



# CLOSURE NOTIFICATION MISCELLANEOUS CONTAINERS

rev Jan 2023

This notification is provided as required in 49 CFR 178.2(c). Instructions attached are provided from Original Equipment Manufacturers (OEMs) for steel drums, fiber drums, pails and other packaging, and describe procedures for closing packagings prior to shipment. All packaging supplied with lids, gaskets, clamp bands, locking rings, bolt rings, bungs, plugs, caps or other fittings must be closed for shipment using only the components supplied.

General Instructions – see attached OEM documents for detailed instructions.

## **Prior to closing:**

1. Inspect each closure to ensure: a) proper gasket is in place; b) threads and sealing surfaces are dry; c) both closure and gasket are in good condition.
2. Replace any defective gaskets, plugs or lids with new, defect free parts identical to the original packaging design.

## **Closing plug and cap fittings:**

1. Insert the plug or cap into the appropriate opening and screw down “hand tight” until the gasket is in contact with the sealing surface.
2. Using a torque wrench capable of applying the proper torque as specified below, tighten the plug or cap until it reaches the pre-set torque as indicated by a release or click. Torque

## **ATTACHED OEM DOCUMENTS:**

1. Greif
2. Mauser
3. Schütz
4. MM

**STEEL DRUM CLOSING STATEMENT  
CLOSURE NOTIFICATION  
(CFR 49 PART 178 – 178.2)**



Steel containers with fittings should be closed after filling and before transportation in accordance with the tightening torques in Appendix 1. Open Head Steel containers with Bolt Ring closures should have the closing ring torques checked after filling and before transportation in accordance with Appendix 2.

<b>APPENDIX 1</b>				
Closing Torques for Plug/Gasket Combinations				
<b>NON-COMPOSITE DRUMS</b>				
PLUG TYPE	GASKETS	TIGHTENING TORQUE in Ft-Lbs		
		¾" Plug	2" Plug	1½" Plug
American Flange Steel	Buna, EPDM, Neoprene, Nitrile/Buna N, Rubber, Silicone, Viton	13	20	
American Flange Steel	Poly, Poly O-Ring, Poly Irradiated, Poly Seal	16	20	
American Flange Steel	Teflon	10	20	
American Flange Plastic or Nylon	All	9	22	
Rieke Steel	Buna, Dapon, EPDM, Silicone, Teflon, Viton	15	30	30
Rieke Steel	Poly, Poly Irradiated	20	40	40
Rieke Plastic or Nylon	All	9	20	
Rieke TOV Steel	Buna, Dapon, EPDM, Silicone, Teflon, Viton	15	300	
Rieke TOV Steel	Poly, Poly Irradiated	20	40	
Rieke TOV Plastic or Nylon	All	9	20	
Technocraft TiteSeal Steel	Buna, EPDM, Viton	8 – 12	10 – 25	
Technocraft TiteSeal Steel	Poly, Poly Irradiated	8 – 15	14 – 25	
Technocraft TiteSeal Nylon	Buna, EPDM	8 – 12	10 – 25	
Technocraft TiteSeal Nylon	Poly, Poly Irradiated	8 – 12	14 – 25	
<b>NOTE:</b> In combination steel plugs, the ¾" inner plug should have a torque of 4-5 Ft-Lbs				
<b>COMPOSITE DRUMS</b>				
PLUG TYPE	GASKETS	TIGHTENING TORQUE in Ft-Lbs		
		2" NPS	2" Buttruss	56x4
American Flange PE or PP	EPDM, O-Ring, Poly Irradiated, Rubber, Viton	20	20	9
<b>NOTE:</b> In combination poly plugs, the ¾" inner plug should have a torque of 3 Ft-Lbs				

<b>APPENDIX 2</b>		
Basic Closing Ring Instructions and Closing Torques for Bolt Ring Closures		
<b>BOLT RING</b>	Place cover on the drum, making sure gasket is in place. Snap the closing ring over the cover and top lip of drum, making sure that the bottom edge of the closing ring engages under the lip of the drum, and the ring lugs point down. Insert the bolt through the lug without threads. Next (if applicable), screw on the locking jam nut. Finally, screw the bolt into the threaded lug. While tightening the bolt, tap along the entire perimeter of the ring with a mallet, starting directly across from the bolt. Tighten the bolt according to the chart below. If used, tighten the jam or locking nut against the lug without threads. The ends of the ring should not touch, and the gap should be no more than 5/8". If the bolt ring is combined with an inside lever-lok, pull the lever until fully closed, and hook under the latch. (Combination rings use the same torque values as standard Bolt Ring)	
BOLT RING CLOSURE		TIGHTENING TORQUE
12 Gauge Bolt Ring, All types except composites		60 Ft-Lbs
16 Gauge or 18 Gauge Bolt Ring, All types except composite		8 – 15 Ft-Lbs
12 Gauge Bolt Ring, Composite		30 Ft-Lbs
16 Gauge or 18 Gauge Bolt Ring, Composite		15 Ft-Lbs
<b>LEVER-LOK, OUTSIDE LEVER</b>	Place cover on the drum, making sure the gasket is in place. Snap the closing ring over the cover and top lip of the drum, making sure that the bottom edge of the closing ring engages under the lip of the drum. Pull the locking lever closed, and at the same time, tap the edge of the closing ring with a mallet, beginning directly opposite the closing lever until the lever is fully closed against the edge of the ring. Snap the latch into the lever until it locks, then apply a sealing wire or other sealing device through the hole in the latch lever.	
<b>LEVER-LOK, INSIDE LEVER</b>	Place cover on the drum, making sure the gasket is in place. Snap the closing ring over the cover and top lip of the drum, making sure that the bottom edge of the closing ring engages under the lip of the drum. Pull the locking lever closed, and at the same time, tap the edge of the closing ring with a mallet, beginning directly opposite the closing lever until the lever is fully closed and hooked under the latch. Apply a sealing wire or other sealing device through the hole in the latch lever.	

United States Department of Transportation regulations state that packaging manufacturers are required to notify each person to whom the packaging is transferred of all requirements not met at the time of transfer. This requirement is given in Title 49, Code of Federal Regulations (49 CFR), Part 178 Specifications for Packagings, § 178.2 (c). In addition this Paragraph requires the closing information to be provided to any person to whom this package is transferred who may need to close the packaging prior to re-shipment. Furthermore, it is the shipper's responsibility as set forth in §173.22(a)(4) to ensure that these closing instructions are carried out as described. In order to ensure the instructions are followed in a manner to result in safe transport of hazardous materials the shipper is obligated, as set forth in § 172.704(a)(4), namely - function specific training - to train his/her employees in the correct way to close the packaging for shipment. In order to fulfill this obligation the shipper often turns to the packaging manufacturer for this training since the manufacturer has designed, produced and tested the packaging to meet UN performance standards. MAUSER is prepared to provide this training in addition to supplying closing instructions. It has been the practice of MAUSER to send closing instructions attached to the shipping documents with each shipment of drums. This document provides specific information on closing MAUSER packagings.

**These closing instructions must be given to the individuals responsible for closing the packagings prior to shipment. Many companies use electronic copies as site specific work instructions and/or use laminated hard copies posted at the fill lines for reference by the fill line operators. A hard copy (printed) must be maintained by the filler or offeror for shipment.**

The following tables and text give examples of the parts and closing torque required to prepare the drum or IBC for shipment so that it is capable of meeting the performance standards indicated by the UN marking on the side or top of the packaging. **MAUSER recommends that only parts that have been tested and certified by MAUSER be used to close the packagings for shipment.** Each closure is supplied with the proper gasket in accordance with the UN design type tests for the packaging supplied. In the case of removable head drums the lids, gaskets and locking rings are supplied as tested. In the case of Intermediate Bulk Containers, IBC's, the lid, gaskets, plugs, cages, pallets, valves and service equipment are supplied as tested.

Pictures of the plugs, lids and rings may be found on the website under products and services/accessories. If a specific closure is not listed on the website or your specific closure is not listed below, please contact MAUSER for assistance.

#### **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. Replace any defective gaskets, plugs or lids with new, defect free parts as sold with the original packaging.**

#### **CLOSING PROCEDURES FOR PLUGS AND CAPS:**

- 1. The plug or cap is inserted into the appropriate opening and screwed down "hand tight" until the gasket is in contact with the sealing surface.**
- 2. A torque wrench capable of applying the proper torque to the fitting as specified by the closing instructions following is then used to tighten the plug or cap until it reaches the pre-set torque as indicated by a release or click. These wrenches should be calibrated at least annually. Adjustable wrenches available at hardware stores, auto parts stores, and through equipment catalog suppliers and drum parts suppliers.**

## PLASTIC NON-REMOVABLE HEAD DRUMS

All non-removable head, UN 1H1, 1H1W Plastic Drums, 49 CFR § 178.509(a)(1), 15 gallon to 65 gallon nominal capacity supplied with plug or screw cap closures with gaskets must be **closed for shipment using only the closures and gaskets supplied and specified** in the design qualification test for the drum as indicated below:

	Part Size / Part Number (Plug number with gasket) <sup>i</sup>	Torque
A	<b>2-inch buttress:</b> L10 EPDM; L10B Buna; L10VT FPM <sup>ii</sup>	20-25 ft.-lbs.
B	<b>2-inch NPS:</b> L16 EPDM <sup>ii</sup> ; L16B Buna; L16VT FPM; L16RVCLG	20-25 ft.-lbs.
C	<b>2-inch buttress:</b> L10V Vented EPDM; L10V-B Buna; L10V-VT FPM	20-25 ft.-lbs.
D	<b>2-inch NPS:</b> L16 Vented EPDM; L16V Buna; L16VT FPM	20-25 ft.-lbs.
E	<b>2-inch NPS:</b> L16R with L12EP	20-25 ft.-lbs.
F	<b>2-inch ACT buttress:</b> SA10B with A72	30-40 ft.-lbs.
G	<b>3/4-inch NPS:</b> C34 or C39 (S) AD with C31 EPDM; C31 Silicone	6-9 ft.-lbs.
H	L10R-HD with L11F-HD; L16RHD; and Santoprene® gaskets	25-30 ft.-lbs.
I	<b>Metric:</b> 70x6 BCS LR10W with LR11EP; 70x6 BCS LR10W with LR11VT	35-40 ft.-lbs.
J	<b>Metric:</b> 56x4 BCS LR17 with LR12EP	20-25 ft.-lbs.
K	<b>Polycon® II :</b> 2-inch NPS L16-6RK/EPDM	37-42 ft.-lbs.
L	<b>Polycon® II :</b> 3/4-inch NPD C34-6RK/EPDM	8-10 ft.-lbs.

## COMPOSITE DRUMS

All non-removable head, UN 6HA1, Composite drums, 49 CFR § 178.522(a)(1), 55 gallon nominal capacity supplied with plug or screw cap closures with gaskets must be **closed for shipment using only the closures and gaskets supplied and specified** in the design qualification test for the drum as indicated below:

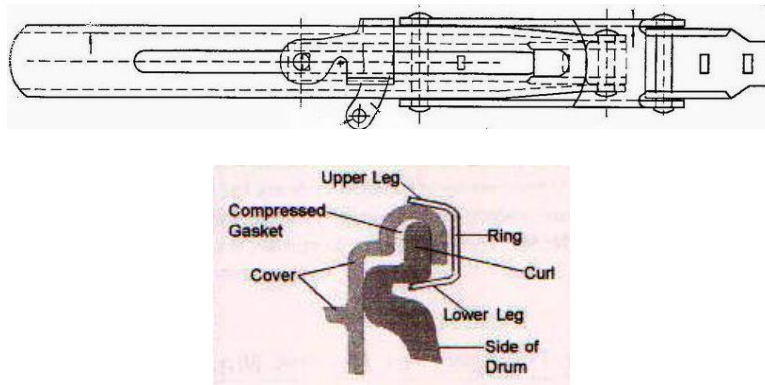
	Part Size / Part Number (Plug number with gasket)	Torque
A	<b>HDPE Liner 6HA1/X1.8/350 and X1.8/300: 2 inch double buttress L-10xx with L11EP-xx</b>	29-32 ft-lbs
B	<b>Liner 5506: 2-inch NPS:</b> L16-xx with L12-xx	14-18 ft.-lbs.
C	<b>Liner 5506: ¾ inch NPS:</b> C39-xx	4-6 ft.-lbs.
D	<b>HDPE Liner 6HA1/Y1.8/100: 2-inch double buttress:</b> L10-xx with L11EP-xx	21-25 ft.-lbs.
E	<b>LDPE Liner 6HA1/Y1.8/100 and Y2.0/100: 2-inch combination plug:</b> A16 EPG-TR	14-18 ft.-lbs.
F	<b>LDPE Liner 6HA1/Y1.8/100 and Y2.0/100: ¾ inch NPS:</b> C34TR with C31EP-TR gasket	4-6 ft.-lbs.
G	<b>Liner 5510 :2-inch double buttress:</b> L10-HD with L11-B4F	25-30 ft.-lbs.
H	<b>Nylon/Polypropylene 2 inch with EPDM Gasket</b>	12-15 ft.-lbs.

## PLASTIC REMOVABLE HEAD DRUMS

	Part Size / Part Number (Plug number with gasket)	Plug Torque
A	<b>Vanguard ® Lid with 2-inch Self-seal type NPS plug:</b>	7-9 ft.-lbs.
B	<b>Vanguard ® Lid with ¾ inch Self-seal type NPS plug:</b>	5-7 ft.-lbs.

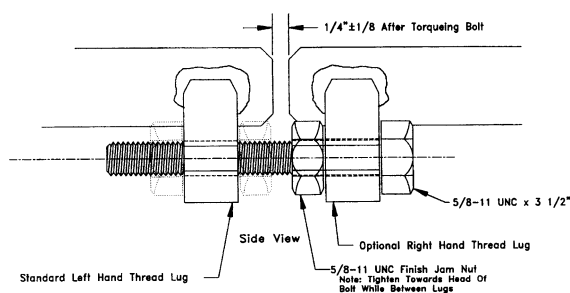
1. All removable head, UN 1H2, Plastic Drums, 49 CFR § 178.509(a)(2), of nominal capacity 15 to 60 U.S. gallons supplied with plastic lids, gaskets and associated clamp bands, or locking rings, or bolt rings, must be **closed for shipment using only the components supplied and specified** in the design qualification tests according to the following installation instructions:
  - Place drum lid with gasket and selected clamp band as supplied on the top opening of the drum body.
  - Firmly place lid onto top opening by applying downward pressure to lid above drum sidewall.
  - While pressing down on lid, engage locking mechanism of clamp band to secure the lid in place. Make sure the locking mechanism is completely latched. Insert locking tab into slots in lever lock handle.

#### Lever Lock Side View



2. Please note that the Vanguard 57 gallon HLR drum carries a liquid rating Y1.2/100 with a bolt ring or lever lock closure. This is valid when the lid is factory installed with a lid press. This drum should be filled through the 2-inch opening in the lid and closed as in subsections the steps listed above. If the lid is removed the liquid rating is no longer valid unless a new lid is installed with a lid press and a MAUSER bolt ring or lever lock is used for closure.
3. The MAUSER removable head plastic drum may be provided with a bolt ring closing device. This bolt ring is closed as follows:
  - Place lid with gasket in place, as supplied, on the curl at the top of the drum body.
  - Place bolt ring around the drum head and curl.
  - Using a head compressor, apply force to the top of the drum head assembly to compress head gasket.
  - Drive bolt into ring until the ends of the bolt ring are at a 3/8-inch or less ring gap.
  - If a head compressor is not available, start bolt into lug, alternating tapping of ring with a mallet and drive bolt with a wrench, until bolt ring ends meet the above requirements.
  - When ring has been tightened as required, the jam nut, if supplied, must be tightened against the left threaded eye.
  - In the case of the Vanguard V57 HLR drum supplied with a bolt ring for liquid service, the bolt has no jam nut but uses a shoulder type bolt. Follow steps 3 a through f tightening the bolt until the shoulder meets the threaded eye.

## Bolt Ring Closure –Plastic Drums



## STEEL NON-REMOVABLE HEAD DRUMS

1. All non-removable head, UN 1A1, Steel Drums, 49 CFR § 178.504(a)(1), that are supplied with plugs and gaskets must be **closed for shipment using only the plugs and gaskets supplied and specified** in the design qualification test for the drum, as indicated below:
  - a. Tri-Sure™ Plugs, 2-inch and 3/4-inch steel and plastic, installed in Tri-Sure™ steel flanges of corresponding size and tightened to the torque recommended by American Flange & Manufacturing Co., Inc. for the plug gasket used, as indicated below. *Materials classified as "POISONOUS BY INHALATION" must be sealed with Tri-Sure steel, gasketed Tab-Seal caps.*
  - b. Rieke® Corporation plugs 2-inch and 3/4-inch steel and plastic, installed in the appropriate Rieke steel or plastic flange of corresponding size and tightened to the torque recommended by Rieke, as indicated below.
  - c. For Technocraft brand plugs and flanges please follow the guidance under "TS Type" in the following table.

	Closing Torques in ft.-lbs. (by Type)	Gasket Type	3/4" Plug Torque	2" Plug Torque
A	Rieke <sup>i</sup> : VISE-GRIP II - Plastic Flange	Polyethylene	9 ft.-lbs.	20 ft.-lbs.
B	Rieke: VISE-GRIP II - Plastic Flange	Rubber	9 ft.-lbs.	20 ft.-lbs.
C	Rieke VISE-GRIP II- Steel Flange	Polyethylene	9 ft.-lbs.	20 ft.-lbs.
D	Rieke: VISE-GRIP II- Steel Flange	Rubber	9 ft.-lbs.	20 ft.-lbs.
E	Rieke: VISE-GRIP II Plug with built-in gasket - Plastic Flange		9 ft.-lbs.	20 ft.-lbs.
F	Rieke: VISE-GRIP II Plug with built-in gasket - Steel Flange		9 ft.-lbs.	20 ft.-lbs.
G	Rieke: Steel Plug - Steel Flange	Polyethylene	20 ft.-lbs.	40 ft.-lbs.
H	Rieke: Steel Plug - Steel Flange	Rubber	15 ft.-lbs.	30 ft.-lbs.
I	TS Type <sup>ii</sup> : Polypropylene and Nylon Plugs	Polyethylene	8 ft.-lbs.	15 ft.-lbs.
J	TS Type: Polypropylene and Nylon Plugs	Rubber	8 ft.-lbs.	15 ft.-lbs.
K	TS Type: Polyethylene Plugs (high-density)	Rubber	8 ft.-lbs.	15 ft.-lbs.
L	TS Type: Self-Gasketing, polyethylene plug		5 ft.-lbs.	12 ft.-lbs.
M	TS Type: Steel Plugs	Polyethylene, Teflon	20 ft.-lbs.	30 ft.-lbs.

<sup>i</sup> ISO 15750-3 Circular Serrated Closure Type B. ANSI MH2-2003 § 3.1.4

<sup>ii</sup> ISO 15750-3 Octagonal & Hexagonal Closures Type A. ANSI MH2-2003 §3.1.4



N	TS Type: Steel Plugs	Rubber	12 ft.-lbs.	20 ft.-lbs.
O	TS Type: Zinc Die-Cast Plugs	Polyethylene, Teflon	20 ft.-lbs.	30 ft.-lbs.
P	TS Type: Zinc Die-Cast Plugs	Rubber	12 ft.-lbs.	20 ft.-lbs.

### STEEL REMOVABLE HEAD DRUMS<sup>iii</sup>

- All removable head, UN 1A2, Steel Drums, 49 CFR § 178.504(a)(2), that are supplied with clamp bands, bolts, gaskets and lids must be **closed for shipment using only the components supplied and specified** in the design qualification tests for the drum.
- Place lid with gasket in place, as supplied, on the curl at the top of the drum body.
- Place bolt ring around the drum head and curl.
- Using a head compressor, apply force to the top of the drum head assembly to compress head gasket.
- Drive bolt into lug until the ends of the bolt ring are as follows:
  - For steel drum thickness (marked on bottom of drum) 1.3/1.1/1.1 to 1.1/0.9/1.1: 1/2-inch or less ring gap.
  - For steel drum thickness (marked on bottom of drum) 1.1/0.8/1.1 or less: 3/8-inch or less ring gap.
  - NOTE:** If prescribed ring gap cannot be achieved, torque ring to 75 +/-5 ft.-lbs. The ends of the ring should not be touching, maintain a minimum gap of 1/16".
- If a head compressor is not available, start bolt into lug, alternating tapping of ring with a mallet and drive bolt with a wrench, until bolt ring ends meet the above requirements.
- When ring has been tightened as required, the jam nut must be tightened against the left lug.
- If using a 0.625" shoulder type bolt a jam nut is not required. These particular bolts claim easier ergonomics for the person closing the drums and less deformation of the ring in closing—hence better fit. Thread the bolt into the ring nut and tighten until the threaded portion is through the nut. The smooth unthreaded portion will not engage the threads and tightening stops at the prescribed gap.

### INTERMEDIATE BULK CONTAINERS

	IBC Type	Gasket Type	Torque
A	Bulkdrum ® II	EPDM/FKM	70 ft.-lbs.
B	MAUSER ® SM series 275/330 gallon	EPDM	70 ft.-lbs.
C	MAUSER ® SM series 275/330 gallon	FKM/FPM	70 ft.-lbs.
D	2" plug in Standard lid, vented and solid	EPDM/FKM	20-25 ft.-lbs.
E	56 mm plug in 150 mm lid vented and solid	EPDM/FKM	20-25 ft.-lbs.

All UN 31HA1 and 31 HG1 Composite IBC's 49CFR § 178.707 (a) (5) that are supplied with lids, cages, pallets and service equipment must be **closed for shipment using only the components supplied and specified in the design qualification tests for that IBC.**

- Place the lid with gasket in place on the top opening of the IBC.
- Screw the lid by hand until the gasket is in contact with the sealing surface.
- Using the lid adaptor and torque wrench tighten the lid to the recommended torque. Recommended torque is reached when the wrench releases or clicks.

<sup>iii</sup> ANSI MH2-2003 §3.2 and 3.2.4

Preset torque wrenches or adjustable torque wrenches are suitable for this procedure. Please calibrate wrenches at least annually. Variable range adjustable machinist torque wrenches are available and most auto parts stores, catalog stores like Grainger and Mc Master Carr, Sears, Home Depot, Lowes, on-line drum parts suppliers, and many others. IBC Cap and valve adapters are available through MAUSER or many catalog houses that specialize in drum and IBC parts and components.

## VALVES

The valves supplied with MAUSER IBCs are factory installed and are not meant to be installed by the filler. If an IBC valve must be replaced the following procedures must be followed. Only valves as specified in the original design qualification are suitable.

IBC valve replacement constitutes a "repair" and the person repairing must adhere to the requirements of 49 CFR Part 180 Subpart D §§ 180.350 -180.352 **Qualification and Maintenance of IBCs**. MAUSER assumes no responsibility for the performance of any packaging repaired by any person or company. This information is provided as an accommodation and MAUSER assumes no warranty or guarantee of any kind and the recipients use or non-use of this information is at the sole discretion and responsibility of the recipient.

1. Inspect new unused replacement valve for presence of defect free, clean gaskets.
2. Hand thread the valve until the threads begin to grip.
3. **MAUSER Butterfly and Cylinder Integrated Collar Valves** : Using a torque wrench with a valve adapter as above tighten the valve to a minimum of 70 ft-lbs, finishing the procedure with the valve in the proper vertical orientation. If the valve reaches 70 ft-lbs and will not orient properly, or if it can not reach 70 ft-lbs, it may be cross threaded or a bad thread. Discard and repeat with **a new** valve. The polyolefin gasket on the valve collar is not designed for repeated
4. **Banjo brand metal collar valves**: Holding the valve in the proper vertical orientation spin the metal collar until hand tight. Using a calibrated torque wrench with valve adapter tighten the collar to 50 ft-lbs.
5. **Leak proof test the empty IBC with  $\geq 20$  kPa air pressure per 49 CFR 178.813.**

## TORQUE WRENCHES

The following are photographs of various torque wrenches MAUSER has found suitable to apply the required closing torque.



Dial Indicating and Adjustable Wrench



Husky Brand Indicating Wrench



Rieke Brand Preset Wrenches

<sup>i</sup> Note: MAUSER uses various buttress and NPS plugs under the generic part numbers L10 and L16 respectively. They are supplied with the drum with gasket-installed ready for final closing for shipment. The plug and gasket are specific to the drum as tested. The closures must be properly installed and tightened to the torque shown or specified on the particular closing instructions for the drum supplied. Closures must be tightened to recommended torque using pre-set or variable-range machinist torque wrenches calibrated to the indicated value. Variable range machinist torque wrenches are available and most auto parts stores, catalog stores like Grainger and Mc Master Carr, Sears, Home Depot, Lowes, on-line drum parts suppliers, and many others.

<sup>ii</sup> **MAUSER L-ring drums marked UN 1H1/Y1.9/150\*\* must have a torque applied of 25-27 ft-lbs (34-37 N-m)**



## Closure systems for dangerous goods: Composite IBC 640 to 1,250 litres



CLOSURE		GASKET		PACKAGING		
Tradename closure	Thread designation	Type	Material	Min. locking torque (Nm), Standard value	Type	Capacity
Screw cap DN 150	S 165 x 7 mm	O-ring	EPDM / FKM / TPE-V	75	Composite IBC	640 - 1,250
Screw cap DN 150	S 165 x 7 mm	O-ring	FKM/ PTFE encapsulated	100	Composite IBC	640 - 1,250
Plug 2"	G 2"	O-ring	EPDM / FKM	14	Composite IBC	640 - 1,250
Plug 2"	G 2"	O-ring	PE, EBA	17	Composite IBC	640 - 1,250
Dip tube CDS	BCS 56 x 4 mm	O-ring	EPDM / FKM	20	Composite IBC	640 - 1,250
Dip tube Micro-Matic	BCS 56 x 4 mm	O-ring	EPDM / FKM / NBR	15	Composite IBC	640 - 1,250
Dip tube ChyperCo	BCS 56 x 4 mm	O-ring	EPDM / FKM	15	Composite IBC	640 - 1,250
Dip tube AS-Strömungstechnik	BCS 56 x 4 mm	O-ring	PE	20	Composite IBC	640 - 1,250
Dip tube Entegris	BCS 62 x 5 mm	O-ring	EPDM / FKM / FEP – encapsulated Silicone	27	Composite IBC	640 - 1,250
Screw cap DN 225	S 245 x 6 mm	O-ring	EPDM / FKM* / Cellular rubber	105	Composite IBC	640 - 1,250
Plug 2"	G 2"	O-ring	EPDM / FKM	14	Composite IBC	640 - 1,250
Plug 2"	G 2"	O-ring	PE, EBA	17	Composite IBC	640 - 1,250
Screw cap K 60 bottom discharge	S 60 x 6 mm	Flat gasket	Alveolit	hand-tight	Composite IBC	640 - 1,250
Valve DN 50 Butterfly and ball valve	S 75 x 6 mm	Flat gasket	EPDM / FKM	70	Composite IBC	640 - 1,250
Valve DN 50 Butterfly valve (valve with cone)	S 75 x 6 mm	O-ring	EPDM / FKM	** 65	Composite IBC	640 - 1,250
Valve DN 50 Ball valve (valve with cone)	S 75 x 6 mm	O-ring	EPDM / FKM	** 75	Composite IBC	640 - 1,250
Valve DN 80 Butterfly valve	S 100 x 8 mm	Contour gasket	ETFE	** 130	Composite IBC	640 - 1,250

\* not for dangerous goods


\*\* twelve o'clock position

The value of each torque ensures the leakproofness of packaging under normal influences of transport conditions such as changes in temperature, humidity or pressure. The values have been established at ambient temperature.

Please consider, that the values have been determined for the dry condition of plugs and bungs.  
The above mentioned value may have to be reduced where required.

The afore-mentioned statements are based on our present knowledge and experiences. They do not free the user of our ECOBULK-System from own tests. A legally binding assurance cannot be diverted out of our statements. Existing laws and determinations must be considered in the customers own responsibility.

# Closure systems for dangerous goods: Plastic drums 60 to 220 litres



CLOSURE		GASKET		PACKAGING		
Tradename closure	Thread designation	Type	Material	Min. locking torque (Nm), Standard value	Type	Capacity
Plug, BCS 70 x 6	BCS 70 x 6	O-ring	PE, EBA	30	SCHÜTZ F1	136, 220
Plug, BCS 70 x 6	BCS 70 x 6	O-ring	EPDM	30	SCHÜTZ F1	136, 220
Plug, BCS 70 x 6	BCS 70 x 6	O-ring	FKM	30	SCHÜTZ F1	136, 220
Plug, BCS 70 x 6	BCS 70 x 6	O-ring	PE, EBA	30	SCHÜTZ S-DS1	60 - 220
Plug, BCS 70 x 6	BCS 70 x 6	O-ring	EPDM	30	SCHÜTZ S-DS1	60 - 220
Plug, BCS 38 x 6	BCS 38 x 6	O-ring	PE, EBA	17	SCHÜTZ F1	136, 220
Plug, BCS 38 x 6	BCS 38 x 6	O-ring	EPDM	15	SCHÜTZ F1	136, 220
Plug, BCS 38 x 6	BCS 38 x 6	O-ring	FKM	15	SCHÜTZ F1	136, 220
Plug, BCS 56 x 4	BCS 56 x 4	O-ring	PE, EBA	17	SCHÜTZ S-DS1	60 - 220
Plug, BCS 56 x 4	BCS 56 x 4	O-ring	EPDM	20	SCHÜTZ S-DS1	60 - 220
Plug, BCS 56 x 4	BCS 56 x 4	O-ring	PE, EBA	25	SCHÜTZ F1	136, 220
Plug, BCS 56 x 4	BCS 56 x 4	O-ring	EPDM	20	SCHÜTZ F1	136, 220
Plug, BCS 71 x 4	BCS 71 x 4	O-ring	PE, EBA	25	SCHÜTZ S-DS1	120, 150, 220
Plug BCS G2 x 11,5 (NPS)	G2 x 11,5	Flat gasket	EPDM	27	SCHÜTZ F1	220
Plug BCS G2 x 5 (Buttres)	G2 x 5	Flat gasket	EPDM	27	SCHÜTZ F1	220

The value of each torque ensures the leakproofness of packaging under normal influences of transport conditions such as changes in temperature, humidity or pressure. The values have been established at ambient temperature.

Please consider, that the values have been determined for the dry condition of plugs and bungs.  
The above mentioned value may have to be reduced where required.

The afore-mentioned statements are based on our present knowledge and experiences. They do not free the user of our ECOBULK-System from own tests. A legally binding assurance cannot be diverted out of our statements. Existing laws and determinations must be considered in the customers own responsibility.

## Closure systems for dangerous goods: Steel drums up to 216,5 litres



CLOSURE		GASKET		PACKAGING		
Tradename closure	Thread designation	Type	Material	Min. locking torque (Nm), Standard value	Type	Capacity
Steel-plug G 3/4"	G 3/4"	O-ring	EPDM	20	SDF / SSF	216 - 250
Steel-plug G 2"	G 2"	O-ring	EPDM	30	SDF / SSF	216 - 250
Steel-plug G 3/4"	G 3/4"	O-ring	PE, EBA	25	SDF / SSF	216 - 250
Steel-plug G 2"	G 2"	O-ring	PE, EBA	30	SDF / SSF	216 - 250
PP-plug G 3/4"	G 3/4"	O-ring	EPDM	15	SDF / SSF	216 - 250
PP-plug G 2"	G 2"	O-ring	EPDM	30	SDF / SSF	216 - 250
PP-plug G 3/4"	G 3/4"	O-ring	PE, EBA	15	SDF / SSF	216 - 250
PP-plug G 2"	G 2"	O-ring	PE, EBA	30	SDF / SSF	216 - 250

The value of each torque ensures the leakproofness of packaging under normal influences of transport conditions such as changes in temperature, humidity or pressure. The values have been established at ambient temperature.

Please consider, that the values have been determined for the dry condition of plugs and bungs.  
The above mentioned value may have to be reduced where required.

The afore-mentioned statements are based on our present knowledge and experiences. They do not free the user of our ECOBULK-System from own tests. A legally binding assurance cannot be diverted out of our statements. Existing laws and determinations must be considered in the customers own responsibility.

# **M&M INDUSTRIES, INC.**

## **MANUFACTURER'S NOTIFICATION FOR M & M INDUSTRIES, INC. UN/DOT PACKAGING FOR HAZARDOUS SOLIDS**

### **General Information:**

At M&M Industries, we understand your goal to safely transport your valuable products along roads and highways. You want to provide your customers with value while keeping their trust. While we are legally bound to provide you with the following information, M&M Industries also wants you to know we value your endeavor and want to help you reach your goal, every day.

Under the **U.S. Department of Transportation's Title 49CFR** it is the **Shipper's Responsibility** to determine that the packaging or container is an authorized packaging, including all part 173 requirements. The selected packaging must be properly assembled for transportation in accordance with the manufacturer's notification. **Please do all testing and research necessary to ensure that you have selected the proper M & M Industries container for use with your product.**

### **To meet UN/DOT Standards, this package must be properly closed for shipment.**

At the time of transfer, the packaging does not meet the UN standard because it is disassembled. Only when assembled as specified in the closing instructions below, and using the components described herein, is this packaging certified to meet the UN standard. Failure to follow the closing instructions or substituting package components with components other than those identified in the following paragraph will render the UN/DOT Certification invalid.

A copy of the manufacturer's notification, including closing instructions, must be made available for inspection by a representative of the Department of Transportation upon request for at least 90 days once the package is offered to the initial carrier for transportation in commerce, as of this time (March 2015). However, M&M Industries recommends that you retain these documents for a minimum of 365 days after the package is offered for shipment. The current record retention requirements are subject to change and are found in 49CFR 173.22(a)(4), <http://www.ecfr.gov>

M&M Industries takes superb pride in our Quality Assurance program and systems. However, even with our very best efforts, fittings on covers / pails can become damaged or shift during transportation or storage after leaving our facility. M&M Industries

recommends that fillers/offerors take all steps deemed necessary to check the fittings on each pail / cover, to meet your quality standards. An example of this is a screw cap on a cover that may vibrate or back off during transportation. The offeror of a hazardous material may be open to liability if they do not take the necessary precautions. Should you have any questions, please contact customer service at **(800) 331-5305**.

## CLOSING INSTRUCTIONS FOR: Life Latch® New Generation Containers

**Identification of Packaging:** This packaging type is identified by:

Size	Pail ID numbers	Matching lid ID numbers	Lid diameter (Ref only, measured at bottom of lid)
6.5 Gallon New Gen	11391,11393,12057, 10778	11074, 11386, 11390, 11394, 11392, 58NGCA, 18402, 18403, 22083, 22082	12.87"
5.9 Gallon New Gen	12057	11074, 11386, 11390, 11394, 11392, 58NGCA, 18402, 18403, 22083, 22082	12.87"
5.5 Gallon New Gen	15503	11074, 11386, 11390, 11394, 11392, 58NGCA, 18402, 18403, 22083, 22082	12.87"
5.0 Gallon New Gen	11387,11389, 10975,13272,13271,40NGPA	11074, 11386, 11390, 11394, 11392, 58NGCA, 18402, 18403, 22083, 22082	12.87"
3.5 Gallon New Gen	11385,10777,11073,13972	11074, 11386, 11390, 11394, 11392, 58NGCA, 18402, 18403,	12.87"

		22083, 22082	
2.5 Gallon New Gen	11302	11303	11.72"
2.0 Gallon New Gen	13189	11303	11.72"
1.25 Gallon New Gen	13905, 18792	13904, 18793	8.9"
0.6 Gallon New Gen	13906, 18794	13907, 18795	7.03"

This packaging may or may not use a gasket and/or vent plug. If a gasket or vent plug is used it must meet the specification below for **SOLIDS**:

Cover Size	Gasket Material	Gasket Length	Gasket Diameter	Vent Plug (Optional)
0.6 Gallon New Gen	Closed Cell Neoprene	18.110" to 18.897"	0.94" -.124"	N/A
1.25 Gallon New Gen	Closed Cell Neoprene	23.510" to 24.470"	.100" to .140"	Rieke Rubber Umbrella Vent PV-21 Part# 02500002
2.0 Gallon New Gen	Closed Cell Neoprene	28.607" to 29.393"	.109" to .141"	Rieke Rubber Umbrella Vent PV-21 Part# 02500002
2.5 Gallon New Gen	Closed Cell Neoprene	28.607" to 29.393"	.109" to .141"	Rieke Rubber Umbrella Vent PV-21 Part# 02500002
3.5 through 6.5 Gallon New Gen	Closed Cell Neoprene	33.075" to 34.425"	.134" to .166"	Rieke Rubber Umbrella Vent PV-21 Part# 02500002



## UN Markings for Life Latch® New Generation Containers:

An appropriate UN marking must be maintained for each M&M Industries container design. The UN markings for M&M Industries **Life Latch® New Generation** containers are listed below.

Container Sizes	UN Rating
0.6 Gallon New Generation	1H2/Y4/S
1.25 Gallon New Generation	1H2/Y6/S
2.0 Gallon New Generation	1H2/Y15/S
2.5 Gallon New Generation	1H2/Y13/S
3.5 Gallon New Generation	1H2/Y19/S
5.0 Gallon New Generation	1H2/Y30/S & 1H2/X11.5/S
5.5 Gallon New Generation	1H2/Y30/S & 1H2/X11.5/S
5.9 Gallon New Generation	1H2/Y30/S & 1H2/X11.5/S
6.5 Gallon New Generation	1H2/Y30/S & 1H2/X11.5/S

In accordance with the U.S. Department of Transportation's Title 49CFR, Section 178.2, manufacturers of U.N. Standard/DOT Specification packages are required to notify in writing each person to whom that packaging is transferred of all requirements in this part not met at the time of transfer, and with information specifying the type(s) and dimensions of the closings, including gaskets and any other components needed to ensure that the packaging is capable of successfully passing the applicable performance tests. This information must include any procedures to be followed, including closing instructions for inner packaging's and receptacles, to effectively assemble and close the packaging for the purpose of preventing leakage in transportation.

Specifically, the following items pertain to the **Life Latch® New Generation** containers:

- **Life Latch® New Generation** containers are certified to the UN/DOT performance-oriented packaging standards and are marked with the appropriate UN markings on the container.
- The **Life Latch® New Generation** pail must always be used with the correct **Life Latch® New Generation** lid in order to meet the UN/DOT performance-oriented packaging standards.
- **Life Latch® New Generation** containers **are not** UN certified for air transportation.

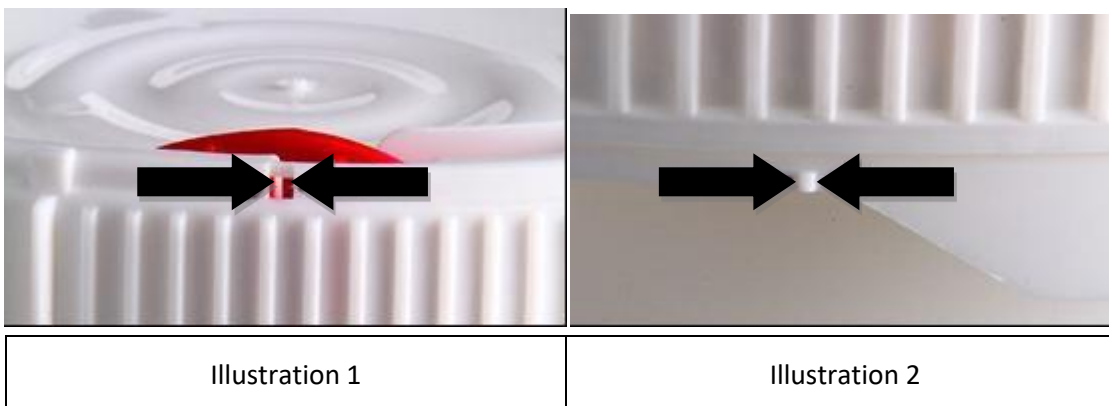
## CLOSING INSTRUCTIONS FOR SOLIDS:

### Packaging Components required:

- Appropriately marked UN/DOT certified M&M Industries Pail
- Matching lid size with trigger attached, **gasketed or non-gasketed**

**2.0, 2.5, 3.5, 5.0, 5.5, 5.9 and 6.5 gallon NON-GASKETED lid:** (Engraved MM on lid)

**To close:** Seat lid on top of pail (engraved MM on bottom of pail). Rotate lid clockwise until the small window by the trigger (see Ill. 1) is located to the left of the mark (see Ill. 2) on the side of the pail and continue rotating until the lid is fully tightened (see Ill. 4). **Inspect lid after application to confirm it is properly seated.**



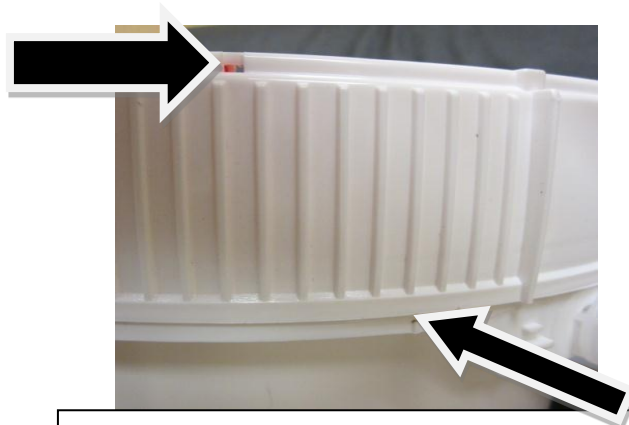


Illustration 4 – Example of lid fully tightened with the window to the left of the mark on pail, non gasketed lid.

**2.0, 2.5, 3.5, 5.0-, 5.5-, 5.9- and 6.5-gallon Gasketed lid:** (Marked MM on lid):

To Close: Seat lid on top of pail (Marked MM on bottom of pail). Rotate lid clockwise until the small window by the trigger (see Ill. 1) is located to the left of the UN mark (see Ill.3) on the side of the pail and continue rotating until the lid is fully tightened (see Ill.5). **Inspect lid after application to**

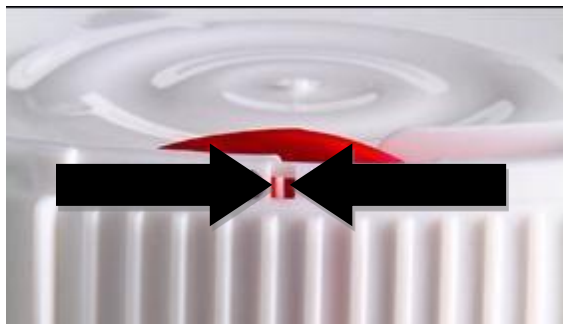


Illustration 1

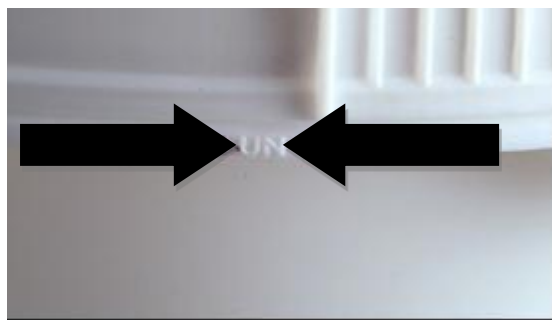


Illustration 2

**confirm it is properly seated.**

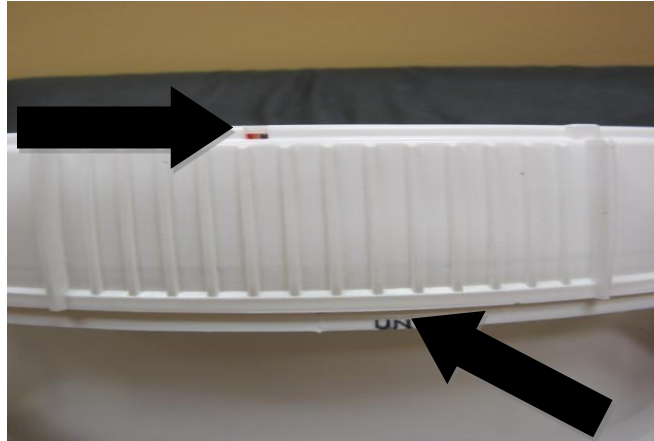


Illustration 5- Example of lid fully tightened,  
gasketed pail, window to left of UN mark.

### 0.6 and 1.25 gallon NON-GASKETED lid:

**To close:** seat lid on top of pail. Rotate lid clockwise until the trigger post (see Ill.6) is located to the left of the mark (see Ill. 7) on the side of the pail and continue rotating until lid is fully tightened. **Inspect lid after application to confirm it is properly seated.**



Illustration six

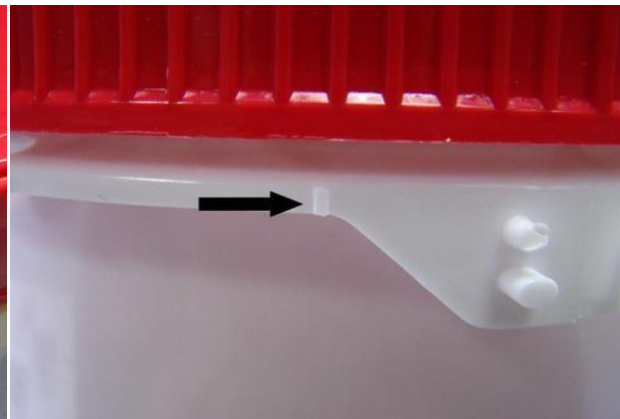


Illustration seven

## 0.6- and 1.25-gallon GASKETED lid:

To Close: seat lid on top of container. Rotate lid clockwise until trigger post (see Ill. 6) is located to the left of the UN mark (see Ill.8) on the side of the pail and continue rotating until the lid is fully tightened. **Inspect lid after application to confirm it is properly seated.**



Illustration six

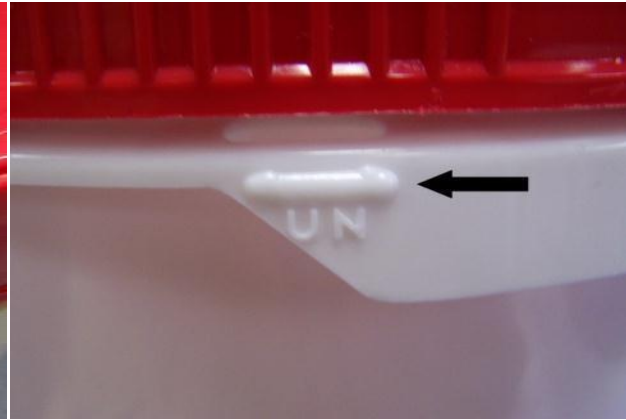


Illustration eight

### Revision History

Rev	Description of Change (s):	Written by:	Approved by:	Date:
1	Added Various New Molds	Ahron Bobbin	Tenna Minwell	11/14/2021



## **MANUFACTURER'S NOTIFICATION FOR M & M INDUSTRIES, INC. UN/DOT PACKAGING FOR HAZARDOUS SOLIDS/LIQUIDS**

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**To meet UN/DOT Standards, this package must be properly closed for shipment.** At the time of transfer, the packaging does not meet the UN standard because it is disassembled. Only when assembled as specified in the closure instructions below, and using the components described herein, is this packaging certified to meet the UN standard. Failure to follow the closure instructions or substituting package components with components other than those identified in the following paragraph will render the UN/DOT Certification invalid.

A copy of the manufacturer's notification, including closure instructions, must be made available for inspection by a representative of the Department of Transportation upon request for at least 90 days once the package is offered to the initial carrier for transportation in commerce. However, M&M Industries recommends that you retain these documents for a minimum of 365 days after the package is offered for shipment. The current record retention requirements are subject to change and are found in 49CFR 173.22(a)(4), <http://www.ecfr.gov>

M&M Industries takes superb pride in our Quality Assurance program and systems. However, even with our very best efforts, fittings on covers / pails can become damaged or shift during transportation or storage after leaving our facility. M&M Industries recommends that fillers/offers take all steps deemed necessary to check the fittings on each pail / cover, to meet your quality standards. An example of this is a screw cap on a



## M2/M2 and M4/M4 pails

December 2021 Rev 6

cover that may vibrate or back off during transportation. The offeror of a hazardous material may be open to liability if they do not take the necessary precautions. Should you have any questions, please contact customer service at **(800) 331-5305**.

THESE CLOSING INSTRUCTIONS REMAIN IN EFFECT UNTIL FURTHER NOTICE.

### CLOSING INSTRUCTIONS FOR: M2/M2 (tear tab lid) and M4/M4 (non-tear tab lid) Containers

#### Identification of Packaging:

This packaging type is identified by:

Pail Size (gallons)	Mold Number	M2 Lids (B engraved on lid, tear tab)	M2 Lid diameter (ref only, measured at bottom of lid)	M4 Lids (A engraved on lid)	M4 Lid diameter (ref only, measured at bottom of lid)
6.5	11716	10905, 10953, 11183, 11184, 11827, 12680	12.47"	N/A	N/A
5.5	11851, 10910	10905, 10953, 11183, 11184, 11827, 12680	12.47"	N/A	N/A
5.3	12341, 44M2PA	10950, 10953, 11183, 11184, 11827, 12680 40M4CA (M4)	12.47"	40M4CA 40M4CB 40M4CC	12.40"
5.0	10948, 11181, 11182, 12342, 12341, 12963, 15378, 15380, 10910, 11851	10950, 10953, 11183, 11184, 11827, 12680	12.47"	40M4CA 40M4CB 40M4CC	12.40"
3.5	11100, 12354	10950, 10953, 11183, 11184, 11827, 12680	12.47"	40M4CA 40M4CB 40M4CC	12.40"

*\*Note: Only the 3.5, 5.0, and 5.3 M4 Pails with M4 Lids are rated for Hazardous Liquids.*

## M2/M2 and M4/M4 pails

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Lid Description	Gasket Material	Available fittings
M2 (B engraving)  Tear tab lid	EPDM Black	Rieke Metal Spout FS-10-10-231 Rieke Vented Metal Spout FS-10-10-231-TFE Rieke Plastic Vented Spout FS-16AP-TFE Rieke Plastic Spout FS-16AP 70 mm Light Weight Screw Cap Vent Cap with Vent Spout (M2 Only) PV-20-52 and FS-16AP-TFE Rieke Tint Plug (M2 Only) TFS-2P APC-2 Plastic Vented Spout APC-2 Plastic Spout
M4 (A engraving) Liquids Non-tear tab lid	EPDM Black	Rieke Metal Spout FS-10-10-231 Rieke Vented Metal Spout FS-10-10-231-TFE Rieke Plastic Screw Cap FS-80 APC-2 Plastic Vented Spout APC-2 Plastic Spout

### UN Markings for M2/M2 (tear tab lid) and M4/M4 (non-tear tab lid) Containers:

An appropriate UN marking must be maintained for each M&M Industries container design. The UN markings for M&M Industries M2/M2 (tear tab lid) and M4/M4 (non-tear tab lid) containers are listed below.

Pail Size (gallons)	UN Mark	Lid	Certified for
6.5	1H2/Y27/S	M2	Solids only
5.5	1H2/Y25/S	M2	Solids only
5.3	1H2/Y27/S	M2	Solids only
5.0	1H2/Y27/S	M2	Solids only
5.5	1H2/Y25/S	M2	Solids only
5.3	1H2/Y40/S 1H2/X40/S	M4	Solids and Liquids

## M2/M2 and M4/M4 pails

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	1H2/Y1.2/30		
5.0	1H2/Y40/S 1H2/Y1.5/30 1H2/X40/S	M4	Solids and liquids
3.5	1H2/Y21/S	M2	Solids only
3.5	1H2/Y1.5/30	M4	Liquids Only

In accordance with the U.S. Department of Transportation's Title 49CFR, Section 178.2, manufacturers of U.N. Standard/DOT Specification packages are required to notify in writing each person to whom that packaging is transferred of all requirements in this part not met at the time of transfer, and with information specifying the type(s) and dimensions of the closures, including gaskets and any other components needed to ensure that the packaging is capable of successfully passing the applicable performance tests. This information must include any procedures to be followed, including closing instructions for inner packaging and receptacles, to effectively assemble and close the packaging for the purpose of preventing leakage in transportation.

Specifically, the following items pertain to the M2/M2 (tear tab lid) and M4/M4 (non-tear tab lid) containers:

1. M2/M2 (tear tab) and M4/M4 (non-tear tab lid) containers are certified to the UN/DOT performance-oriented packaging standards and are marked with the appropriate UN markings on the container.
2. The M-Style pail must always be used with the correct M2 or M4 lid to meet the UN/DOT performance-oriented packaging standards.
3. ONLY the 3.5-gallon, 5-gallon, and 5.3-gallon M4 pails with M4 lids are UN certified for liquid hazardous materials, and only for ground or vessel transportation.
4. M2/M2 (tear tab) and M4/M4 (non-tear tab lid) containers are **NOT** UN certified for air transportation of liquids.

### A. CLOSING INSTRUCTIONS FOR THE M2/M2 and M4/M4 PAIL AND LIDS:

1. **Pneumatic press with 6" cylinder – 3.5-6.5-gallon sizes ONLY (Figure A),**
  - a. Adjust downward stroke of top plate so that it goes beyond pail rim by 1/16-1/8".
  - b. Center the pail and lid under the press.
  - c. Apply a minimum of 80 psi from a regulated air supply to the lid listening for a defining snap.
  - d. If the cylinder is less than 6", higher air pressure may be required to adequately seal the lid.
  - e. **Inspect lid after application to confirm it is properly seated.**

**Figure A: Pneumatic Press**



**\*To mitigate air entrapment and doming of the lid during production filling, M&M recommends the use of a “Burper Plug” measuring 3” Diameter by 1 ¼” Height attached to the bottom of the capper platen, centrally positioned. (Figure A1)**

**Figure A1: Burper Plug**



- 2. Rubber mallet (minimum 16 oz.) – all sizes 3.5 gallon through 6.5 gallon (5.3-gallon M4 for liquids excluded)**
  - a. Center the lid on the pail.
  - b. Hammer the cover into place by striking cover in the center of the cover’s outer ring (Figure B).

## M2/M2 and M4/M4 pails

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- c. Strike cover until it snaps onto the rim of the pail. For best results, strike cover starting at 12 o'clock position, then 6:00, then 3:00 and 9:00. Continue to hammer the cover into place 360 degrees, until the cover is evenly seated all the way around the pail.
- d. **Inspect lid after application to confirm it is properly seated.**

Figure B



Properly seated M2 lid:



Improperly seated M2 lid:



Properly seated M4 lid:



Improperly seated M4 lid:



- 3. **When using the cover with the screw cap fitting, the recommended application torque for the 80mm cap is 12-foot pounds. Use a calibrated torque wrench to apply the closure to the fitting.**

## M2/M2 and M4/M4 pails

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80 mm Screw Cap Lid:



80 mm Screw Cap Tightened with torque wrench:



4. If Rieke pour spout is supplied separately, refer to spout installation instructions below.

### **B. APPLICATION INSTRUCTIONS FOR RIEKE or APC SPOUT (if not pre-applied):**

1. Use a Rieke/APC spout installer only.
2. Place lid into installer in the upright position (if applicable).
3. Place Rieke/APC plastic spout in spout hole of lid in upright position.
  - a. For automated crimper: Place right and left index fingers on each side of the spout installer to activate.
  - b. For Hand crimper: Apply per Rieke/APC crimping tool instructions.



### **Revision History:**

Original issue - August 19, 2013

Revision 1 – January 12, 2015 – separated pneumatic press for 5-5.5-gallon sizes only.

Revision 2 – December 1, 2015 – added cylinder size to pneumatic press, stroke adjustment and mallet size.

Revision 3-June 3, 2020-Added New Mold Numbers, removed reference to 2.0 M2 Pails, removed reference to previous M4 Lid, added new Mold, corrected various wording and grammar.

Revision 4-9/3/2020-Added Burper Plug Information

Revision 5-6/3/2021-Added New Molds, UN Information for 5.3 M4 Pail and Lid

**See instructions on next page to confirm proper application of spout.**

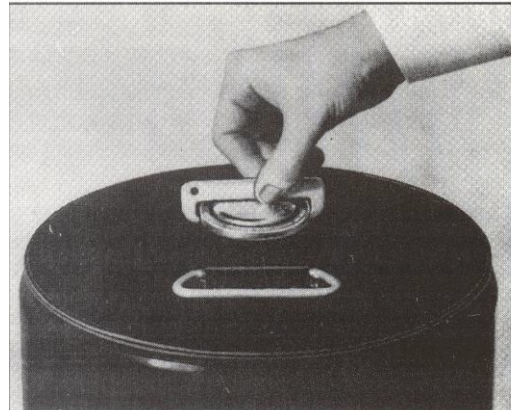




This gauge is to be used to check FLEXSPOUT® Closure installations made by the following model tools: FS, Hand Operated Tool; IAFS Airmatic Tools. This gauge is to be used when gaging both steel and plastic pails.

## How to Use the Flex spout Closure Slip Gauge

Place gauge in position shown. Inner lands on gauge should rest on top of Flex Ring. In this position the gauge should clear freely the side wall of the installed FLEXSPOUT Closure when drawn across.



SHOULD THE GAUGE FAIL TO CLEAR the sides of the FLEXSPOUT Closure after it has been crimped on by hand tool, one of the following is the reason:

1. The operator failed to properly bottom the handles:



2. The tool is not functioning properly and should be returned to Rieke for adjustment.

SHOULD THE GAUGE FAIL TO CLEAR the sides of the FLEXSPOUT Closure after it has been crimped by either type of mechanically operated tool, the tool or power unit is not functioning properly and should be returned to Rieke for repair and adjustment.

### TIPS ON THE USE AND CARE OF YOUR FLEXSPOUT CLOSURE TOOLS

- Be sure your operator is instructed to bottom the tool each time he affixes a FLEXSPOUT Closure to a container. This merely requires him to move handles downward as far as they will go.
- Rest the tool evenly on the container head, over the FLEXSPOUT Closure before starting the downward movement of the handles. This prevents "cocking" of the tool which results in an inferior seal.
- Keep your tools well-oiled and keep the closing collets or jaws free of dirt and paint.
- Do not attempt to adjust or dismantle your tools. They are precision adjusted at the factory for maximum sealing efficiency and received by you ready to use. Should your slip gauge reveal inefficient performance of any tool, return the tool to Rieke, transportation charges prepaid, for adjustment or repair.

- Do not remove mis crimped FLEXSPOUTS with the crimping tool. This will cause damage to the crimping tool by “popping out” or chipping the jaws. The M-066 removal tool should be used.



500 West 7th Street, Auburn, IN U.S.A. 46706  
Phone: 260-925-3700 Fax: 260-925-4654

[www.riekepacking.com](http://www.riekepacking.com) PR225 rev-1.2.doc November 15, 2011



## **MANUFACTURER'S NOTIFICATION FOR M & M INDUSTRIES, INC. UN/DOT PACKAGING FOR HAZARDOUS SOLIDS/LIQUIDS**

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or shift during transportation or storage after leaving our facility. M&M Industries recommends that fillers/offerors take all steps deemed necessary to check the fittings on each pail / cover, to meet your quality standards. An example of this is a screw cap on a cover that may vibrate or back off during transportation. The offeror of a hazardous material may be open to liability if they do not take the necessary precautions. Should you have any questions, please contact customer service at **(800) 331-5305**.

## CLOSING INSTRUCTIONS FOR:

### Life Latch® Liquid Containers

## Identification of Packaging:

This packaging is UN certified for both liquid and solid hazardous materials. For LIQUIDS, only the 5 gallon Life Latch ® Liquid container is UN certified, and it must contain the following gasket:

Lid Size	Gasket Material	Gasket Length	Gasket Diameter	Spout Options
5.0 Gallon	Closed cell Neoprene	36.938"-38.445"	.260"- .340"	Sonically welded Polyethylene American Flange spout #BUB0380000N0112 with 1.50" opening, 2.50" total fitting.

This package type is identified by:

Size	Pail ID Number	Matching Lid ID number	Lid Diameter(ref only, measured at bottom)
5.0 Gallon Liquid Screw Top	11395	11396	13.053"



**UN Markings for Life Latch® Liquid Containers:**

An appropriate UN marking must be maintained for each M&M Industries container design. The UN markings for M&M Industries **Life Latch® Liquid** containers are listed below.

5.0 Gallon Liquid Pail	1H2/Y30/S (for solids)
	1H2/Y1.5/30 (for liquids)

In accordance with the U.S. Department of Transportation's Title 49CFR, Section 178.2, manufacturers of U.N. Standard/DOT Specification packages are required to notify in writing each person to whom that packaging is transferred of all requirements in this part not met at the time of transfer, and with information specifying the type(s) and dimensions of the closings, including gaskets and any other components needed to ensure that the packaging is capable of successfully passing the applicable performance tests. This information must include any procedures to be followed, including closing instructions for inner packagings and receptacles, to effectively assemble and close the packaging for the purpose of preventing leakage in transportation.

Specifically, the following items pertain to the **Life Latch® Liquid** containers:

- **Life Latch® Liquid** containers are certified to the UN/DOT performance oriented packaging standards and are marked with the appropriate UN markings on the container.
- The **Life Latch® Liquid** pail must always be used with the correct **Life Latch® Liquid** lid in order to meet the UN/DOT performance oriented packaging standards.
- **Life Latch® Liquid** containers **are not** UN certified for air transportation.

## CLOSING INSTRUCTIONS FOR SOLIDS and LIQUIDS:

**Only the 5 Gallon Life Latch ® Liquid style container with GASKETED lid is UN certified for liquid and solid hazardous materials. Package components required:**

- Appropriately marked UN/DOT certified M&M Industries Pail, gasketed 5 gallon
- Matching lid size with handle attached

**To close:** Seat lid on top of pail (engraved MM on bottom of pail). Rotate lid counterclockwise until the lid drops down over the threads, once the lid drops over the threads rotate cover clockwise a complete 360 degrees, the square symbol on the bottom outside of the cover should pass the numbers on the side of the pail by a minimum of .500". For ease of application, use the built in hand lever on the cover. **Inspect lid after application to confirm it is properly seated.**

