

**CLOSING INSTRUCTIONS**

**ALL PLASTIC STACKABLE IBC (275 and 330 Gallon)**

**INTERMEDIATE BULK CONTAINER (UN 31H2)**

**Mauser Packaging Solutions (MPS) provides these instructions to the filler of its UN certified All Plastic Stackable Intermediate Bulk Container (IBC)**

*This document applies to UN 31H2 IBCs manufactured at the following location: **M#4778 - Middlebury, IN***

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 regulation requires the closing information 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. MPS is prepared to provide this training in addition to supplying closing instructions. It has been the practice of MPS to send closing instructions attached to the shipping documents with each shipment of IBCs. This document provides specific information on closing MPS' All Plastic Stackable IBC.

**These closing instructions must be given to the individuals responsible for closing the IBC prior to shipment. A hard copy (printed) must be maintained by the filler or offeror for shipment. Copies should be immediately available at fill lines.**

The following table and text summarize the components and associated closing torque required to prepare the IBC for shipment so that it is capable of meeting the performance standards indicated by the UN marking on the side of the packaging. **MPS recommends that only parts that have been tested and certified during design qualification be used to close the packagings for shipment. Any UN marking is voided if parts other than those used in the original design qualification are used.** Each closure is supplied with the proper gasket in accordance with the UN design type tests for the packaging supplied. In the case of Intermediate Bulk Containers (IBCs), the lid, gaskets, plugs, valves and service equipment are supplied as tested.

**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 identical to the original packaging design.

**CLOSING PROCEDURES FOR PLUGS AND LID**

1. The plug and/or lid are to be screwed down "hand tight" until the component's gasket is in contact with the sealing surface.
2. A torque wrench capable of applying the proper torque to the component (as specified in the following table) is then used to tighten the plug or lid until it reaches the pre-set torque as indicated by a release or click.

Torque wrenches should be calibrated at least annually.

| Component        | Gasket Type      | Torque    |
|------------------|------------------|-----------|
| 6" Lid           | Santoprene/Viton | 75 ft-lbs |
| 2" NPS Lid Vent  | EPDM/Viton       | 35 ft-lbs |
| 2" NPS Bung Plug | EPDM/Viton       | 25 ft-lbs |

Variable range adjustable torque wrenches are available at most auto parts stores, industrial supply companies (e.g., Grainger, McMaster-Carr), hardware/home improvement stores (e.g., Home Depot, Lowes), etc. IBC lid and plug adapters are available through MPS or many on-line stores that specialize in IBC parts and components.

**VALVE AND 2” NPS ADAPTER**

The discharge valve and two 3” buttress to 2” NPS adapters on the top of the tank are factory installed and not intended to be replaced by the filler. If these components need to be replaced, MPS recommends contacting a qualified IBC reconitioner. Only components specified in the original design qualification are suitable for use.

Valve and 2” NPS adapter replacement must adhere to the requirements of 49 CFR §178.704 (e) and §§180.350 -180.352. MPS assumes no responsibility for the performance of any packaging modified from the original design by any person or company. This information is provided as an accommodation and MPS 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 components for presence of defect free, clean gaskets.
2. Hand thread until the threads begin to grip.
3. Ball Valve: Using a torque wrench with a valve adapter, tighten the valve to 50 ft-lbs, finishing the procedure with the valve in the proper vertical orientation. If the valve reaches 50 ft-lbs and will not orient properly, or if it cannot reach 50 ft-lbs, it may be cross threaded or contain a bad thread. Discard and repeat with a new valve. The gasket on the valve collar is not designed for multiple installations.

2” NPS adapter: Use a torque wrench to tighten the adapter to 50 ft-lbs

4. Leak proof test the empty IBC with  $\geq 20$  kPa air pressure per 49 CFR §178.813.

**CAP SEALS**

It is the responsibility of the filler to verify the torque on all closures that have been “factory torqued” and/or closures that have been supplied with a cap seal, dust cover or tamper evidence. This includes any bungs in an IBC lid/cap. For this reason we suggest all cap seals and the like be installed after filling and all closures have been properly closed. Please be aware that cap seals and tamper evidence devices may interfere with the proper function of vents or other pressure and vacuum relief devices.

**DIP TUBES AND EXTRACTION VALVES**

Please consult the manufacturer for proper closing torques on the style being used.

**TORQUE WRENCHES**

The following are photographs of various torque wrenches MPS has found suitable to apply the required closing torque. These are typical units and other brands of adjustable wrenched are acceptable. These should be regularly calibrated.



Dial Indicating and Adjustable Torque Wrench



Husky Brand Indicating Wrench

**Revision history:**

| Version              | Description  | Prepared By | Effective Date |
|----------------------|--------------|-------------|----------------|
| MC/PAS-QA-105 REV.00 | New document | T.Smoleeva  | 11/16/22       |