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

Type A 7A Drums – 5 Gallon Size, Lever Lock Closure

ORNL-PKG-55, Rev. 0

Issued: 03/01/2004 Revised: Page 1 of 3

**INSTRUCTIONS:** Complete the activities requested below following the instructions in Section A.

NOTE 1: Type A 7A Drums are used for solid material only, any particle size (e.g., Form Nos. 1, 2 & 3.)

**NOTE 2:** The maximum gross weight for UN1A2 is 60 kilograms (132 lbs.) for Type A use.

**NOTE 3:** The drum needs to retain its original configuration as purchased.

**NOTE 4:** Complete Type A documentation must be kept on file one (1) year after latest shipment of packaging. It is necessary for the shipper to compare the physical characteristics of the planned load with the test load to show compatibility. See Attachment A.

#### A. UN1A2 (5 Gallon Size, Lever Lock Closure) Stores Catalog No. 02-112-6505

## Operating Personnel

- 1. Visually inspect the drum, lid, and lever lock ring for rust, damage, dents, and defects.
- 2. Visually inspect the lid gasket for wearing or tears.
- 3. Report any deficiencies to the Packaging Supervisor.
- 4. Securely position the contents.
- 5. Ensure that the gasket is properly fitted into the cover groove.
- 6. Position the cover on to the drum curl being careful to ensure that the gasket sits around the bead.
- 7. Fully open the Toggle Lever and place the expanded ring on to the drum cover with the vertical-skirt hugging the drum body.
- 8. Slowly close the Toggle Lever so that the out ring engages the cover / body juncture.
- 9. Downward pressure along with tapping the outside of the ring may assist in an even closure.
- 10. Once closed for shipment, engage latch to lock the lever into place.
- 11. Mark the drum to indicate "Radioactive Material, USA DOT 7A TYPE A."



#7 - Expanded ring being placed on drum



# 8 - Lever being closed slowly

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#### A. UN 1A2 (5 Gallon Size, Lever Lock Closure) Stores Catalog No. 02-112-6505

## Operating Personnel

12. Attach a plain wire seal for nonaccountable materials or a controlled, numbered seal for accountable materials, if required.

Seal wires should be threaded through the lugs in the closing ring or through holes provided in the bolt and/or lugs as appropriate for each container. The seal must be installed so that it has to be broken to open a container.

13. Record the controlled, numbered seal information on the Seal Log Sheet, if applicable.

Prepared by: ORNL TPM Organization

Approved by: March 1, 2004

Jeff Shelton, Manager (576-6401) ORNL TPM - Packaging Operations

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#### ATTACHMENT A

Container Specifications:		<u>Dimensions</u> : Top / Head Thickness	
Part Number;	CQ0502Q	(Gauge):	1.2mm (.047")
Drum Type:	Open Head	Body Thickness (Gauge):	0.9mm (.037")
Material Type:	CRCQ	Bottom Thickness (Gauge):	
Rolling Hoops:	N/A	Inside Diameter:	14"
Capacity:	5 Gallons	Overall Height:	10.25"
Closing Ring:	13 Gauge ".065"" LL	Performance Rating:	
Nut / Bolt Combination:	N/A	Packing Groups:	I, II and III
Cover Gasket:	3/8" Round EPDM	Specific Gravity:	1.8
ittings:	2" & 3/4" TS	Hydrostatic Test Pressure:	150 kPa
Chime Type	Box 5 Ply	Solids Gross Weight	60 kg.
Nuclear Vent	N/A	UN Rating:	1A2/X60/S
	<del></del>		
Cest Results:			
Test #1 Water Spray Test	(173,465 (6))	Test #4 Free Drop Test	(173.465(c))
Date:	11/9/01	Date:	11/12/01
Results:	Passed	Results of Drop (s):	Passed
Comments:	No leakage detected.	Drop Height:	1,2m
		Drop #1:	Pass
	and the second of the second	Drop #2:	
Test #2 Stacking Test (173	3.465(d))	Drop #3:	
Date:	11/9-11/12/01	Drop #4:	
Results:	Passed	Drop #5:	
Comments:	2800 lb. Load applied.	Drop #6:	
	No deformation detected.	Drop #7:	
		Crush Measurement:	
Test #3 Penetration Test (	(173.465(e))	Comments:	No leak detected with U\
Date:	11/12/2001		
Results of Drops:	Passed	Tested Gross Weight:	60 kgs.
	Pass .125" dent Cover	_	
7.0			<del></del>
			****
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Drop #1: Drop #2: Drop #3: Comments: This steel drum and similar severe UN testing requirem	Pass .125" dent Cover Pass .128" dent Cover Pass .125" dent Side Wall models meet and / or exceedents of 48 CFR 178.600-178.	Ring Gap: Bolt Torque: the requirements above by me	N/A N/A
Test Performed by:	The Solyion		
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