Quality Assurance and Regulatory Affairs
366 Greif Parkway
Delaware, Ohio 43015
Phone: 740 657 6565
Fax: 740 657 6978

October 15, 2020

UN/DOT Design Type Certification

Report No:	F-1878-201013	**Test Type:**	Periodic Retest
Test Date:	October 13, 2020	**Expiration Date:**	October 13, 2021
Test Facility:	Greif – Alsip, IL Technical Center 4300 W 10th 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 at the following location(s): Charlotte, Englishtown, Houston-Fibre, Lithonia, Morgan Hill, Naperville, Ontario, Van Wert, Windsor Locks, 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
Director, Quality Assurance and Regulatory Affairs

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

DESIGN TYPE Details

Report No:	F-1878-201013
Date Tested:	October 13, 2020
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
Closing Ring:	Steel Lok-Rim .022
Cover Material/Thickness:	Steel FDC Plain No Gasket 26ga
Bottom Material / Thickness:	Fibre .120
Top Seal:	None
Bottom Seal:	None
Poly Bag/Poly Tubing:	None
Bag/Poly Tubing Application:	N/A

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.

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

RETEST DESIGN TYPE RESULT SHEET

Report No:	F-1878-201013	
Date Tested:	October 13, 2020	
Qualification Date:	July 11, 2006	
Drum Style:	Lok-Rim Fibre Drum	
UN Certified Marking(s):	1G/Y143/S	1G/Z143/S
Maximium Capacity:	146.0 Litres	38.5 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	10.7 Lbs
Net:	138.1 KG	304.6 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:	(5.5 Units * 143 KG Each) 1.5 x Static Load = 1,181 KG
Results:	3 Units Passed

Drop Test (49 CFR 178.603)
Package Preparation: Drums filled to 95% minimum capacity, with material 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 / 47.2 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

Phil Zamperin
Director, 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. Product compatibility with the container is the shipper's responsibility.

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 recommendations 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 cover on drum.
2. Snap the closing ring over the cover and top lip of the drum. Make sure that the writing on the closing lever is right side up. Also, make sure the bottom edge of the closing ring engages under the top lip of the drum.
3. Pull the locking lever closed. At the same time, tap along the entire outside 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.
4. 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.
5. 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.
6. Drums closed in this manner have met the UN performance test requirements as specified in the container markings.