TEN-E Packaging Services, Inc.

UNITED NATIONS / DOT PERFORMANCE CERTIFICATION

31HH1 DESIGN QUALIFICATION

Poly IBC UC 2.0 1000 Liter All Plastic Composite Framed IBC with KTJ Quick Connect II & III Dip Tubes and KTJ Non-Vented Bung Closure

TEST REPORT #: 25-MN40056

(un) 31HH1 / Y / * / USA / +AA11220 / 0 / 2010

* Insert the month and year (last two digits) of manufacture

TESTING PERFORMED FOR:

RIKUTEC AMERICA, INC.
2510-B West Whitner St.
Anderson, SC 29624

ATTN: Alex Pytka

TESTING PERFORMED BY:

TEN-E PACKAGING SERVICES, INC.
1666 County Road 74
Newport, MN 55055
Phone: 651-459-0671
Fax: 651-459-1430

June 23, 2025

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NOTES AND COMMENTS

This IBC was previously certified under report 24-MN40068. Due to testing a new shipping cap on the KTJ Quick Connect III, this report is being issued as a design qualification report.

Rikutec America, Inc. has reports on file with alternate gaskets per their competent authority approval number CA2020110503.

SECTION I: CERTIFICATION

DESIGN QUALIFICATION of the Rikutec America, Inc. Poly IBC UC 2.0 1000 Liter All Plastic Composite Framed IBC with KTJ Quick Connect II & III Dip Tubes and KTJ Non-Vented Bung Closure

TEN-E Packaging Services, Inc. is a current DOT UN Third-Party Certification Agency under §107.403 and certifies that the **Rikutec America, Inc.** packaging referenced above has passed the standards of the DEPARTMENT OF TRANSPORTATION'S TITLE 49 CFR; Performance Oriented Packaging Standards, Section 178. This package is also certified under IMDG and the UN Recommendations on the Transport of Dangerous Goods. It is the responsibility of the end user to determine 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.

SUMMARY OF PERFORMANCE TESTS

UN / DOT TEST	49 CFR REFERENCE	TEST LEVEL	TEST CONTENTS	TEST COMPLETED	TEST RESULTS
Vibration	178.819	3.6 Hz – 1 Hour	Water	June 2, 2025	PASS
Bottom Lift	178.811	2,576.7 Kg	Water	June 2, 2025	PASS
Leakproofness	178.813	20 kPa – 10 Minutes	Empty	June 2, 2025	PASS
Hydrostatic	178.814	100 kPa – 10 Minutes	Water	June 3, 2025	PASS
Drop	178.810	1.9 m	Methanol/Water	June 23, 2025	PASS

TEST REPORT NUMBER:	25-MN40056
UN MARKING: (CFR 49 – 178.703)	(un) 31HH1 / Y / * / USA / +AA11220 / 0 / 2010
PACKAGING IDENTIFICATION CODE:	31HH1 (178.707 Composite IBC)
PERFORMANCE STANDARD:	Y (Packaging meets Packing Group II and III tests)
MONTH AND YEAR OF MANUFACTURE:	*
STATE AUTHORIZING ALLOCATION OF THE MARK:	USA
PACKAGING CERTIFICATION AGENCY:	(+AA) TEN-E Packaging Services, Inc. (Newport, MN CAA #2006030022)
THIRD PARTY PACKAGING IDENTIFICATION:	+AA11220
STACKING TEST LOAD:	0 Kg (not intended to be stacked in transportation)
MAXIMUM PERMISSIBLE GROSS MASS:	2,010 Kg (4,431 Lbs.)
PERIODIC DESIGN REQUALIFICATION DATE:	June 23, 2026
CLIENT COMPETENT AUTHORITY APPROVAL:	CA2020110503
ADDITIONAL REQUIRED RIGID PLASTIC & COMPOSITE IBC MARKINGS (CFR 49 – 178.703(b)):	
RATED CAPACITY AT 20ºC (liters):	1000 Liters
TARE MASS (Kg):	Insert Individual IBC Tare Mass
GAUGE TEST PRESSURE (kPa):	100 kPa
DATE OF LAST LEAKPROOFNESS TEST:	Insert Month & Year of Last Leakproofness Test
DATE OF LAST INSPECTION:	Insert Month & Year of Last Inspection

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 **Rikutec America, Inc.** for services rendered. In the event of future changes to the above referenced test standards, it is the responsibility of **Rikutec America, Inc.** 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.

MANUFACTURER:
Rikutec America, Inc.
2510-B W. Whitner St.
Anderson, SC 29624

Oscar Mejia
Technician
TEN-E Packaging Services, Inc.
1666 County Road 74
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Tyler Kinderman
Project Manager
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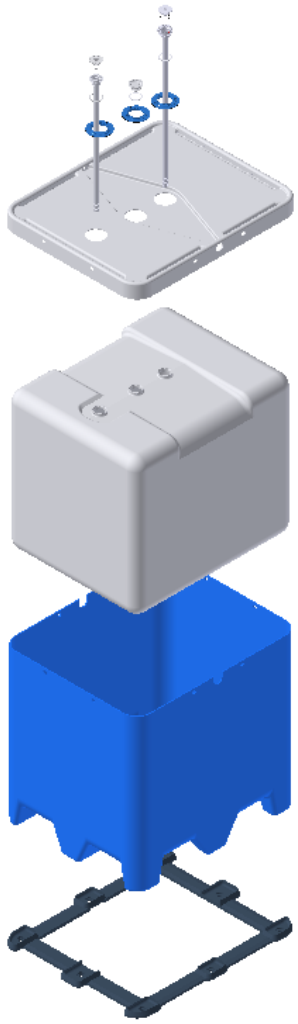
SECTIONS II & V: PACKAGING DESCRIPTIONS / COMPONENT DRAWINGS

Poly IBC UC 2.0 1000 Liter All Plastic Composite Framed IBC with KTJ Quick Connect II & III Dip Tubes and KTJ Non-Vented Bung Closure

ASSEMBLY DRAWING



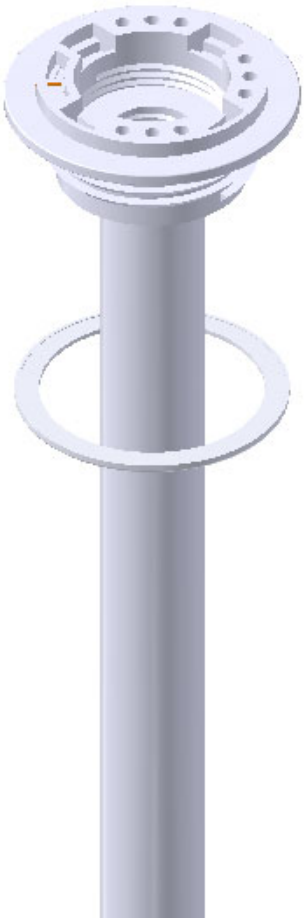
TEST LEVELS

Certification Type:		Design Qualification	
Packaging Code Designation:		31HH1	
Packing Group:		II	
Specific Gravity:		1.9	
Test Pressure:		100 kPa	
TEST SAMPLE PREPARATION (Refer to Section IV)			
Overall IBC Tare Weight: (Sample #1 and Sample #2)		97 Kg	214 Lbs.
Net Fill Weight (98% Maximum Capacity):			
Water	(Sample #1)	1,028.1 Kg	2,266.6 Lbs.
Methanol/Water	(Sample #2)	964.4 Kg	2,126.2 Lbs.
IBC Test Weight:			
Water	(Sample #1)	1,125.1 Kg	2,480.3 Lbs.
Methanol/Water	(Sample #2)	1,061.4 Kg	2,339.9 Lbs.
Maximum Permissible Gross Mass:		2,050.3 Kg	4,520.0 Lbs.
CLOSING METHODS			
KTJ Quick Connect II Dip Tube:			
Application Torque:		25 Ft-Lbs.	
Equipment:		Torque Wrench #740	
KTJ Quick Connect III Dip Tube:			
Application Torque:		25 Ft-Lbs.	
Equipment:		Torque Wrench #740	
KTJ Quick Connect II Shipping Cap:			
Application Torque:		5 Ft-Lbs.	
Equipment:		Torque Wrench #740	
KJT Quick Connect III Shipping Cap:			
Application Torque:		6 Ft-Lbs	
Equipment:		Torque Wrench #740	
2” KTJ Non-Vented Bung Closure:			
Application Torque:		25 Ft-Lbs.	
Equipment:		Torque Wrench #740	

COMPONENT INFORMATION

CLOSURE (21310101)			DRAWING
Manufacturer: Kunststofftechnik Jaeger, Braunschweig, Germany			
Description:	2” Non-Vented Buttress Threaded Plug		
Quantity:	2		
Material:	Polypropylene, Natural		
Tare Weight:	34.209 Grams		
Overall Dimensions:			
• **Height**	34.5 mm	(1.358”)	
• **Diameter**	78.7 mm	(3.102”)	
Thread Dimensions:			
• **Major Diameter:**	61.9 mm	(2.437”)	
• **Minor Diameter:**	54.9 mm	(2.162”)	
Markings (QC Audit):	2		
POE PROFILE GASKET (22010202):			
Description:	Natural Polyolefin Profile Gasket		
Tare Weight:	2.964 Grams		
Thickness:	3.8 mm	(0.15”)	
Diameter:	72.5 mm	(2.85”)	

CLOSURE (41010051 - DT-62PE-XXX-1040-TF)		DRAWING
Manufacturer: Kunststofftechnik Jaeger, Braunschweig, Germany		
Description:	1-1/2” Quick Connect II Threaded Sealing Cap	
Quantity:	1	
Material:	Polyethylene, Natural	
Tare Weight:	17.073 Grams	
Overall Dimensions:		
• **Height**	25.1 mm (0.99”)	
• **Diameter**	75.7 mm (2.98”)	
Thread Dimensions:		
• **T**	41.2 mm (1.62”)	
• **E**	38.6 mm (1.52”)	
Markings (QC Audit):	www.qc-system.com patented U.S. Pat. No. 6,357,494	
GASKET		
Description:	Polyethylene, Natural	
Tare Weight:	0.547 Grams	
Thickness:	2.8 mm (0.11”)	
Diameter:	35.6 mm (1.40”)	
DIP TUBE (41010051 - DT-62PE-XXX-1040-TF)		
Manufacturer: Kunststofftechnik Jaeger, Braunschweig, Germany		
Description:	2” Quick Connect II Buttress Threaded Insert with Dip Tube and Bottom Flexible Bellow	
Quantity:	1	
Material:	Polyethylene, Natural	
Tare Weight:	138 Grams	
Overall Dimensions:		
• **Height**	1047.7 mm (41.25”) (with Dip Tube)	
• **Insert Height**	34.0 mm (1.34”)	
• **Diameter**	79.0 mm (3.11”)	
Thread Dimensions (2” Container - Side):		
• **Major Diameter**	62.0 mm (2.44”)	
• **Minor Diameter**	54.6 mm (2.15”)	
Thread Dimensions (1-1/2” Shipping Cap - Side):		
• **Major Diameter**	42.7 mm (1.68”)	
• **Minor Diameter**	40.4 mm (1.59”)	
Thread Dimensions (3/4” Plug - Side):		
• **Major Diameter**	26.6 mm (1.05”)	
• **Minor Diameter**	24.0 mm (0.94”)	
Markings (QC Audit):	1B2 3A4 5C6	
POE PROFILE GASKET (22010202)		
Description:	Natural Polyolefin Profile Gasket	
Tare Weight:	2.884 Grams	
Thickness:	3.8 mm (0.15”)	
Diameter:	72.4 mm (2.85”)	

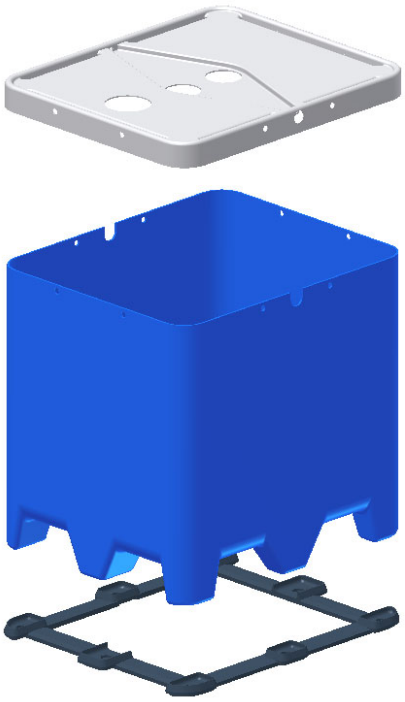


CLOSURE (44020003 – DT3-62PP-XXX-0900-TF)			DRAWING
Manufacturer: Kunststofftechnik Jaeger, Braunschweig, Germany			
Description:	2” Quick Connect III Threaded Sealing Cap		
Quantity:	1		
Material:	Polypropylene, Natural		
Tare Weight:	50.660 Grams		
Density:			
Overall Dimensions:			
• **Height**	23.85 mm	(0.939”)	
• **Diameter**	77.47 mm	(3.050”)	
Thread Dimensions:			
• **T**	52.40 mm	(2.063”)	
• **E**	49.42 mm	(1.946”)	
Markings (QC Audit):	None		
O-RING			
Description:	FEP Encapsulated O-Ring		
Tare Weight:	2.614 Grams		
Thickness:	3.38 mm	(0.133”)	
Diameter:	49.75 mm	(1.959”)	
DIP TUBE (44020003 – DT3-62PP-XXX-0900-TF)			
Manufacturer: Kunststofftechnik Jaeger, Braunschweig, Germany			
Description:	2” Quick Connect III Buttress Threaded Insert with Dip Tube and Bottom Flexible Bellow		
Quantity:	1		
Material:	Polypropylene, Natural		
Tare Weight:	139 Grams		
Overall Dimensions:			
• **Height**	911.0 mm	(35.87”) (with Dip Tube)	
• **Insert Height**	32.6 mm	(1.28”)	
• **Diameter**	80.3 mm	(3.16”)	
Thread Dimensions (2” Container - Side):			
• **Major Diameter**	61.5 mm	(2.42”)	
• **Minor Diameter**	55.2 mm	(2.17”)	
Thread Dimensions (1-1/2” Shipping Cap - Side):			
• **Major Diameter**	53.5 mm	(2.10”)	
• **Minor Diameter**	51.3 mm	(2.02”)	
Markings (QC Audit):	None		
POE PROFILE GASKET (22010202):			
Description:	Natural Polyolefin Profile Gasket		
Tare Weight:	2.917 Grams		
Thickness:	3.8 mm	(0.15”)	
Diameter:	72.4 mm	(2.85”)	

CLAMPING NUT (2.0)		DRAWING
Manufacturer: Rikutec America, Inc., Anderson, SC		
Description:	Outer Buttress Threaded Clamping Nut used on 2.0 IBC designs	
Quantity:	3 (1 on each opening)	
Material:	Polyethylene, Blue and Black, Rubber	
Tare Weight:	60 Grams	
Overall Dimensions:		
• **Height**	0.758”	
• **Diameter**	5.905”	
Thread Dimensions:		
• **T**	3.446”	
• **E**	3.245”	
Markings (QC Audit):	RIKUTEC 5/24 SPI “2” Recycling Symbol	

PLASTIC INNER RECEPTACLE (11001033)			DRAWING
Manufacturer: Rikutec America, Inc., Anderson, SC			
Description:	Rikutec 2.0 1000 Liter Rigid Inner Receptacle with (3) 2” Buttress Threaded Top Fill Port Openings		
Material:	High Density Polyethylene, Natural		
Resin Type:	Two Layer Wall Design: • Inside: Lupolen 4261 A Q149 • Outside: Lupolen 4261 AG UV 60005		
Method of Manufacture:	Blow Molded		
Tare Weight:	50.71 Lbs. (23.0 Kg)		
Capacity:			
• **Rated**	1,000 Liter		
• **Overflow**	277.1 Gallons (1,049.0 Liter)		
Overall Dimensions:			
• **Length**	1,155.7 mm	(45.50”)	
• **Width**	962.5 mm	(37.88”)	
• **Height**	1,044.7 mm	(41.13”)	
2” Fill Port Opening Thread Dimensions			
• **Major Diameter**	64.8 mm	(2.55”)	
• **Minor Diameter**	57.1 mm	(2.25”)	
Clamping Nut Thread Dimensions			
• **Major Diameter**	85.52 mm	(3.367”)	
• **Minor Diameter**	81.23 mm	(3.198”)	
Dip Tube Opening Thread Dimensions			
• **Major Diameter**	64.8 mm	(2.55”)	
• **Minor Diameter**	57.4 mm	(2.26”)	
Wall Thickness (Minimum):	2.387 mm	(0.09”)	
Markings (QC Audit):	(un) 31HH1 / Y / 0423 / D / BAM 6808-RIKUTEC RIKUTEC 14783 Made in Germany SPI “2” PE-HD Recycling Symbol		

COVER – POLY BOX (2.0)		DRAWING
Manufacturer: Rikutec America, Inc., Anderson, SC		
Description:	Top HUVEX Cover with (3) Access Holes Secured to Tote with (8) Plastic Pins	
Quantity:	1	
Material:	High Density Polyethylene, Natural	
Tare Weight:	10.6 Kg (23.37 Lbs.)	
Overall Dimensions:		
• **Length**	1,212.9 mm (47.75”)	
• **Width**	1,003.3 mm (39.50”)	
• **Height**	962.2 mm (37.88”)	
• **Small Hole Diameter**	142.0 mm (5.63”)	
• **Large Hole Diameter**	177.8 mm (7.00”)	
Markings (QC Audit):	(un) 31HH1 / Y / 0423 / D / BAM /6808 RIKUTEC/ 3314 / 2070 / TR6F142 POLY-IBC UC 1000 Max Capacity 1060 Liter / Tare 96kg Gauge of Pressure: 100 kPa Hersteller: RIKUTEC Made in Germany SPI “2” PE HD Recycling Symbol	
FRAMED BASE – POLY BOX		
Manufacturer: Rikutec America, Inc., Anderson, SC		
Description:	4-Way Entry Plastic Outer Tote	
Quantity:	1	
Material:	HDPE / Foam / HDPE	
Tare Weight:	65.5 Kg (144.4 Lbs.) (with Bottom Frame)	
Overall Dimensions:		
• **Length**	1,193.8 mm (47.00”)	
• **Width**	990.6 mm (39.00”)	
• **Height**	1,168.4 mm (46.00”)	
FRAMED PALLET:		
Description:	Molded Pallet Feet and Bottom Detachable Plastic Framed Pallet with (8) Plastic Screws and Bolts	
Markings (QC Audit):		
• **Frame**	SPI “2” PE-HD Recycling Symbol	
• **Box**	None	



SECTION III: TEST PROCEDURES AND RESULTS

VIBRATION TEST

TEST INFORMATION		TEST CRITERIA
TEST CONTENTS:	Water	• An IBC passes the vibration test if there is no rupture or leakage. (§178.819)
SAMPLE PREPARATION:	Refer to Section II	
CONDITIONING:	Ambient	
TABLE DISPLACEMENT:	1”	
TEST FREQUENCY:	3.6 Hz	
TEST DURATION:	1 Hour	
TEST EQUIPMENT:	Vertical motion using L.A.B. 10000 Transportation Simulator	

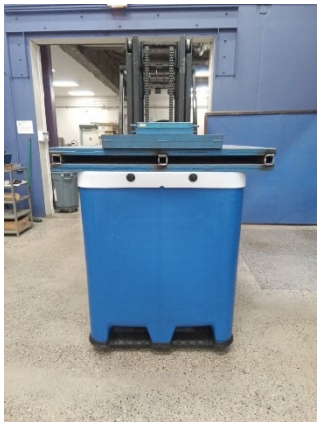
VIBRATION TEST SET-UP AND RESULTS (SAMPLE #1)

Results	Comments/Observations
PASS	The IBC met the criteria for passing the test. No leakage or damage.

BOTTOM LIFT TEST

TEST INFORMATION		TEST CRITERIA
TEST CONTENTS:	Water	• For all IBC design types designed to be lifted from the base, there may be no permanent deformation which renders the IBC unsafe for transportation and no loss of contents. (§178.811)
SAMPLE PREPARATION:	Refer to Section II	
CONDITIONING:	Ambient	
NUMBER OF LIFTS:	8 (Four-Way Entry with 2 Lifts per Direction of Entry)	
FORK TINE PENETRATION:	Entry 1 & 2: 36” Entry 3 & 4: 30”	
COMBINED GROSS MASS LIFTED:	2,576.7 Kg (5,680.6 Lbs.) (Refer to Section IV)	
TEST EQUIPMENT:	Fork Truck Dead Load Weights	

BOTTOM LIFT TEST SET-UP AND RESULTS (SAMPLE #1)

Direction of Entry #1	Direction of Entry #2	Direction of Entry #3	Direction of Entry #4
			

Results		Comments/Observations
Lift #1: **PASS**	Lift #5: **PASS**	The IBC met the criteria for passing the test. No leakage or damage.
Lift #2: **PASS**	Lift #6: **PASS**	
Lift #3: **PASS**	Lift #7: **PASS**	
Lift #4: **PASS**	Lift #8: **PASS**	

LEAKPROOFNESS TEST

TEST INFORMATION		TEST CRITERIA
TEST CONTENTS:	Empty	• For all IBC design types intended to contain solids that are loaded or discharged under pressure or intended to contain liquids, there may be no leakage of air from the IBC. (§178.813)
SAMPLE PREPARATION:	Refer to Section II	
CONDITIONING:	Ambient	
TEST PRESSURE:	20 kPa	
TEST DURATION:	10 Minutes	
AREA OF PRESSURIZATION:	Through Top Head	
TEST EQUIPMENT:	Regulated Air Source #: 2 Pressure Gauge #: 615 & 641	

LEAKPROOFNESS TEST SET-UP AND RESULTS (SAMPLE #1)

Set-Up Photo	Leakproofness Photo	Leakproofness Photo
		

Results	Comments/Observations
PASS	The IBC met the criteria for passing the test. No leakage.

HYDROSTATIC PRESSURE TEST

TEST INFORMATION		TEST CRITERIA
TEST CONTENTS:	Water	• For rigid plastic and composite IBC design types intended to contain solids loaded or discharged under pressure or intended to contain liquids, there may be no leakage and no permanent deformation which renders the IBC unsafe for transportation. (§178.814)
WATER TEMPERATURE:	19.6°C (67.5°F)	
FILL CAPACITY:	Maximum Capacity	
SAMPLE PREPARATION:	Refer to Section II	
CONDITIONING:	Ambient	
TEST PRESSURE:	100 kPa	
TEST DURATION:	10 Minutes	
AREA OF PRESSURIZATION:	Through Top Head	
TEST EQUIPMENT:	Regulated Water Source #: 2 Pressure Gauge #: 641	

HYDROSTATIC PRESSURE TEST SET-UP AND RESULTS (SAMPLE #1)

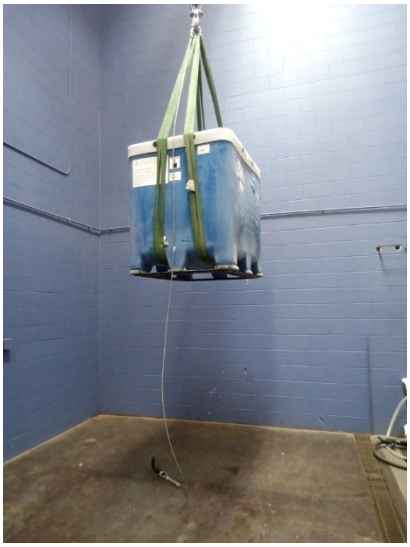
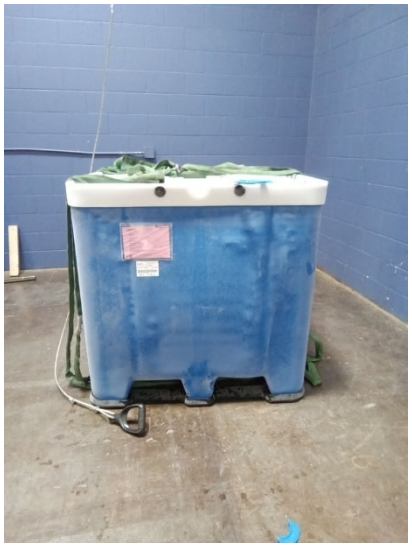
Set-Up Photo	Hydrostatic Pressure Photo	Hydrostatic Pressure Photo
		

Results	Comments/Observations
PASS	The IBC met the criteria for passing the test. No leakage.

DROP TEST

TEST INFORMATION		TEST CRITERIA
TEST CONTENTS:	Methanol/Water Solution (SG 0.966)	• For all IBC design types, there may be no damage which renders the IBC unsafe to be transported for salvage or for disposable, and no loss of contents. • The IBC shall be capable of being lifted by an appropriate means until clear of the floor for five minutes. • A slight discharge from closures upon impact is not considered a failure provided that no further leakage occurs. (§178.810)
SAMPLE PREPARATION:	Refer to Section II	
CONDITIONING:	-18°C (0°F) Chamber #202	
TEST CONTENTS TEMP.:	-19.1°C (-2.4°F)	
DROP HEIGHT:	1.9 Meters (75”) (Refer to Section IV)	
DROP ORIENTATION:	Most Vulnerable Part of Base	
TEST EQUIPMENT:	Quick Release Hook Mechanism 5 Ton Overhead Hoist	

DROP TEST SET-UP AND RESULTS (SAMPLE #2)

Set-Up Photo	Post Drop Photo	Post Drop Photo
		

Results	Comments/Observations
PASS	The IBC met the criteria for passing the test. No leakage. (3) clamping nuts cracked and there was a crack on the bottom right side of the outer shell.

REGULATORY AND INDUSTRY STANDARD REFERENCES

REGULATORY REFERENCES			
TEST	**49 CFR①**	**UN②**	**IMDG③**
	October 2024 Edition	**23rd Edition**	**2024 Edition**
Vibration:	178.819	6.5.6.13	6.5.6.13
Bottom Lift:	178.811	6.5.6.4	6.5.6.4
Leakproofness:	178.813	6.5.6.7	6.5.6.7
Hydrostatic Pressure:	178.814	6.5.6.8	6.5.6.8
Drop:	178.810	6.5.6.9	6.5.6.9

① United States Department of Transportation Code of Federal Regulations (CFR) Title 49, Transportation, Parts 100-185
② The United Nations Recommendations on the Transport of Dangerous Goods – Model Regulations (UN – Orange Book)
③ International Maritime Dangerous Goods Code (IMDG)

INDUSTRY STANDARD REFERENCES		
Vibration:	ASTM④ D7387:	Standard Test Method for Vibration Testing of IBCs Used for Shipping Liquid Hazardous Materials (Dangerous Good)
	ISO⑤ 2247:	Packaging – Complete, Filled Transport Packages – Vibration Test at Fixed Low Frequency
Stacking:	ASTM④ D8409:	Standard Guide for Conducting Stacking Tests on UN Packagings Using Guided or Unguided Loads
	ASTM④ D4577:	Standard Test Method for Compression Resistance of a Container Under Constant Load
	ISO⑤ 2234:	Packaging – Complete, Filled Transport Packages – Stacking Test using Static Load
Pressure:	ASTM④ D8134:	Standard Guide for Conducting Internal Hydrostatic Pressure Tests on United Nations (UN) IBC Design Types
Drop:	ASTM④ D5276:	Standard Test Method for Drop Test of Loaded Containers by Free Fall
	ASTM④ D7790:	Standard Test Method for the Preparation of Plastic Packagings Containing Liquids for United Nations (UN) Drop Testing
	ISO⑤ 2248:	Packaging – Complete, Filled Transport Packages – Vertical Impact Test by Dropping

④ American Society for Testing and Materials (ASTM)
⑤ International Organization for Standardization (ISO)

EQUIPMENT

All inspection, measuring and test equipment that can affect product quality is calibrated and adjusted at prescribed intervals, or prior to use, and is traceable to NIST, using ANSI Z540 as an overall guide for calibration certification.

SECTION IV MATHEMATICAL CALCULATIONS

INFORMATION USED FOR CALCULATIONS

Overall IBC Tare Weight (IBCTW)-Sample 1:	**97.0**	**Kg**	**213.8 Lbs.**
Overall IBC Tare Weight (IBCTW)-Sample 2:	**97.0**	**Kg**	**213.8 Lbs.**
Overflow Capacity (OFC):			
Water	**1,049.0**	**Kg**	**2,312.6 Lbs.**
Methanol/Water	**984.0**	**Kg**	**2,169.3 Lbs.**
Actual Load Applied for Bottom Lift (BLALA):	**1,451.5**	**Kg**	**3,200.0 Lbs.**
Packing Group	**II**		
Product Specific Gravity (PSG):	**1.90**		**Min Wt To Be Applied**
Packing Group Multiplication Factor (MF):	**1.00**		3,169.6 Lbs. (Btm Lift)
# of IBC Stacked During Transportation (#IBC):	**0**		

98% OF OVERFLOW

Overflow Capacity (OFC) x 98%

OFC	x	98%					
1,049.0	x	98% =	**1,028.1**	**Kg**	**2,266.6**	**Lbs. Water**	Sample #1
984.0	x	98% =	**964.4**	**Kg**	**2,126.2**	**Lbs. Methanol/Water**	Sample #2

IBC TEST WEIGHT (IBCW)

Overall IBC Tare Weight (IBCTW) + 98% Overflow Capacity (OFC)

IBCTW	+	98% OFC =					
97.0	+	1,028.1	**1,125.1**	**Kg**	**2,480.3**	**Lbs. Water**	Sample #1
97.0	+	964.4	**1,061.4**	**Kg**	**2,339.9**	**Lbs. Methanol/Water**	Sample #2

AUTHORIZED IBC GROSS MASS (AIBCGM)

Overall IBC Tare Weight (IBCTW) + (Product SG (PSG) x 98% Overflow (OFC))

IBCTW	+	(PSG	x	98% OFC)
97.0	+	1.90	x	1,028.1

2,050.3 Kg **4,520.0 Lbs.**

BOTTOM LIFT CALCULATIONS

The IBC must be loaded to 1.25 times the combined maximum permissible gross mass with load being evenly distributed

Minimum Required Load

Authorized IBC Gross Mass x 1.25

AIBCGM	x	1.25	=	Minimum Required Load			
2,050.3	x	1.25	=	**2,563.0**	**Kg**	**5,650.4**	**Lbs.**

Combined Gross Mass Lifted

Actual Load Applied (ALA) + IBC Test Weight (IBCW)

IBCW	+	ALA	=	Total Load Lifted			
1,125.1	+	1,451.5	=	**2,576.7**	**Kg**	**5,680.6**	**Lbs.**

DROP HEIGHT

Calculation For Product Specific Gravities Exceeding 1.2

Product Specific Gravity (PSG) x Packing Group Multiplication Factor (MF)

PSG	x	MF			**Packing Group:**	**II**
1.90	x	1.00		**Required Drop Height**		**Actual Drop Height**
		1.90	**Meter**	**74.8**	**Inches**	**75** **Inches**