

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

UN 110 Gallon Salvage Open Head (OH) Steel Drum

ORNL-CHK-29, Rev. 1

Issued: 5/15/1997

Revised: 3/15/2000

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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 110 gallon Salvage open head steel drum is UN marked for containing hazardous materials packagings as solid materials.

NOTE 2: The Salvage drum is intended for use in the shipment of damaged, defective, or leaking packages, or packages that have leaked or spilled. The hazardous material must be compatible with the Salvage drum, its internal lining, as well as the internal packagings, and contain sufficient cushioning and absorbent material. The Salvage drum, and its contents, is authorized only for shipment for repackaging or disposal.

NOTE 3: The maximum allowable gross weight is embossed (bottom) and marked (side) on each drum in kilograms [ex., 400 kilograms (880 lbs)]. Allowable weight applies to Packaging Groups I, II, or III solid materials.

NOTE 4: Salvage drum lids used during in-house storage which contain vents/pressure relief devices must be removed and replaced with the original non-vented lid 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 1A2/X 110 Gallon Salvage OH Carbon Steel Drum
Stores Catalog No. 02-112-6100**

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. **WHEN** packaging hazardous materials/wastes in defective packaging as set-forth in [NOTE 2](#) above; **THEN**, ensure that the drum, with contents and internal packagings, meet the requirements/limitations specified in [NOTE 3](#) above.
- _____ 3. Ensure there is sufficient and compatible absorbent material in the drum to eliminate any free liquid from the damaged packaging into the Salvage drum at the time of closing.
- _____ 4. Ensure there is sufficient and compatible cushioning material to prevent excessive movement of the damaged package within the Salvage drum.

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Operating
Personnel

- _____ 5. (#) Ensure that the material being filled into the drum is compatible with (will not react, corrode, or attack) the inside clear coating and internal steel of the drum.
- _____ 6. Ensure that the Salvage drum lid does not contain vents/relief devices when offered for shipment. Refer to [NOTE 4](#) on page one.
- _____ 7. (#) Ensure the gasket is in place, is in good condition, and is adhered to the drum lid when placing the lid on the packaged drum.
- _____ 8. Close the drum with the steel locking ring and 5/8 inch steel bolt and jam nut (supplied with drum).
- _____ 9. Ensure the bolt section of the locking ring is extended below the ring and *not* protruding above the drum lid.
- _____ 10. [Skolnik¹] Tap around the closing ring with a heavy rubber mallet/hammer and, and at the same time, tighten the bolt with a torque wrench. The bolt should be tightened to 55 - 60-foot lb torque. The cover ring should not spin, but the free ends of the rim should have a 0.125 inch maximum gap.
- NOTE:** If the locking ring butts itself when completely tightened, in lieu of leaving a gap, the ring is too large or the gasket is too thin--making the lid/locking ring unusable. The lid and/or the locking ring must then be replaced.
- _____ 11. Tighten the "jam nut" to prevent unintentional loosening of the closure during handling/transit; tighten against the lug without threads. ("Jam nut" must be located in between the two locking ring lugs.)
- _____ 12. Label and mark the drum in accordance with the markings on the damaged packagings and 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.
- _____ 13. Sign and date the checklist in the appropriate signature block verifying that the activities have been performed and the checklist completed.

¹These "Closing Instructions" are specifically for 110 gallon salvage steel drums manufactured by Skolnik Drum—Identification marking code on drum side is: SDCC. [see [NOTE 5](#) on page one]

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- Operating Personnel** _____ 14 Submit this completed checklist to the Operations Supervisor for approval for shipment.
- Operations Supervisor** _____ 15. Verify that all defined activities have been successfully completed.
- _____ 16. 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
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ORNL TPM - Packaging Operations