

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

UN 16 Gallon Tight Head (TH) Steel Drum

ORNL-CHK-20, Rev. 2

Issued: 5/15/1997

Revised: 7/25/2002

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 16 gallon tight head steel drum is UN marked for filling with liquid hazardous materials.

NOTE 2: The maximum allowable specific gravity is embossed (bottom) and marked (side) on each drum [ex., 1.4]. Allowable specific gravity applies to Packaging Groups I, II, or III liquid materials.

NOTE 3: The maximum allowable vapor pressure 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 containing vents/pressure relief devices inserted into the bung fittings during in-house storage 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 1A1/X 16 Gallon Carbon Steel TH Drum
Stores Catalog No. 02-112-6090**

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, corrode, or attack) the drum's internal surface.
- _____ 3. Fill the drum with liquid hazardous materials/wastes according to the requirements/limitations specified in [NOTE 2](#) and [NOTE 3](#) above.

NOTE: For liquid hazardous materials/wastes, sufficient outage **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.
- _____ 4. (#) Ensure that bung gaskets are in place and are in good condition prior to inserting bungs into the drums.

FOR INTERNAL USE ONLY

Container Preparation and Filling Instructions/Checklist

UN 16 Gallon Tight Head (TH) Steel Drum

ORNL-CHK-20, Rev. 2

Issued: 5/15/1997

Revised: 7/25/2002

Page 2 of 3

A. UN 1A1/X 16 Gallon Carbon Steel Drum Stores Catalog No. 02-112-6090

Operating
Personnel

- _____ 5. Insert the bungs into each bung fitting, tightening using the appropriate bung wrench for each specific fitting.
- _____ 6. [Skolnik¹] Using a torque wrench, tighten each bung fitting to (1) 12-foot lbs for the 3/4 inch fitting, (2) 20-foot lbs for the 2 inch fitting.
- _____ 7. Ensure that the drum lid does not contain vents/relief devices when offered for shipment. Refer to [NOTE 4](#) on page one.
- _____ 8. **IF** generator/filler is responsible for preparing package for transport, **THEN**
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.
- IF** generator/filler is *not* responsible for preparing package for transport, **THEN**
This item is not applicable and should be marked **N/A**.
- _____ 9. Sign and date the checklist in the appropriate signature block verifying that the activities have been performed and the checklist completed.
- _____ 10. Submit this completed checklist to the Operations Supervisor for approval for shipment.
- _____ 11. Verify that all defined activities have been successfully completed.
- _____ 12. Sign and date the checklist in the appropriate signature block, approving the container for shipment.

Operations
Supervisor

¹These "Closing Instructions" are specifically for 16 gallon steel drums manufactured by Skolnik Industries which have identification marking code on drum side: SDCC. [see [NOTE 5](#) on page one]

Container Preparation and Filling Instructions/Checklist

UN 16 Gallon Tight Head (TH) Steel Drum

ORNL-CHK-20, Rev. 2

Issued: 5/15/1997

Revised: 7/25/2002

Page 3 of 3

**A. UN 1A1/X 16 Gallon Carbon Steel Drum
Stores Catalog No. 02-112-6090**

APPROVED FOR SHIPMENT:

Operating Personnel:	Date:
Operations Supervisor:	Date:

Prepared by: ORNL TPM Organization

Approved by: Jeff Shelton July 25, 2002
Jeff Shelton, Manager (576-6401)
ORNL TPM - Packaging Operations