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IBC Closing Instructions

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.

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 offer or for shipment.

The following information give examples of the parts and 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 or top of the packaging.

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.

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.

INTERMEDIATE BULK CONTAINERS

IBC Lid Torque Requirements

- a. 275 and 330 gallon 6" and 9" IBC Lids at 75 ft.-lbs.
- b. 2" plug in Standard lid, vented at 30 ft.-lbs.

1. 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.

- a. Place the lid with gasket in place on the top opening of the IBC.
- b. Screw the lid by hand until the gasket is in contact with the sealing surface.
- c. Using the lid adaptor and torque wrench tighten the lid to the recommended torque. Recommended torque is reached when the wrench releases or clicks.
- d. Preset torque wrenches or adjustable torque wrenches are suitable for this procedure.

Closing Procedures for plugs and caps

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. A torque wrench capable of applying the proper torque to the fitting as specified by the closing instructions is then used to tighten the plug or cap until it reached the pre-set torque. **ALL VALVES MUST HAVE A CAP INSTALLED ON OUTLET.**

IBC Valve Removal Instructions

Using the valve tool and torque wrench or breaker bar loosen the valve counterclockwise. Remove the remainder of valve from the IBC by hand.

IBC Valve and Valve Cap Torque Requirements

- a. **Metal Collar IBC Valves**-275 and 330 gallon 2" IBC Valves Torque to 55-60 ft.-lbs.
- b. **Poly Collar IBC Valves**-275 and 330 gallon 2" IBC Valves Torque to 35-40 ft.-lbs.

1. 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.

- a. Place the valve with gasket in place on the bottom opening of the IBC.
- b. Screw the valve by hand until the gasket is in contact with the sealing surface.
- c. Using the valve tool and torque wrench tighten the valve to the recommended torque. Recommended torque is reached when the wrench releases or clicks.
- d. **ALL VALVES MUST HAVE A CAP INSTALLED ON OUTLET.**
- e. Preset torque wrenches or adjustable torque wrenches are suitable for this procedure.