Quality Assurance and Regulatory Affairs

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September 17, 2020

UN/DOT Design Type Certification

Report No:F-1394-200806Test Type:Periodic RetestTest Date:August 6, 2020Expiration Date:August 6, 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): Naperville.

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

1G/Y120/S 1G/Z120/S

Thank you and best regards.

Phil Zamperin

Director, 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-1394-200806

Date Tested: August 6, 2020

Qualification Date: July 31, 2009

Drum Style: RT

Drum Type: Ro-Con Transport Fibre Drum

N/A

UN Certified Marking(s):

1G/Y120/S

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1G/Z120/S

Diameter: 14.75 inches
Overall Height: 32.25 inches
Tare Weight: 9.2 lbs
Gallon Capacity: 20 - 30

Cap Material: Kraft 56# **Cap Material Weight:** Cap No of Lams: 7 lams Cap Liner/Barrier: None **Body/Btm Cap Material:** Kraft **Body/Btm Cap Weight:** 56# Body/Btm Cap No of Lams: 7 lams Body/Btm Cap Liner / Barrier: None **Insert Material:** N/A **Insert Material Weight:** N/A **Insert Material No of Lams:** N/A

Top Element Min: .220

Bottom Element Min: .220

Poly Bag: None

Bag Application: N/A

Drum Construction:

Insert Liner / Barrier:

Shell/Tube is constructed of convolutely wound kraft or barrier (if applicable) paper using adhesive to bind individual layers. The bottom of the tube is attached to a head and facer by folding the bottom tube end inward and joining between the bottom header and bottom facer. Top shell/chime remains a straight cut that allows for attachment of a slip on All-Fi cover with no locking ring. All Fibre component end is constructed by manufacture of a larger diameter tube, folding the tube end inward and attaching a header and facer, which is bound together with adhesive. Drum shall be sealed with or without tape, according to closing instructions.

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



1G/Z120/S

RETEST DESIGN TYPE RESULT SHEET

Report No: F-1394-200806

Date Tested: August 6, 2020

Qualification Date: July 31, 2009

Drum Style: Ro-Con Transport Fibre Drum

UN Certified Marking(s): 1G/Y120/S

113.7 Litres 30 Gallons

 Capacity Range:
 75.8 - 113.7 Litres
 20 - 30 Gallons

 Test Mass - Gross:
 120.0 KG
 264.6 Lbs

 Tare:
 4.1 KG
 9.0 Lbs

 Tare:
 4.1 KG
 9.0 Lbs

 Net:
 115.9 KG
 255.6 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: (4.5 Units * 120 KG Each) 1.5 x Static Load = 811 KG

Results: 3 Units Passed

Drop Test (49 CFR 178.603)

Maximium Capacity:

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/ 3 Units Passed

Handle @ Impact Point:

Diagonal Btm Drop | On bottom 3 Units Passed

edge:

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:

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Phil Zamperin

Director, Quality Assurance and Regulatory Affairs



ALL-FI, ALL-FI TRANSPORT, ALL-FI FLUTED, ROCON, ROCON TRANSPORT CLOSURE NOTIFICATION ** REQUIRES THREE WRAPS OF TAPE **

Product Type: F25 Country: USA

Pursuant to the requirement 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.

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. Telescoping cover must fit securely on drum. Cover must be pushed onto drum until the top edge of the drum body touches the inside top of the cover.
- 2. The cover must be secured to the drum body using adhesive backed tape, Intertape Model RG3...56, 3-inch wide filament tape or equivalent filament reinforced 72mm (3" nominal) wide natural rubber adhesive tape. The tape must wrap around the drum body three (3) times. There should be approximately 1-1/2" of tape on the cover and 1-1/2" of tape on the body of the drum. Press and rub the tape firmly into place around the entire drum.
- 3. Drums closed in this manner have met the UN performance test requirements as specified in the container markings.