Quality Assurance and Regulatory Affairs
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June 17, 2026

UN/DOT Design Type Certification

Report No:	F-1878-260602	**Test Type:**	Periodic Retest
Test Date:	June 2, 2026	**Expiration Date:**	June 2, 2027
Test Facility:	Greif – Alsip, IL Technical Center 4300 W 130th Street Alsip, IL 60803		

Attached are our laboratory test result sheets of the UN/DOT Performance Test on the fibre drums that were conducted at the above test facility location.

This design is manufactured under the registered symbol GBC at the following locations: Charlotte, Englishtown, Houston-Fibre, Lithonia, Naperville, Van Wert, Wright City.

These sample containers, that were made with the proper components, passed the required tests for the following UN Marking(s):

1G/Y143/S 1G/Z143/S

Thank you and best regards.



Phil Zamperin
Vice President, Quality Assurance and Regulatory Affairs

This test report is the property of Greif. The know-how, methods and techniques disclosed in this report are confidential information which can only be used by those persons with specific written authorization from Greif.

Quality Assurance and Regulatory Affairs
United Nations/IMO/DOT
Performance Test

DESIGN TYPE Details

Report No:	F-1878-260602
Date Tested:	June 2, 2026
Qualification Date:	July 11, 2006
Drum Style:	LR
Drum Type:	Lok-Rim Fibre Drum
UN Certified Marking(s):	1G/Y143/S 1G/Z143/S
Diameter:	18.5 inches
Overall Height:	34.125 inches
Tare Weight:	11.2 lbs
Gallon Capacity:	20 - 38.5
No of Lams:	6 lams
Sidewall Material:	Kraft
Kraft Weight:	56#
Sidewall Liner/Barrier:	None
Top Chime:	.022 Narrow
Bottom Chime:	.022 Narrow
Bottom Material / Thickness:	Fibre .120
Top Seal:	None
Bottom Seal:	None
Poly Bag/Poly Tubing:	None
Bag/Poly Tubing Application:	N/A

Additional components - see next page

Drum Construction:
Shell/Tube is constructed of convolutely wound kraft or barrier (if applicable) paper using adhesive to bind individual layers. Metal reinforcing chime bands are installed on the shell/tube to each of the top and bottom ends of the sidewall tube so as to form an outwardly directed step which is integral with and incorporates the fibre sidewall. A bottom element is mechanically crimped to lock bottom and shell together. If the design type includes a bag it may be mechanically crimped into the bottom chime or dropped in as a separate unit as indicated in the specification. Top shell/chime is mechanically formed with an inverted curl that allows for attachment of a cover and locking ring.

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DESIGN TYPE Details - Additional Components

Report No: F-1878-260602
Date Tested: June 2, 2026
UN Certified Marking(s): 1G/Y143/S 1G/Z143/S

The following components have undergone DOT qualification testing as described in the Original Design Type Result Sheet using the same conditions and procedures, and meet the requirements of §178.601(g)(5):

COVER

Material	Description	Thickness
Steel	FDC Plain No Gasket	26ga

CLOSING RINGS

Material	Style / Thickness
Steel	Lok-Rim .022

Notes:

1. Plug elastomer gaskets include EPDM, BUNA. All other gasket materials should be denoted in the tested design. For specific plug gasket and torque instructions, please refer to your product specific closure instruction on the packing slip.
2. See attached closure notification for torque values for applicable rings on test drum.
3. If torques for components are not included on the attached closure, the components were supplied by the customer for testing. Proper closure of the unit is the responsibility of the shipper.
4. Closures supplied by Greif for this design have been fully qualified throughout the packaging design history, and the closures on this report may not include all qualified closures for this design. Please consult Greif Quality Assurance and Regulatory Affair for specific questions regarding closure qualification. In the event a closure that is not qualified by Greif is substituted by the customer, the certified mark should be voided and removed from the package. It is the responsibility of the customer to ensure that any substituted closures meet the requirement of CFR 49 178.601 and this report cannot be used as evidence of compliance to the certified marking.

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Performance Test

RETEST RESULT SHEET

Report No:	F-1878-260602	
Date Test:	June 2, 2026	
Qualification Date:	July 11, 2006	
Drum Style:	Lok-Rim Fibre Drum	
UN Certified Marking(s):	1G/Y143/S	1G/Z143/S
Maximum Capacity:	146.3 Litres	38.6 Gallons
Capacity Range:	75.8 - 146.0 Litres	20 - 38.5 Gallons
Test Mass - Gross:	143.0 KG	315.3 Lbs
Tare:	4.9 KG	10.8 Lbs
Net:	138.1 KG	304.5 Lbs

Dynamic Compression Test (49 CFR 178.606)
Package Preparation: No Package Content
Conditioning: 24 hours at 23°C, ±2°C temperature and 50%, ±2% relative humidity.

Total Mass:	(5.6 Units * 143 KG Each) 1.5 x Static Load = 1,202 KG
Results:	3 Units Passed

Drop Test (49 CFR 178.603)
Package Preparation: Drums filled to 95% minimum capacity, with a mixture of materials including sand, metallic dust, sawdust, steel slugs/shot, resin with similar in density sufficient to represent the gross mass package weight indicated in the certification, min grain size 125 micrometers
Conditioning: 24 Hours a 23°, +/- 2°C Temperature and 50%, +/- 2% Relative Humidity

Drop Height:	1.2 Metres / 47.3 Inches
Diagonal Top Drop | Closure/ Handle @ Impact Point:	3 Units Passed
Diagonal Btm Drop | On bottom edge:	3 Units Passed

Vibration Test (49 CFR 178.608)
Capable of withstanding, without rupture or leakage, the vibration test procedure in 49 CFR 178.608.

Leakproofness (49 CFR 178.604)
Not Applicable

Hydraulic (Hydrostatic) (49 CFR 178.605)
Not Applicable

TEST RESULTS CERTIFIED BY:
Quality Assurance and Regulatory Affairs

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Phil Zamperin
Vice President, Quality Assurance and Regulatory Affairs

LOK-RIM CLOSURE NOTIFICATION

Product Type: F11 **Country:** USA

Pursuant to the requirements of the Department of Transportation in CFR 49 Part 178.2(c)(1), 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.

To be UN certified, this drum must be closed with the same cover and closing ring used for certification. If drum is purchased without these parts, contact the supplying Greif plant for the correct cover and closing ring.

Your product may adversely affect container materials, bung threads, or closing devices. According to CFR 49 Part 173.24(e)(1), it is the responsibility of the person offering a hazardous material for transportation to ensure that the packaging is compatible with their lading.

These instructions for closure are based upon the closure methods used to enable these containers to pass the United Nations test requirements as outlined by the UN marking on the package.

The closure requirements do not take into account any hazards present in your facility, or the handling, filling or shipping of your product.

Any containers used for packaging hazardous materials should be inspected prior to filling and shipment. Containers with obvious damage or deterioration should not be filled or shipped.

To Close:

1. Place the cover on the top of the open head fibre drum.
   a. **For lever locking bands** – With the ring in the open position, place the ring on the cover. The ring should be placed on the cover with the lever closing from right to left.

      Starting at one end and working around the circumference of the ring, install the ring such that the channel envelopes the cover edge and top drum chime. Inspect the ring to ensure it is wrapped around the top chime of the drum and the edge of the cover.

      While beginning to close the lever lock, gently tap the ring with a rubber mallet starting on the side opposite the lever. Using constant pressure, slowly close the lever lock while gently tapping around the outside of the ring until the lever lock is flush against the side of the drum. Tapping the ring around the circumference will allow you to close the lever without damage or bending.

      If the lever becomes difficult to close and tapping is not relieving the resistance, stop and review the closure to ensure it is properly seated on the drum and cover. Engage the latch so that it fully allows for the lever and latch to have a seal applied. Apply a seal through the holes to secure the ring.

i. **Steel lever locking bands** – The channel shaped ring is drawn around the cover by the lever closing device and secured in place with a latch device. Snap the latch into the lever until it locks, then apply a sealing wire or other sealing device through the holes on the latch lever.

ii. **Plastic lever locking bands** – The channel shaped ring is drawn around the cover by the lever closing device. The lever closing device is secured in place with the locking tab that protrudes through a slot in the handle. Snap the latch into the lever until it locks, then apply a sealing wire or other sealing device through the holes on the latch lever.

2. For covers with fittings: 2" fittings bearing NPS thread must be tightened to a torque level of 9 FT-LBS, and 3/4" fittings bearing NPS thread must be tightened to a torque level of 3 FT-LBS.

3. Drums closed in this manner have met the UN performance test requirements as specified in the container markings.