

## DRUM CLOSURE NOTIFICATIONS

ULINE in accordance to the requirements stated in the code of Federal Regulations 178.2 (c) (1) provides closure notification of all containers bearing U.N. Certification.

To comply with part 178.2 and to assist the shipper (our customer), we have listed the pertinent information which will enable you (the shipper) to fulfill your responsibility under part 173.22. You are required to provide closing information to any person to whom this package is transferred who may need to close the package prior to reshipment.

## STEEL OPEN HEAD DRUM (UN1A2)

All open head type drums (UN1A2) that are supplied with locking rings, bolts, gaskets and lids must be closed for shipment using only the components supplied and specified in the design qualification test for that drum.

### CLOSURE PROCEDURES

1. Place lid with gasket in place on top of drum curl.
2. Place ring around drum curl and lid, apply downward pressure, the use of a head compressor or press is recommended at approximately 50 psi.; to best allow ring to capture lid and drum curl and compress gasket. If a cover with bungs is used the gap in the ring should be in line with the center of the bungs.
3. For 5/8 bolt ring, and using a locking nut, insert bolt through the unthreaded lug and install on the locking nut. Then screw the bolt into the threaded lug. Tighten bolt to a minimum of 60 ft. lbs of torque, then tighten lock nut against lug . When using the Fas Lok Bolts (the bolts with a large diameter and no threads after the bolt head), it creates a frictional fit and eliminates the need for a lock nut. Also tighten the Fas Lok bolt to a minimum 60 ft. lb of torque. For 5/8 bolt that have 2 unthreaded lugs or a ring with one threaded lug and one unthreaded with the lugs attached to the very end of the ring, with no space for a lock nut between lugs, insert the bolt through both lugs and then install the locking nut. This type of ring needs to have a gap of approximately 1/8" or less. For 3/8 bolt and 5/16 bolts, insert the bolt through the unthreaded lugs. Place a washer then the proper locking nut and start to tighten.
4. Tighten the bolt while tapping around the entire perimeter of the ring with a dead blow mallet or metal hammer to assure the ring compresses the gasket between the lid and bead. The bottom of the closing ring must tighten under the top curl of the body and top of the lid when fully assembled.
5. Tighten 12 gauge bolt ring with 5/8" bolts to a minimum of 60 – 80 ft lbs. When properly assembled the gap between the ends of the ring should be as close as possible and may exceed 1/4" on reconditioned drums, but not exceed 1/4" on new drums. Tighten 14 or 16 gauge bolt rings with 5/16 bolt or 3/8 bolt to a minimum of 12 – 15 ft lbs. When fully assembled, the gap between the free ends of the ring should not exceed 1/4" and should not touch.
6. For all 5/8 bolts, except Fas Lok, tighten the locking nut against the unthreaded lug to prevent the bolt from backing out of the closing ring.
7. If using a lever type lock ring, slowly close the lever while using a mallet to assist in closing. Engage latch to lock lever in place.

## REQUIRED TORQUE SPECIFICATIONS



**NOTE:** ULINE does not ship containers to customers with closures secured to compliance specifications. It is the responsibility of the individual who fills the container to ensure the container is in UN Compliance before shipping. Contact ULINE with questions regarding proper closing methods.



**CAUTION!** Use only the plugs and gaskets supplied with the drums. Insert and tighten all plugs into their appropriate threaded flanges until snug. Using a torque wrench, tighten each fitting to the correct torque. Torque is based on the manufacturers' closure recommendations. Drums closed in this manner meet the UN performance oriented packaging standards test requirements for the container markings shipped.



**CAUTION!** After filling and prior to transport, the shipper should check the closures to determine if closures need to be tightened due to heating, cooling or gasket relaxation.

SIZE AND FITTING STYLE	STEEL PLUGS – EPDM GASKET	
	TORQUE	GAP
American Flange 2" Steel	15 to 22 ft. lbs.	—
American Flange 3/4" Steel	8 to 15 ft. lbs.	—
12ga Bolt Ring	60 ft. lbs.	1/8" to 5/8"