



All DeLong's Facilities

Procedure #:  
CHW-001

Drum Closure  
Procedure

Rev 1

**1. Purpose:**

1.1 The purpose of this procedure is to outline the method of closure for hazardous waste drums.

**2. Responsibility:**

2.1 The Environmental Health and Safety (EHS) Manager is the program coordinator, with overall responsibility for the program, including reviewing and updating this plan as necessary.

2.2 The EHS Manager and/or Supervisors are responsible for implementation of this procedure, and training of all employees with regard to this procedure.

**3. References:**

3.1 49 CFR 178 Specification for Packagings

**4. Procedure:**

4.1 Each container of hazardous waste will be close in accordance to manufacturer's specifications.

4.2 The manufacturer's closure instruction forms will be updated in the event a different supplier is chosen.

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1/1/17

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**CLOSURE NOTIFICATION ADVICE  
STEEL DRUMS**

(INCLUDING BUT NOT LIMITED TO 16-, 30-, AND 55-GAL DRUM SIZES)

Pursuant to the requirements of the U.S. Department of Transportation at 49 CFR 178.2(c)(1), we hereby provide this *Notification* of the closing method used for the containers sold to you under our *Quotation*. This method of closure should be used to ensure that your containers have been closed in the same manner as when they were initially tested. Under the applicable DOT regulations, any changes made to (a) the type, materials or dimensions of closures or (b) the method of closure may constitute a change to the design type of these containers, voiding the UN certification we have marked on them. If there are any questions regarding proper closing methods, please contact your Account Manager or Customer Service representative. Industrial Container Services highly recommends a copy of this *Notification* be kept on file and posted in a conspicuous location at your facility.

TO CLOSE FITTINGS IN HEADS OR COVERS:					
1. Use only the plugs and gaskets we have supplied with the drums. 2. Insert and tighten all plugs into their appropriate threaded flanges until snug. 3. Using a torque wrench, tighten each fitting to the correct torque. See below for correct torques. Torques are based on the closure manufacturers' recommendations.					
REQUIRED TORQUE					
SIZE & FITTING STYLE	STEEL PLUGS			NYLON OR POLY PLUGS	
	Buna Rubber Gasket	Poly Gasket	EPT Gasket	Buna Rubber Gasket	Poly Gasket
2" Rieke Type	30 ft. lbs.	40 ft. lbs.	N/A	20 ft. lbs.	20 ft. lbs.
1 1/2" Rieke Type	30 ft. lbs.	40 ft. lbs.	30 ft. lbs.	N/A	N/A
3/4" Rieke Type	15 ft. lbs.	20 ft. lbs.	N/A	9 ft. lbs.	9 ft. lbs.
2" Trisure Type	20 ft. lbs.	30 ft. lbs.	N/A	20 ft. lbs.	30 ft. lbs.
3/4" Trisure Type	12 ft. lbs.	20 ft. lbs.	N/A	8 ft. lbs.	8 ft. lbs.
2" Leak Lock Type	25 ft. lbs.	N/A	N/A	N/A	N/A
3/4" Leak Lock Type	20 ft. lbs.	N/A	N/A	N/A	N/A
Drums closed in this manner meet the UN performance oriented packaging standards test requirements for the container markings shown on our <i>Quotation</i> . It is the responsibility of the shipper to ensure that the container is closed according to these instructions prior to shipment per 49 CFR 173.22(a)(4).					

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CLOSURE NOTIFICATION ADVICE STEEL DRUMS

TO CLOSE OPEN HEAD DRUMS:

A. FOR CUSTOMERS WHO ASSEMBLE THE COVER AND RING AFTER FILLING:

- 1. Place cover on drum, using only the cover gasket we have supplied and which is described in our Quotation.
2. Snap the closing ring over the cover and the bead of the drum. Make sure the ring's lugs point down, toward the floor. Also make sure that sufficient downward pressure is applied to the cover so that the bottom edge of the closing ring is fully engaged under the bottom edge of the drum bead.
3. If there are fittings in the cover, the 3/4" bung should be oriented between 45 to 90 degrees from the ring lug. If no 3/4" bung, orient the 2" bung 45 to 90 degrees from the ring lug.
4. Insert the bolt through the lug without threads. Then screw lock nut on bolt (if provided see section 6). Finally, screw the bolt into the threaded lug.
5. Tighten the bolt in the locking ring lugs to 60 ft-lbs. of torque. While tightening the bolt, tap the entire perimeter of the locking ring with a mallet until there is no further loosening of the ring. Begin each tapping cycle 180 degrees across the drum cover from the locking ring lugs; repeat several times. Check to ensure that the ring is seated tightly against the bottom edge of the drum bead and cover and ring ends are not touching.
6. If jam nuts are provided, ensure nut spins freely between lugs during ring torquing process. Finger tighten jam nut against threaded lug of ring (metal to metal); then wrench tighten the jam nut an additional 14 to 28 degrees. Note: If Fas lok bolts or shoulder bolts are provided (which manufacturers are using at an increased rate), they do not require a jam nut for proper closure.

B. FOR CUSTOMERS WHO PURCHASE DRUMS ASSEMBLED:

- 1. Ensure that the locking ring, bolt and nut have not been disturbed from the time of our delivery.
2. After filling, close the fitting in the cover used for filling, as described on the reverse.
3. Check the tightness of the bolt and nut, per A.5 & 6, above. (Some loosening of the ring is inevitable, over time, because of gasket compression.) Ensure that torque levels meet those shown above.

Drums closed in the above manner meet the UN performance-oriented packaging standards test requirements for the container markings shown on the attached Quotation. It is the responsibility of the shipper to ensure that the container is closed according to these instructions prior to shipment per 49 CFR 173.22(a)(4).

Note: Consideration should be given to the possible effects heating and cooling may have on containers resulting in the need to tighten the closure(s). Drum gaskets will compress and lose their memory over time affecting their ability to seal. It is recommended that you limit to a minimum the time assembled gaskets are kept under full compression.

Under DOT regulations, any changes made to the type and dimensions of closures or the method of closure may constitute a change in design type of this packaging, voiding the certification we have marked on it and requiring retesting and recertification.

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