

**STEEL DRUM ASSEMBLY GUIDELINES**

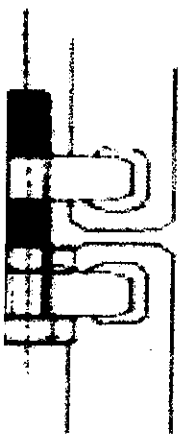
55 GAL BLK/WHT RECONDITIONED O/H DRUM EPOXY PHENOLIC LINED W/ 2 & 3/4" STEEL FITTINGS W/ 12 GA BOLT RING \*\*

EMBOSSED \*\*

- 1) Covers must be **firmly** seated on the top of the drum with the gasket in place. Care must be taken to ensure that the gasket has not become dislodged, looped, or twisted during either removal or placement of the cover.

- 2) Snap the closing ring over the curl area of the drum, making sure that it is seated over the entire perimeter. For some ring/gasket combinations a mechanical head compressing device may be necessary to accomplish this.

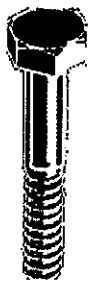
- 3) Tighten the ring bolt with a torque wrench while using downward pressure on the cover and striking the outside of the closing ring with a non-sparking mallet. In order to compress the gasket uniformly, strike **FIRMLY** around the entire perimeter of the ring while tightening. Gradually tighten, while striking the entire perimeter of the ring until the torque stabilizes at 60-65 ft. lbs. Re-strike the entire perimeter of ring again and tighten bolt. Repeat these steps until bolt tightening resistance does not change.
- 4) For bolt ring closures, the gap between the closing ring ends should be between 1/16"-3/8". (The torque applied to the bolt should be at 60-65 ft.-lb.)



**CLOSING RINGS/BOLT LOCKING RINGS**

**FOR OPENHEAD DRUMS WITH LOCKING RINGS**

No jam nut needed with these shoulder bolts



The locking nut required for the proper application of 17H style rings (with non shoulder bolts) must be placed between the lugs on ring while tightening the top bolt. When bolt has been torqued as required, jam nut must be firmly tightened against the unthreaded lug using a open end wrench.

- 5) For side lever lock rings, the ring latch must be snapped securely in place. For top lever locking rings, the top lever must be fully locked into place under the securing bar.
- 6) Sealing the eyelet of lever rings is necessary not only for evidence of tampering, but for the integrity of the closure.

**SPECIAL NOTES**

- A) The components of a drum from one drum manufacturer should not be intermingled with those of another. Components from the same manufacturer from different drum specifications likewise should not be intermingled. This ensures proper fit of the subassemblies and performance of the drum.
- B) The use of non-sparking tools is recommended to close drums containing hazardous materials.

INSTRUCTIONS

**STEEL DRUM  
ASSEMBLY GUIDELINES  
ROCHE BROTHERS & ROCHE MANUFACTURING**

**ROUND HEAD PLUGS/RECOMMENDED TORQUES**



**Steel Plugs w/**

Rubber gaskets	$\frac{3}{4}$ "	20 ft.-lb.
Polyethylene or Teflon gaskets	20 ft.-lb.	30 ft.-lb.

**Zinc Die Cast Plugs w/**

Rubber gaskets	12 ft.-lb.	20 ft.-lb.
Polyethylene or Teflon gaskets	20 ft.-lb.	30 ft.-lb.

**Nylon or Polypropylene Plugs w/**

Rubber gaskets	8 ft.-lb.	20 ft.-lb.
Polyethylene or Teflon gaskets	8 ft.-lb.	30 ft.-lb.

**Hi-Density Polyethylene Plugs w/**

rubber gaskets	8 ft.-lb.	15 ft.-lb.
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**Self Gasketing Polyethylene Plug**

	5 ft.-lb.	12 ft.-lb.
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**STEEL DRUM  
ASSEMBLY GUIDELINES**

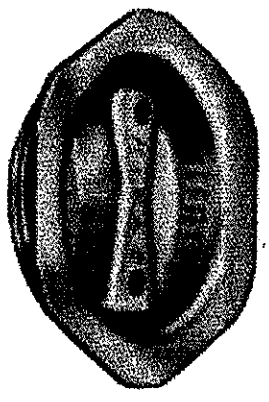
After filling out container it must be properly closed before being offered for transportation.

The assembly guidelines listed below should be followed to ensure the drum will perform to the marking level indicated thereon.

**DRUM PLUGS**

Tighten all plugs to the recommended torque, while taking care that the plugs are not cross threaded into the flange and that the plug gaskets do not become looped or twisted while tightening.

**HEX HEAD PLUGS/RECOMMENDED TORQUE**



	$\frac{2}{2}$ "	
Rubber Gaskets	30 ft.-lb.	15 ft.-lb.
Plastic Gaskets	40 ft.-lb.	20 ft.-lb.

**PLASTIC PLUGS**

	2"	20 ft.-lb.
	$\frac{3}{4}$ "	9 ft.-lb.

**CLOSURE**

**INSTRUCTIONS**

**SCHUETZ**  
**packaging update**  
**PACKAGING CLOSURE INFORMATION**  
March 6, 2017

**CLOSURE SPECIFICATIONS FOR TIGHT HEAD DRUMS**

**PLUGS MUST BE TORQUED TO THE FOLLOWING**

**2" NPS AND 2" BUTTRESS - 150 kPa and 250 kPa - 30 FT LBS.**

**Dip tubes - 20 ft lbs. 3/4" NPT - 9 FT LBS**

**Note: Closures must have gaskets to seal**

**CLOSURE SPECIFICATIONS FOR OPEN HEAD DRUMS**

**CLOSE AND SECURE LID WITH LOCKING RING - ATTACH HOLDING PIN FOR HANDLE TO KEEP RING CLOSED.**

**PLUGS MUST BE TORQUED TO THE FOLLOWING :**

**2" NPS AND 2" BUTTRESS - 20 FT LBS**

**3/4" NPS - 9 FT LBS**

**note: closures must have gaskets to seal**

**CLOSURE SPECIFICATIONS FOR IBC'S**

**FILL PORT CAP AND VALVE MUST BE TORQUED TO THE FOLLOWING:**

**6" AND 9" FILL PORT CAP - 75 FT LBS**

**2" plug in 6" or 9" fill port cap must be torqued to 15 ft lbs. ( Schuetz does not recommend that you remove this plug. Filling should be done through the 6" or 9" opening )**

**\* 56 x 4 mm plug - 20 ft lbs**

**Dip tubes - 20 ft lbs**

**Old style valves and EVOH valves**

**VALVE NUT - 55 FT LBS**

**note: caps, valves, and plugs must have gaskets to seal**

**New Style valves - valve must have gasket to seal. Two complete turns and line up the hole in the valve body and the hole in the bottle insert and insert clip.**

**\* - Underline indicates the latest change to the instructions.**

TIGHT HEAD DRUM WITH FITTINGS  
 OPEN HEAD DRUM WITH FITTINGS

FORM # FIT-1

**GREIF  
 CLOSURE INSTRUCTIONS FOR FITTINGS**

Pursuant to the requirements of the Department of Transportation in CFR 49 Part 178.2(c)(1), 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. If there is any question regarding proper closing methods, contact your local Greif salesperson or manufacturing facility. "Effective until further notice".

**To Close:**

- 1) Insert and tighten all fittings into their appropriate threaded flanges until snug.
- 2) Using a torque wrench, tighten each fitting to the correct torque. See the list below for correct torques. Torques are based on closure manufacturer's recommendations.
- 3) If this is an open head drum, follow the additional closing instructions for top head.
- 4) Drums closed in this manner have met the UN performance test requirements as specified in the container markings.

**Fittings:**

<u>Size/Thread</u>		<u>Flange</u>	<u>Plug</u>	<u>Torque Foot Lbs</u>
Tri-Sure	2" BTR	Poly	Poly	20
Tri-Sure	2" NPS	Poly	Poly	20
Tri-Sure	3/4" NPS	Poly	Poly	9

**Drum Code:** PIK18

**Report #:** P-198-HZ-032917

**Date Tested:** 3/29/2017

**Technician:** DP (Sample drums were closed exactly as described above.)

This UN test certification report form is a sample of the closure notification form. The data on this form reflect the components of the tested sample drums; it details the closing methods followed at the lab for the fittings supplied.

The closure notification form should be completed using information from the actual customer specification, referencing fitting type, manufacturer and gasket, along with the associated torque values for the closures supplied. These values may differ from the sample closing instructions supplied with the UN

To obtain this form for your customer service use, contact: Greif -Testing and Technical Services  
 366 Greif Parkway, Delaware, OH 43015  
 (740) 657-6565

PDC0015SC00001 - 15 GAL NAT T/H HDPE W/ 2" &amp; 3/4" PLUG #RS1360 UN EMBOSSED



15 Gallon RS Style Tighthhead Closure Instructions	
Form Number: RD-ETS-1002	Version: 1
Issued by: Maria Childers	Version Date: 20-Sep-05
Contact: 1-317-298-8155 x161	Page 1 of 1

- PURPOSE:** To ensure the 2" Fine and Buttress Closure is properly sealed when assembled on a Tighthhead Container.
- SIGNIFIGANCE:** The DOT/UN Performance Certification only applies to a Tight Head Container that is closed per this procedure. The sealing performance of the 2" Fine & Buttress Plug Closure is compromised if the top surface of the neck is rough, has excessive burr, or is not clean; in addition to, if the gasket is damaged, twisted, not clean or not properly seated against the bung plug flange. The Closures are only to be assembled on the container after all sealing surfaces pass inspection.
- APPARATUS:** 2" Fine & Buttress Plug Head Fixtures  
Torque Wrench (Set to 20 ft-lbs or 240 in-lbs)
- PROCEDURE:**
1. Inspect the top surface of the 2" fine & buttress threaded holes of the containers to wnsure an acceptable sealing surface.
  2. Inspect the closure to ensure the gasket is properly assembled and is clean.
  3. Start the closure on the neck by hand, rotating the closure in a clock-wise direction. Take care not to cross thread the closure; this will result in damage to the closure or to the neck finish.
  4. Using the 2" Fine & Buttress Plug Torque Head Fixture mounted onto a torque wrench, tighten the closures to 20 ft-lbs (240 in-lbs).
- APPARATUS:** 3/4" Fine Thread Bung  
Torque Wrench (Set to 7 ft-lbs or 84 in-lbs)
- PROCEDURE:**
1. Check to ensure the 3/4" fine thread bungs have been fitted with gaskets.
  2. Prior to installing the bung plug into the container, be sure the gasket has been properly seated against th bung plug flange.
  3. With the gasket properly seated, install the bung plug. with a clockwise rotation, into the 3/4" NPS hole of the container.
  4. Be careful not to cross thread the bung plug or damage to the thread may occur.
  5. Torque of 7 ft-lbs (84 in-lbs) for all 3/4" NPS bungs plugs are required.
- NOTE:** Substitution of any of the components listed above may render the UN Certification Invalid.

**GREIF**  
**CLOSURE INSTRUCTIONS FOR FITTINGS**

Pursuant to the requirements of the Department of Transportation in CFR 49 Part 178.2(c)(1), 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. If there is any question regarding proper closing methods, contact your local Greif salesperson or manufacturing facility. "Effective until further notice".

**To Close:**

- 1) Insert and tighten all fittings into their appropriate threaded flanges until snug.
- 2) Using a torque wrench, tighten each fitting to the correct torque. See the list below for correct torques. Torques are based on closure manufacturer's recommendations.
- 3) If this is an open head drum, follow the additional closing instructions for top head.
- 4) Drums closed in this manner have met the UN performance test requirements as specified in the container markings.

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**Fittings:**

<u>Size/Thread</u>		<u>Flange</u>	<u>Plug</u>	<u>Torque Foot Lbs</u>
Rieke	2" BTR Vented	Poly	Poly	20
Tri-Sure	2" NPS	Poly	Poly	20

**Drum Code:** GP30V

**Report #:** P-123-HZ-080216

**Date Tested:** 8/2/2016

**Technician:** DP (Sample drums were closed exactly as described above.)

This UN test certification report form is a sample of the closure notification form. The data on this form reflect the components of the tested sample drums; it details the closing methods followed at the lab for the fittings supplied.

The closure notification form should be completed using information from the actual customer specification, referencing fitting type, manufacturer and gasket, along with the associated torque values for the closures supplied. These values may differ from the sample closing instructions supplied with the UN

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366 Greif Parkway, Delaware, OH 43015  
(740) 657-6565

PDO0030RC40001 - 30 GAL BLUE O/H HDPE DRUM NAT CVR 2 x 3/4" FTGS W/ GASKET &amp; LEVER LOCK RING UN

EMBOSSED

PDO0055RC40001 - 55 GAL BLUE O/H REGRIND HDPE DRUM NAT CVR 2 x 3/4" FTGS W/ GASKET &amp; LEVER LOCK RING UN EMBOSSED

# **RECYCLE INC. EAST**

20-A HARMICH ROAD · S. PLAINFIELD · NEW JERSEY · 07080 · (908) 756-2200 · FAX (908) 757-2211

## **DuraDrum Closure Instructions**

**October 2008****Revised August 2013**

Pursuant to the requirements of the Department of Transportation in CFR 49 Part 178.2 (c), this is your notification of the closing method used for the containers sold to you. 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. If there is any question regarding proper closing methods, contact your local Recycle salesperson or manufacturing facility.

### **PRIOR TO CLOSING:**

Inspect each closure to ensure that the closure has the proper gasket and that both closure and gasket are in good condition. Inspect the sealing surface for damage and make sure the threads and sealing surfaces are dry and in good condition.

**Product Name – 55 - 30 Gallon Open Head DuraDrum**  
**Product Code – DDOH**

#### **To Close:**

- 1) Place cover on drum.
- 2) Firmly apply downward pressure on the lid to snap the cover into the drum opening.
- 3) Snap the closing ring over the cover and top lip of drum. Make sure that the writing on the closure lever is right side up. Also make sure that the bottom edge of the closing ring engages under the top lip of the drum.
- 4) Pull the locking lever closed, at the same time, tap the outside edge of the closing ring, beginning directly opposite the closing lever, with a rubber mallet until the lever is fully closed against the edge of the ring.
- 5) Snap the latch into the lever until it locks.
- 6) Drums closed in the manner have met the UN performance test requirements as specified in the container markings.
- 7) If the Flat Container Accessories cover has bung openings the bungs must be torque as follows: 2 inch to 20 foot -pounds – ¾ inch 9 foot - pounds.
- 8) If the Ribbed IPCC cover has bung openings the bungs must be torque as follows: 2 inch to 20 foot pounds and the ¾ inch to 7 foot pounds.

**Product Name 55 Gallon Tight Head DuraDrum with 2 – 2inch fittings (Butress /NPT)**  
**Product Code – DDTH**

#### **To Close:**

- 1) Both fittings must be tightened after filling
- 2) Do not cross thread fittings. Use proper thread type (NPT or Butress) in matching bunghole
- 3) Using a torque wrench of known calibration accuracy slowly apply 25 foot-pound to each fitting.
- 4) Drums closed in this manner have met the UN performance test requirements as specified on the container markings.

Retain this form for your records; Department of Transportation requires one year retention of this record (CFR49.178.2 (c) (2)).

**GREIF  
 CLOSURE INSTRUCTIONS FOR FITTINGS**

Pursuant to the requirements of the Department of Transportation in CFR 49 Part 178.2(c)(1), 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. If there is any question regarding proper closing methods, contact your local Greif salesperson or manufacturing facility. "Effective until further notice".

**To Close:**

- 1) Insert and tighten all fittings into their appropriate threaded flanges until snug.
- 2) Using a torque wrench, tighten each fitting to the correct torque. See the list below for correct torques. Torques are based on closure manufacturer's recommendations.
- 3) If this is an open head drum, follow the additional closing instructions for top head.
- 4) Drums closed in this manner have met the UN performance test requirements as specified in the container markings.

**Fittings:**

<u>Size/Thread</u>		<u>Flange</u>	<u>Plug</u>	<u>Torque Foot Lbs</u>
Tri-Sure	2" BTR	Poly	Poly	20
Tri-Sure	2" NPS	Poly	Poly	20

**Drum Code:** GP30

**Report #:** P-124-HZ-080816

**Date Tested:** 8/8/2016

**Technician:** JC (Sample drums were closed exactly as described above.)

This UN test certification report form is a sample of the closure notification form. The data on this form reflect the components of the tested sample drums; it details the closing methods followed at the lab for the fittings supplied.

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