

UN HM - 181 Requirements (Closure Instructions)

Mid-America Steel Drum Co., Inc. certifies that the drums we ship meet the requirements stated in part 178, subparts L and M. If, after receiving our drums, you, as the filler and most likely the next shipper, alter the drums in any way, you release Mid-America Steel Drum Co., Inc. from its responsibility as the drum manufacturer.

To comply with part 178.2 and to assist the shipper (our customer), we have listed the pertinent information which will enable the shipper to fulfill its responsibility under part 173.22 if the drums we shipped have been altered in any manner from the condition they were at the time of delivery.

Recommended Torque Specification

<u>Tri-Sure Style Plugs / Tri-Sure Style Steel Flanges</u>	Recommended Minimum Torque Specification	
	<u>3/4"</u>	<u>2"</u>
Steel or Zinc Die Cast w/ Rubber Gasket	12 ft. lbs.	20 ft. lbs.
Steel or Zinc Die Cast w/ Polyethylene and Teflon Gasket	20 ft. lbs.	30 ft. lbs.
Self-Gasketing Polyethylene Plugs	5 ft. lbs.	9 ft. lbs.
High Density Polyethylene w/ Rubber Gasket	8 ft. lbs.	15 ft. lbs.
Nylon or Polypropylene w/ Poly Gasket	8 ft. lbs.	30 ft. lbs.
Nylon or Polypropylene w/ Rubber Gasket	8 ft. lbs.	20 ft. lbs.

<u>Rieke Style Plugs / Rieke Style Steel Flanges</u>	Recommended Minimum Torque Specification		
	<u>3/4"</u>	<u>2"</u>	<u>1 1/2"</u>
Steel w/ Buna Gasket	15 ft. lbs.	30 ft. lbs.	30 ft. lbs.
Steel w/ Polyethylene Gasket	20 ft. lbs.	40 ft. lbs.	40 ft. lbs.
Steel w/ Dapon or Visecar Gasket	15 ft. lbs.	30 ft. lbs.	30 ft. lbs.
Steel w/ EPT or EPDM Gasket	15 ft. lbs.	30 ft. lbs.	30 ft. lbs.
Nylon Plug w/ EPT or EPDM Gasket	9 ft. lbs.	20 ft. lbs.	
Nylon Plug w/ Poly Gasket	9 ft. lbs.	20 ft. lbs.	

<u>UN1H1 Packaging</u>	Recommended Minimum Torque Specification
2" Buttress Plug with EPDM gasket	250 in-lb
2" NPS Plug with EPDM gasket	250 in-lb

- When a ring is closed on a drum, a 1/4" to 1/2" gap is ideal to allow for the 1/8" plus/minus in the ring length. The two ends of the ring should not touch and prevent the ring from closing all the way.
- As for pressure in ft. lbs. required to close a ring, it will vary according to the gasket used or gauge of steel used in a drum. Sponge gaskets will compress easier than tubular gaskets.
- When using 16 or 18 gauge rings with 3/4" wide steel lugs, use only enough pressure to pull the ends up tight. Once you reach that point the lugs will bend, the bolt might also bend which could cause trouble removing the bolt. Tapping on the outside of the ring with a fibre mallet while tightening the bolt will lessen the pressure necessary to close the ring properly.
- A 12 gauge or 17H ring will take a considerable amount of pressure to close. A torque of about 40 ft. lbs. should normally be enough to close the ring. Once the ring is sealed properly and is completely closed, do not apply excessive pressure on the bolt. This could cause threads of the bolt to distort making it difficult, if not impossible, to remove the bolt.

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