UNITED NATIONS/DOT PERFORMANCE CERTIFICATION

3H1/Y1.8/150/**/USA/M6864

TEST REPORT #: 26-G2-1010

UN MARKING:

3H1/Y1.8/150/**/USA/M6864

**Insert the year packaging is manufactured

PACKAGING CERTIFICATION AGENCY:

G3 Packaging, LLC (M6864)

4273 Salzman Road

Monroe, Ohio 45044

Date:

July 22, 2026

CERTIFICATION

Design Qualification of G3 Packaging's

7 Gallon (27L) Tight Head Jerrican with Miami Valley Plastics 70mm 8TPI Closure

G2 2770NTNAVERDC

G3 Packaging LLC certifies testing has been performed in accordance with standard good laboratory practices and that the packaging tested has passed the standards of the DEPARTMENT OF TRANSPORTATION'S TITLE 49 CFR; PERFORMANCE ORIENTED PACKAGING STANDARDS, SECTION 178. THIS PACKAGE IS ALSO CERTIFIED FOR SHIPMENTS UNDER IMDG, ICAO/IATA REGULATIONS. It is the responsibility of the end user to determine packaging authorization for use under these regulations. The use of other packaging methods or components other than those documented in this report may render this certification invalid.

PERFORMANCE TESTS SUMMARY

DOT TEST	49 CFR REFERENCE	TEST LEVEL	TEST PERIOD	TEST CONTENTS	TEST COMPLETED	TEST RESULTS
Drop	178.603	1.8m	N/A	GLYCOL/WATER	7/15/2026	PASS
Leakproofness	178.604	20 kPa	5 Minutes	EMPTY	7/15/2026	PASS
Hydrostatic	178.605	150 kPa	30 Minutes	WATER	7/15/2026	PASS
Stacking	178.606	317.5 Kg	28 Days	WATER	5/11/2026	PASS
Vibration	178.608	4.0 Hz	1 Hour	WATER	4/14/2026	PASS

TEST REPORT NUMBER	26-G2-1010
UN MARKING (CFR 49-178.503)	3H1/Y1.8/150/**/USA/M6864
PACKAGING IDENTIFICATION CODE	3H1 – Non-Removable Head Jerrican (178.509)
PERFORMANCE STANDARD	Y (Packaging meets Packing Group II & III tests)
MAXIMUM PRODUCT SPECIFIC GRAVITY	1.8
HYDROSTATIC TEST PRESSURE	150 kPa
YEAR OF MANUFACTURE	**Insert year the packaging is manufactured**
STATE AUTHORIZING THE MARK	USA
PACKAGING CERTIFICATION AGENCY	G3 Packaging, LLC (M6864)
PERIODIC RETEST DATE	July 22, 2027

ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING ANY WARRANTY THAT THE PACKAGING TESTED IS MERCHANTABLE OR FIT FOR A PARTICULAR PURPOSE, ARE DISCLAIMED.In the event of future changes to the above referenced Test Standard it is the responsibility of G3 Packaging LLC. To determine whether additional testing or updating of past testing is necessary to verify that the packaging tested remains in compliance with those standards.

Thomas J. Gruber, Jr.

Thomas Gruber - President

TEST SETUP AND RESULTS

DROP TEST – TITLE 49-CFR: 178.603

TEST CRITERIA:

- For each packaging containing liquid, each packaging does not leak when equilibrium has been reached between the internal and external pressures.
- Any discharge from a closure is slight and ceases immediately after impact with no further leakage. (178.603)

TEST CONTENTS:	Glycol/Water Solution
SAMPLE SIZE:	6 jerricans (3 for each test)
CLOSURE TORQUE:	Cap MVP 70 (12 ft-lbs) 22/400 vent (15 in-lbs)
FILLING SUBSTANCE:	Water
CONDITIONING:	0°F
FILL CAPACITY:	5 Gallons/98 Capacity
DROP HEIGHT:	1.8 meters (71”)
TEST EQUIPMENT:	Presto Labs

DIAGONAL TOP CHIME ON 70MM CLOSURE

Sample #	Results	Comments
7	PASS	NO LEAKAGE
8	PASS	NO LEAKAGE
9	PASS	NO LEAKAGE

DROP TEST (cont'd)			
FLAT ON SIDE			
	Sample #	Results	Comments
	10	PASS	NO LEAKAGE
	11	PASS	NO LEAKAGE
	12	PASS	NO LEAKAGE

LEAKPROOFNESS TITLE 49-CFR: 178.604

TEST CRITERIA:

Packaging passes the test if there is no leakage of air from the packaging (178.604)

TEST CONTENTS:	Empty
SAMPLE SIZE:	3 jerricans
CLOSURE TORQUE:	Cap MVP 70 (12 ft-lbs) 22/400 vent (15 in-lbs)
CONDITIONING:	Ambient
TEST PRESSURE:	20 kPa
TEST DURATION:	5 Minutes
AREA OF PRESSURIZATION:	Through Sidewall
TEST EQUIPMENT:	Regulated Air Source & Calibrated Pressure Gauge

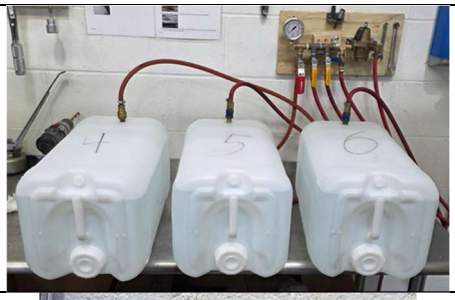
Sample#	Results	Comments
1	PASS	NO LEAKAGE
2	PASS	NO LEAKAGE
3	PASS	NO LEAKAGE

HYDROSTATIC PRESSURE TEST TITLE 49-CFR: 178.605

TEST CRITERIA:

Packaging passes the test if, for each sample, there is no leakage of liquid from the package (178.605)

TEST CONTENTS:	Water
WATER TEMPERATURE:	71°F
SAMPLE SIZE:	3 jerricans
FILL CAPACITY:	Max Capacity (5 gallons/20L)
CLOSURE TORQUE:	Cap MVP 70 (12 ft-lbs) 22/400 vent (15 in-lbs)
CONDITIONING:	Ambient
TEST PRESSURE:	150 kPa
TEST DURATION:	30 Minutes
AREA OF PRESSURIZATION:	Through Sidewall
TEST EQUIPMENT:	Regulated Water Source & Calibrated Pressure Gauge



Sample#	Results	Comments
4	PASS	NO LEAKAGE
5	PASS	NO LEAKAGE
6	PASS	NO LEAKAGE

TIGHT HEAD PLASTIC JERRICAN (G22770NTNAVERDC)				DRAWING
Manufacturer: G3 Packaging, Monroe, OH				
Description:	7 Gallon Tight Head Jerrican			
Material/Pigment:	High Density Polyethylene, Natural			
Method of Manufacture:	Blow Molded			
Tare Weight:	1,371 Grams			
Capacity:				
• **Rated**	7 Gallon			
• **Overflow**	27.2 Liters 7.186 (Gallons)			
Overall Dimensions:				
Length:				
• **Top Length**	10.817”			
• **Bottom Length**	10.995”			
Width:				
• **Top Width**	10.859”			
• **Bottom Width**	10.606”			
Height:	17.732”			
70 mm Opening Thread Dimensions:				
• **T**	2.740”			
• **E**	2.585”			
• **Height**	0.730”			
22 mm Vent Access Thread Dimensions:				
• **T**	0.870”			
• **E**	0.780”			
• **Height**	0.493”			
Wall Thickness:	**Top**	**Sidewall**	**Bottom**	
• **Minimum**	0.046”	0.056”	0.045”	
Handle:				
• **Style**	Integrated			
• **Number/Location**	1 – Top			
• **Material**	High Density Polyethylene, Natural			
Markings (QC Audit):	G3 Packaging 2 8/25 SPI “2” HDPE Recycling Symbol			

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SECTION III: TEST PROCEDURES AND RESULTS

STACKING & STACKING STABILITY TESTS

TEST INFORMATION		TEST CRITERIA
TEST COMPLETED:	May 11, 2026	• No test sample may leak. • There can be no deterioration that could adversely affect transport safety or any distortion liable to reduce the package's strength, cause instability in stacks of packages, or cause damage to inner packagings that is likely to reduce safety in transport. (§178.606)
TEST CONTENTS:	Water	
SAMPLE PREPARATION:	Refer to Section II	
CONDITIONING:	40°C (104°F) Chamber #201	
TEST LOAD APPLIED:	308.4 Kg (680.0 Lbs.) (Refer to Section IV)	
TEST DURATION:	28 Days	
TEST EQUIPMENT:	Guided Load Fixture w/ Dead Load Weight	

STACKING TEST SET-UP & RESULTS

Sample #	Maximum Deflection After 28 Days	Results
1	1-9/16"	**PASS**
2	1-1/8"	**PASS**
3	1-7/8"	**PASS**

Comments/Observations: Following the 28-day stack test, there was no leakage of contents from the test samples and no damage likely to affect the performance of the packaging.

STACKING STABILITY TEST SET-UP & RESULTS

Results	CRITERIA FOR PASSING THE TEST
PASS	• In guided load tests, stacking stability must be assessed after test completion. • Two filled packagings of the same type must be placed on the test sample. • The stacked packages must maintain their position for one hour. (§178.606)

For stack stability, TEN-E places the filled samples one on top of the other. The bottom sample is rotated to the top until all three samples have been subjected to stacking stability for one hour each.

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VIBRATION TEST

TEST INFORMATION		TEST CRITERIA
TEST COMPLETED:	April 14, 2026	• Immediately following the period of vibration, each package must be removed from the platform, turned on its side and observed for any evidence of leakage. • A packaging passes the vibration test if there is no rupture or leakage from any of the packages. • No test sample should show any deterioration which could adversely affect transportation safety or any distortion liable to reduce packaging strength. (§178.608)
TEST CONTENTS:	Water	
SAMPLE PREPARATION:	Refer to Section II	
CONDITIONING:	Ambient	
TABLE DISPLACEMENT:	1”	
TEST FREQUENCY:	4.0 Hz	
TEST DURATION:	1 Hour	
TEST EQUIPMENT:	Vertical motion using L.A.B. 10000 Transportation Simulator	

VIBRATION TEST SET-UP AND RESULTS

Sample #	Results	Comments/Observations
4	**PASS**	No leakage or damage.
5	**PASS**	
6	**PASS**	

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SECTION IV: MATHEMATICAL CALCULATIONS

INFORMATION USED FOR CALCULATIONS

Overall Packaging Tare Weight (PTW):	**1.4 Kg**
Overflow Capacity (OFC):	
Water	**27.2 Kg**
Packing Group	**II**
Product Specific Gravity (PSG):	**1.8**
Packing Group Multiplication Factor (MF):	**1.00**
Nesting Height of one Package (NH):	**17.25**
Stack Test-# of Samples Tested Simultaneously:	**0**

98% OF OVERFLOW

Overflow Capacity (OFC) x 98%

OFC	x	98%				
27.2	x	98% =	**26.7**	**Kg**	**58.9**	**Lbs. Water**

PACKAGE TEST WEIGHTS

Overall Pkg Tare Weight (PTW) + 98% Overflow Capacity (OFC)

PTW	+	98% OFC =				
1.4	+	26.7	**28.1**	**Kg**	**61.9**	**Lbs. Water**

STACK TEST MINIMUM LOAD CALCULATIONS

Number of Packages in a 3m High Stack (118.2 / Nesting Height (NH) -1)

118.2 / Nesting Height of one Pkg (NH) - 1

(118.2	/	NH)	-1	=	# 3m HS
118.2	/	17.25	-1	=	5.9

Stack Test Load Calculation (Individual Package)

Calculated Pkg Gross Mass (CPGM) x # of Pkg in a 3m High Stack (# 3m HS)

CPGM	x	# 3m HS		
49.4	x	5.9		
		291.5 Kg	**642.6**	**Lbs.**

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DISCLAIMER OF WARRANTIES

TEN-E PACKAGING SERVICES, INC. certifies that the previously described testing services have been performed in accordance with standard good laboratory practices and have passed the DEPARTMENT OF TRANSPORTATION'S TITLE 49 CFR; Performance Oriented Packaging Standards, Section 178.606 and 178.608. The results included within this test report relate only to the items tested. **ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING ANY WARRANTY THAT THE PACKAGING TESTED IS MERCHANTABLE OR FIT FOR A PARTICULAR PURPOSE, ARE DISCLAIMED.** In no event shall TEN-E Packaging Services, Inc. liability exceed the total amount paid by **G3 Packaging** for services rendered.

In the event of future changes to the above referenced test standard, it is the responsibility of **G3 Packaging** to determine whether additional testing or updating of past testing is necessary to verify that the packaging we have tested remains in compliance with those standards.

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