

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

UN 55 Gallon Composite Tight Head (TH) Steel Drum

ORNL-CHK-30, Rev. 1

Issued: 5/15/1997

Revised: 3/15/2000

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 55 gallon composite TH steel drum with polyethylene insert liner 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., 1.4]. Allowable density applies to Packaging Groups I, II, or III liquid materials.

NOTE 3: The maximum allowable vapor pressure allowable is embossed (bottom) and marked (side) on the drum in kilopascals [ex., 250 kPa (36 psig)]. Allowable vapor pressure applies to Packaging Groups I, II, or III liquids.

NOTE 4: Drum heads, that during in-house storage have vents/pressure relief devices inserted into the bung fittings, must be removed and replaced with the original (standard) bung fitting for the closure prior to offering for shipment.

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 6HA1/X 55 Gallon Composite Carbon Steel TH Drum
Stores Catalog No. 02-112-5885**

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 polyethylene insert (liner).
- _____ 3. Inspect the polyethylene bung closures to ensure the plastic threads are not damaged, cross-threaded, or warped, etc. such that the closure will not seal.

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Page 2 of 3

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Operating
Personnel

- _____ 4. Fill the drum with liquid hazardous materials/waste 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 bung gaskets are in place and are in good condition prior to inserting bungs into the drums.
- _____ 6. Insert the bungs into each bung fitting and ensure that poly bungs are not cross-threaded while inserting the closures.
- _____ 7. [*Van Leer*¹] Using a torque wrench, tighten each plastic bung fitting to:
(1) 12 foot-pounds for the 3/4 inch fitting; (2) 20 foot-pounds for the 2 inch fitting.
- _____ 8. Ensure that the drum lid does not contain vents/relief devices when offered for shipment. Refer to [NOTE 4](#) on page one.
- _____ 9. Label and mark the drum in accordance with the current ORNL/Department of Transportation (DOT) requirements. For off-site shipments, contact ORNL Transportation and Packaging Management Organization for appropriate DOT marking and labeling.
- _____ 10. Sign and date the checklist in the appropriate signature block verifying that the activities have been performed and the checklist completed.
- _____ 11. Submit this completed checklist to the Operations Supervisor for approval for shipment.

¹These "Closing Instructions" are specifically for 55 gallon composite steel drums manufactured by Van Leer — Identification marking code on drum side is: VL. [see [NOTE 5](#) on page one]

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Page 3 of 3

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**Operations
Supervisor**

- _____ 12. Verify that all defined activities have been successfully completed.
- _____ 13. 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 April 24, 2000
Jeff Shelton, Manager (576-6401) Date
ORNL TPM - Packaging Operations