) designed for the drum such that the gasket is fully compressed.

All lugs on the cover should meet the crimp angle requirement of at least 90°. *

- _____ 7. Label and mark the drum in accordance with the current ORNL/Department of Transportation (DOT) requirements. For off-site shipments, contact the ORNL Transportation and Packaging Management organization for appropriate DOT marking and labeling.

- _____ 8. Sign and date the checklist in the appropriate signature block verifying that the activities have been performed and the checklist completed.

- _____ 9. Submit this completed checklist to the Operations Supervisor for approval for shipment.

* These Closing Instructions are specifically for this one (1) gallon steel drum manufactured by Central Can Co., distributed by Freund Can Co., with the identification marking code, **M4071**, on the drum side. [See **Note 5** on page one.]

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Page 3 of 3

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Stores Catalog No. 02-112-6105**

**Operations
Supervisor**

- _____ 10. Verify that all defined activities have been successfully completed.
- _____ 11. Sign and date the checklist in the appropriate signature block, approving the container for shipment.

APPROVED FOR SHIPMENT:

Operating Personnel:	Date:
Operations Supervisor:	Date:

Prepared by: ORNL TPM Organization

Approved by: Jeff Shelton June 22, 2001
Jeff Shelton, Manager (576-6401)
ORNL TPM - Packaging Operations