



R.125 R.031	
R1.613 700 + 700 + 0 3+1/XXX/XXX/XX 0 3+1/XXX/XXX/XX 0 3+1/XXX/XXX/XX 1 0 0 1 0 0	900
	38mm NECK ADDED PER CUST DWG#2056       10-Jun-02         GENERAL REVISION AND UPDATE       10-Jun-02         RAD. INCREASE VAR. FROM DECK TO ANGLE       29-May-02         BOTTOM PINCH RED100" ANGLE NOW 45"       29-May-02         CORNERS @ NECK SOFTENED TO R.500"       29-May-02         .375" RADIUS WAS .250"       29-May-02         DECK UNDER HANDLE/NECK RAISED .100"       29-May-02         .090" ROCKER COMP. ADDED       29-May-02
Image: Second	3.046 DIM WAS 3.461 ON 38mm NECK       MAY.8\02         .365 BOTTOM RIB HT. WAS .453       MAY.8\02         11.475 REF. HT. WAS 11.425       MAY.8\02         SHEET 3 ADDED WITH 38mm SP 400 NECK       22–Apr-02         LABEL AREA REDUCED TO 6.500" ACTUAL       22–Apr-02         NECK OFFSET WAS 3.359"       22–Apr-02         DISHED AREA ADDED AT REAR OF HANDLE       22–Apr-02         NECK / HANDLE AREA REVISED       22–Apr-02         63mm RIEKE NECK ADDED       22–Apr-02         11.425" HEIGHT WAS 11.556"       22–Apr-02         YEAR REMOVED FROM MONTH CLOCK       9–Apr-02         NAME PLATE LOCATION + DETAIL ADDED       9–Apr-02         HEIGHT OF BI INCREASED TO 0.250" @ INT.       9–Apr-02         RADIUS FROM BI TO BASE WAS R0.125       9–Apr-02         RADIUS FROM BI TO BASE WAS R0.125       9–Apr-02         NAIL VENT AREA ADDED       9–Apr-02         HANDLE EXT. TOWARDS BACK OF CONTAINER       9–Apr-02         Y       DESCRIPTION       DATE         T.P.I.: 6       CUTT. DIA:: .500 [12.70]       TO FILL LEVEL BEFORE DECORATING         CAPACITY BEFORE DECORATING       2.8 ± .1GAL         CAPACITY AFTER DECORATING       2.8 ± .1GAL
<ul> <li> <ul> <li></li></ul></li></ul>	WOODBRIDGE, ONTARID       TEL (905) 851-7724         Y: TJ Zuber       2.5 GALLON HANDLE         1 DATE: 27-Mar-02       DRAWING NO. 82-26028-3D         AT'L: HDPE       MOULD NO. 44-V-8483-3         E:PD\82-26028       500 Industrial Park Road         PORTLAND, INDIANA 47371       260-726-7000         CRIPTION:       NT 2 1/2 GAL.         DRAWING NUMBER:       0F1

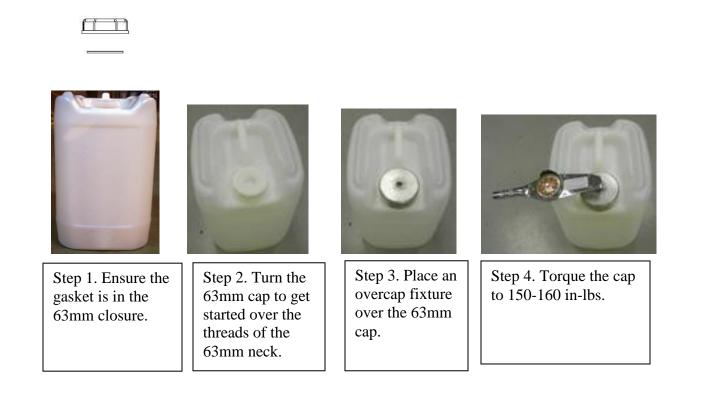


# **<u>Closing Instructions</u>**

Corporate Office 500 Industrial Park Dr. Portland IN 47371 Tel 260.726.7000 Fax 260.726.8111 Date Created: Updated to New Format: 8.08.2019

# Closing Instructions for 2.5 Gallon Containers

Caps that this closing instruction includes are: Priority Plastics 63mm cap manufactured by Miami Valley Plastics is 8728-204-060 (63mm Cap W/EPDM gasket.)



NOTE: Priority Plastics, Inc. certifies that these containers have been manufactured and certified in accordance with Performance Requirements of Part 178 Subpart M of title 49CFR. The chemical filler and the shipper may rely upon the marking as certification that the package meets the applicable UN performance standards. The shipper is responsible for ensuring the product is authorized in the package and must consult and General Shipper Requirements, including modal requirements. To meet UN standards, the package must be properly closed for shipment. Failure to follow the closure instructions or substitution of packaging components other than those identified in the closure instructions will render the UN Certification invalid.

DOT/UNITED NATIONS Performance Oriented Packaging Certification



#### **3H1 PERIODIC RETEST**

7947 2.5 Gallon Rectangle 63mm NoVent- Group II HDPE

#### Test Report #: 2020-12



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3H1/Y1.6/150/\*\* USA /M5105 \*\*Insert year the packaging is manufactured

#### **TESTING PERFORMED FOR:**

PRIORITY PLASTICS, INC. 500 Industrial Park Rd. Portland, IN 47371

#### **TESTING PERFORMED BY:**

 Priority Plastics, Inc.

 500 Industrial Park Rd.

 Portland, IN 47371

 Phone: (260) 726-7000

 Fax: (260) 726-8111

Certification Date: 03/24/2020 Re-Certification Date: 03/24/2021



## **TABLE OF CONTENTS**

Section I: CERTIFICATION
Section II & V: PACKAGING DESCRIPTION / COMPONENT DRAWINGS4
Section III: TEST PROCEDURES AND RESULTS7
DROP TESTS7
LEAKPROOFNESS TEST8
HYDROSTATIC PRESSURE TEST9
DYNAMIC COMPRESSION TEST10
REPETITIVE SHOCK VIBRATON TESTS
REGULATORY AND INDUSTRY STANDARD REFERENCES
Section IV: MATHEMATICAL CALCULATIONS



### **SECTION I: Certification**

#### Periodic Retest 2.5 Gallon Rectangle HDPE Packaging (HDPE Resin)

Priority Plastics, Inc. certifies that the packaging referenced above has passed the standards of the DEPARTMENT OF TRANSPORTATION'S TITLE 49 CFR; Performance Oriented Packaging Standards, Section 178. 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.

	SU.	MMARY OF P	<b>ERFORMANCE TE</b>	STS	
UN/DOT TEST	CFR TEST REFERENCE LEVEL		TEST CONTENTS	TEST TEST	
Drop	178.603	1.6 m	Windshield Fluid/Antifreeze Coolant 50/50 Diluted (WW?A)	March 24, 2020	PASS
Leakproofness	178.604	20 kPa – 5 Min. 3 PSI	Empty	March 23, 2020	PASS
Hydrostatic	178.605	150 kPa – 30 Min.	Water	March 23, 2020	PASS
Stacking/ Dynamic Compression	178.606	534.2 lbs	Water	March 23, 2020	PASS
Vibration	178.608	1.6mm – 1 Hr	Water	March 23, 2020	PASS
TEST REPOR	T NUMBERS:	<b>2018-15,</b> 2019-14, 2020	-12		
UN MARKING (CFR 49 – 178				Y1.6/150/** /M5105	
PACKAGING IDENTIFICATION CODE:			3H1 (178.509)		
PERFORMANCE STANDARD:			Y (Packaging mee	ets Packing Group II test)	
MAXIMUM PRODUCT SPECIFIC GRAVITY:			1.6		
INTERNAL TEST PRESSURE:			150 kPa		
YEAR OF MANUFACTURE:			**Insert year the	packaging is manufactur	ed
STATE AUTHORIZING THE MARK:		USA			
PACKAGING	CERTIFICATI	ON AGENCY:	(M5105) Priority Plastics, Inc.		
PACKAGE ID	ENTIFICATIO	N.	M5105		
PERIODIC RE	ETEST DATE:		March 24, 202	21	

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

#### **MANUFACTURER:**

Priority Plastics, Inc. 500 Industrial Park Road Portland, IN 47371

Donna Noll Quality Manager Priority Plastics, Inc. 500 Industrial Park Rd Portland, IN 47371



Design Qualification Test Report # 2018-15 done by Priority Plastics, Inc. Test Report # 2020-12 March 30, 2020 Page 4of 16

	Certification Type:       Periodic Retest         Packaging Code Designation:       3H1         Packing Group:       II         Specific Gravity:       1.6         Hydrostatic Pressure:       150 kPa         TEST SAMPLE PREPARATION (Refer to Section_IV)         Overall Package Tare Weight:       0.674 Kg         Fill Capacity (98% Overflow):         WW/A       10.192 Kg         Water       10.388 Kg         Package Test Weight:         WW/A:       10.866 Kg         Water       11.362 Kg         Calculated Package Gross Mass:       17.3 Kg (38.1 Lbs.)         CLOSING METHODS       Application Torque for 63mm Cap:       150- 160 In-L	SECTION II: PACKAGING DESCRIPTION / C	
Packaging Code Designation:3H1Packaging Group:IISpecific Gravity:1.6Hydrostatic Pressure:150 kPaTEST SAMPLE PREPARATION (Refer to Section_IV)Overall Package Tare Weight:0.674 KgFill Capacity (98% Overflow):••WW/A10.192 Kg•Water10.388 KgPackage Test Weight:••WW/A:10.866 Kg•Water11.362 KgCalculated Package Gross Mass:17.3 Kg (38.1 Lbs.)CLOSING METHODSApplication Torque for 63mm Cap:150-160 In-L	Packaging Code Designation: 3H1Packaging Group:IISpecific Gravity:1.6Hydrostatic Pressure:150 kPaTEST SAMPLE PREPARATION (Refer to Section IV)Overall Package Tare Weight:0.674 KgFill Capacity (98% Overflow):••WW/A10.192 Kg•Water10.388 KgPackage Test Weight:•WW/A:10.388 KgPackage Test Weight:•WW/A:10.386 KgCalculated Package Gross Mass:17.3 Kg (38.1 Lbs.)CLOSING METHODSApplication Torque for 63mm Cap:150-160 In-L	2.5 Gallon Rectangle, No V	ent, HDPE Packaging
Hydrostatic Pressure:150 kPaTEST SAMPLE PREPARATION (Refer to Section_IV)Overall Package Tare Weight: 0.674 KgFill Capacity (98% Overflow):• WW/A10.192 Kg• WW/A10.192 Kg• Water10.388 KgPackage Test Weight:•• WW/A:10.866 Kg• Water11.362 KgCalculated Package Gross Mass:17.3 Kg (38.1 Lbs.)CLOSING METHODSApplication Torque for 63mm Cap:150-160 In-L	Hydrostatic Pressure:150 kPaTEST SAMPLE PREPARATION (Refer to Section_IV)Overall Package Tare Weight: 0.674 KgFill Capacity (98% Overflow):•WW/A10.192 Kg•WW/A10.192 Kg•Water10.388 KgPackage Test Weight:••WW/A:10.866 Kg•Water11.362 KgCalculated Package Gross Mass:17.3 Kg (38.1 Lbs.)CLOSING METHODSApplication Torque for 63mm Cap:150-160 In-L		Packaging Code Designation: 3H1
Water 10.388 Kg     Package Test Weight:     WW/A: 10.866 Kg     Water 11.362 Kg     Calculated Package Gross Mass: 17.3 Kg (38.1 Lbs.)     CLOSING METHODS     Application Torque for 63mm Cap: 150-160 In-L	Water 10.388 Kg     Package Test Weight:     WW/A: 10.866 Kg     Water 11.362 Kg     Calculated Package Gross Mass: 17.3 Kg (38.1 Lbs.)     CLOSING METHODS     Application Torque for 63mm Cap: 150-160 In-L		Hydrostatic Pressure:       150 kPa         TEST SAMPLE PREPARATION (Refer to Section_IV)         Overall Package Tare Weight:       0.674 Kg         Fill Capacity (98% Overflow):
CLOSING METHODS Application Torque for 63mm Cap: 150-160 In-L	CLOSING METHODS Application Torque for 63mm Cap: 150-160 In-L		Water 10.388 Kg Package Test Weight:     WW/A: 10.866 Kg     Water 11.362 Kg
Equipment for 63mm Cap: GP-045,GP-052 & V-GP-064-A	Equipment for 63mm Cap: GP-045,GP-052 & V-GP-064-A		
			Equipment for 63mm Cap: GP-045,GP-052 & V-GP-064-A



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### **COMPONENT INFORMATION**

CLOSURE (8728-20	4-060)	
	i Valley Plastics, Eldorado, OH	
<b>Description:</b> 63MM	Cap with 3/4" NPT and EPDM Gasket	
Priority Item Number:	8728-204-060	
Tare Weight:	28.52 Grams	
<b>Closure Overall Dimensi</b>	ons:	
• Height	0.862"	
• Diameter	2.895"	
Finish Dimensions:		
• T	2.437"	
• E	2.324"	
Markings (QC Audit):	2, 8 ribs around the outside	
Liner/Gasket	55 Durometer White EPDM	
Identification:	None	
Height Thickness:	0.070"	
Diameter:	2.300"	



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Design Qualification Test Report # 2018-15 done by Priority Plastics, Inc. Test Report # 2020-12 March 30, 2020 Page 60f 16

<b>TIGHT HEAD PI</b>	ASTIC JE	RRICAN (794	7)	
Manufacturer: Pr	iority Plast	ics, Portland, I	N	
Description: 2.5 Gallo				
Material /Pigment: Hi			l	
Method of	Blow	Molded		
Manufacturer:				
Tare Weight:	0.645	Kg		
Capacity:				
• Rated:	2.5 Gallons	6		
• Overflow:	10.600 Kg	(2.797 Gallons)		
<b>Overall Dimension</b>	ns:			
Height:	11.530"			
• Length:	9.197"			
• Width:	8.368"			
Finish Dimensions:				
• 63mm T	2.426"			
• 63mm E	2.282			
<ul> <li>63mm Neck Height</li> </ul>	0.851"			
Wall Thickness:	Body	Top Head	Btm Head	
• Minimum	0.036	.036 0.029" 0.040"		
<ul> <li>Minimum from Design Qualification 2018-15</li> </ul>	0.033"	0.026"	0.038"	
Material:	High Density	Polyethene		
Markings (QC Audit)	u n	u 3H1/Y1.6/150/20		



## **SECTION III: TEST PROCEDURES AND RESULTS**

## **DROP TESTS**

TEST INFORMATION	TEST CRITERIA
<b>TEST CONTENTS:</b> Windshield Washer/Antifreeze(0.984SG)	• For packaging containing liquid, each packaging does not leak when
SAMPLE PREPARATION: REFER TO Section II	equilibrium has been reached between the internal and external
<b>CONDITIONING:</b> -18°C (0°F), Chamber #	<ul><li> Pressures.</li><li> Any discharge from a closure is</li></ul>
<b>TEST CONTENTS TEMP.:</b> -18.35°C (-1.03°F)	slight and ceases immediately after impact with no further leakage.
<b>DROP HEIGHT:</b> 1.6 Meters (63") (Refer to Section IV)	(§ 178.603)
TEST EQUIPMENT: L.A.B. Accu drop	

DIAGONAL TO	<b>P</b> CHIME	<b>DROP</b> T	EST SET-UP AND RESULTS
1	Sample #	Results	<b>Comments / Observations</b>
	1	PASS	No leakage or Breakage
	2	PASS	No leakage or Breakage
	3	PASS	No leakage or Breakage

FLAT ON SIDE, N	FLAT ON SIDE, NECK DOWN SIDE DROP TEST SET-UP AND RESULTS				
15	Sample #	Results	<b>Comments / Observations</b>		
	6	PASS	No leakage or Breakage		
	7	PASS	No leakage or Breakage		
	8	PASS	No leakage or Breakage		



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## **LEAKPROOFNESS TESTS**

TEST INFORM	TEST INFORMATION		
TEST CONTENTS:	Empty		
CLOSURE APPLICAATION:	Refer to Section II		
CONDITIONING:	Ambient		
TEST PRESSURE:	20.7 kPa (3 PSI)	• A packaging passes the test if there is no leakage of air from	
TEST DURATION:	5 Minutes	the packaging. (§ 178.604)	
AREA OF PRESSURIZATION:	Through the Sidewall		
TEST EQUIPMENT:	Regulated Air Source Pressure Monitoring Gauge		

LEAKPROOFNESS TEST SET-UP & RESULTS					
P P D	Sample #	Results	<b>Comments / Observations</b>		
	9	PASS	All three samples maintained the 20.7 kPa test pressure for 5		
	10	PASS	minutes without leakage.		
V	11	PASS			



# HYDROSTATIC PRESSURE TEST

TEST INFOR	TEST INFORMATION		
TEST CONTENTS:	Water		
FILL CAPACITY:	Maximum Capacity		
CLOSURE APPLICATION:	Refer to Section II		
CONDITIONING:	Ambient	• For each test sample, there is no leakage of liquid from the	
<b>TEST PRESSURE:</b>	150 kPa (21.76 psi)	package. (§ 178.604)	
<b>TEST DURATION:</b>	30 Minutes		
AREA OF PRESSURATION:	Through the Sidewall		
TEST EQUIPMENT:	Regulated Water Source Pressure Monitoring Gauge		

HYDROSTATIC	PRESSURE	TEST SE	T-UP & RESULTS
MEZ	Sample #	Results	<b>Comments / Observations</b>
	12	PASS	
	13	PASS	All three samples maintained the 150 kPa test pressure for 30 minutes without leakage.
	14	PASS	



**TEST CRITERIA** 

## **DYNAMIC COMPRESSION TEST RESULTS**

#### **TEST INFORMATION**

TEST CONTENTS:	Empty and Without Closure	
SAMPLE PREPARATION:	Refer to Section II	• After application of the required load, there can be no buckling
CONDITIONING:	Ambient	of the sidewalls sufficient to cause damage to its expected
PRE-LOAD APPLIED:	50 Lbs.	<ul> <li>ontents.</li> <li>In no case may the maximum</li> </ul>
MINIMUM TEST LOAD REQUIRED:	242.55 Kg (534.7 Lbs.) (Refer to Section IV.)	deflection exceed one inch. (§ 178.606)
TEST EQUIPMENT:	TLS(Tech Lab Systems)	

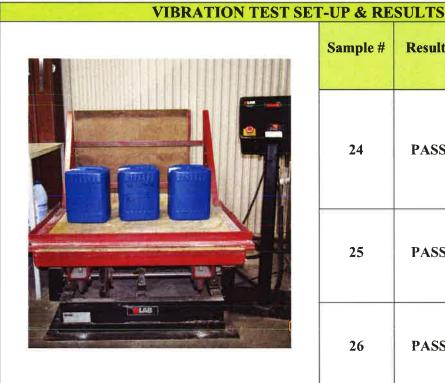
DYNAMIC COMPRESSI	ON TEST Sample #	<u>SET-UP (</u> Load	& RESULTS	Results
	21	534.7 Lbs.	0.992"	Passed
	22	534.7 Lbs.	0.937"	Passed
	23	534.7 Lbs.	0.891"	Passed

**NOTE:** After meeting the minimum to load requirement of 178.606  $\mathbb{O}(2)(ii)$ , each container was taken to failure. Refer to Section VI for the Load vs Deflection Graphs and the maximum compression strength of each test sample.



## **REPETITIVE SHOCK VIBRATION TESTS**

TEST INFOR	MATION	TEST CRITERIA	
TEST CONTENTS:	Water	Immediately following the period of vibration, each package must be	
SAMPLE PREPARATION:	Refer to Section II	removed from the platform, turned on its side, and observed for any	
CONDITIONING:	Ambient	<ul><li>evidence of leakage.</li><li>A package passes the vibration</li></ul>	
TABLE DISPLACEMETN:	1"	test if there is no rupture or leakage from any of the	
<b>TEST FREQUENCY:</b>	4.0 Hz	<ul><li>packages.</li><li>No test sample should show any</li></ul>	
TEST DURATION:	1 Hour	deterioration which could adversely affect transportation	
TEST EQUIPMENT:	Vertical motion using Vibration Tester	safety or any distortion liable to reduce packaging strength. (§ 178.608)	



1	-UP & KE	SULIS	
	Sample #	Results	Comments / Observations
	24	PASS	No leakage or
	25	PASS	damage.
	26	PASS	



## **REGULATORY AND INDUSTRY STANDARD REFERENCES**

REGULATORY REFERENCES		
TEST	49 CFR 2019 EDITION	
Drop:	178.603	
Leakproofness:	178.604	
Hydrostatic Pressure:	178.605	
Stack:	178.606	
Vibration:	178.608	

1. United States Department of Transportation Code of Federal Regulations (CFR) Title 49, Transportation, Parts 100-185



Design Qualification Test Report # 2018-15 done by Priority Plastics, Inc. Test Report # 2020-12 March 30, 2020 Page 130f 16

## SECTION IV: MATEMATICAL CALCULATIONS

#### **INFORMATION USED FOR CALCULATIONS**

Overall Packaged Tare Weight (PTW): Overflow Capacity (OFC) :	.674 Kg (1.5 Lbs.)	<u>WW/A SG</u> SG: 0.984
Windshield Washer/Antifreeze	10.400 Kg	
Water	10.600Kg	2.8 Gallons (GAL)
Packing Group:	II	
Product Specific Gravity (PSG):	1.6	
Packing Group Multiplication Factor (MF):	1.00	
Nesting Height of one Package (NH):	11.530 Inches	
Stack Test # of Samples Tested Simultaneously:	0	

## 98% OF OVERFLOW

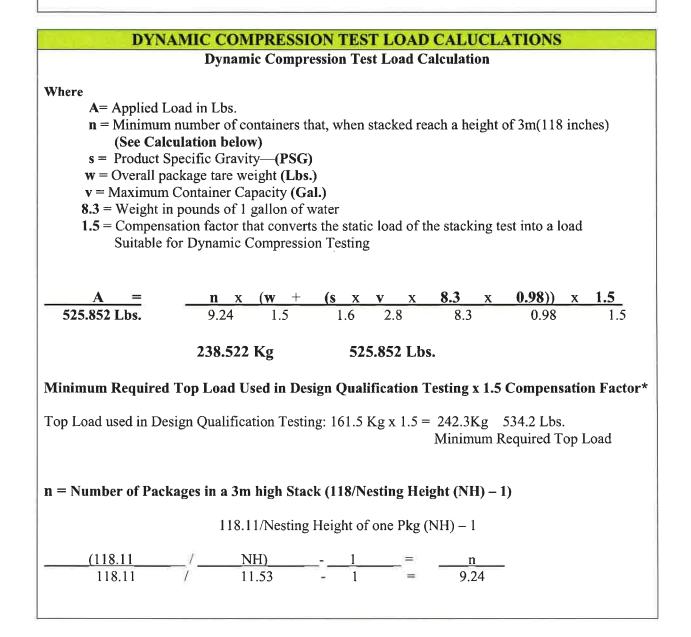
		Overflow Capacity (OFC) x 98%		
OFC	x <u>98%</u>			
10.400	x 98% =	10.192 Kg	WW/A	
10.600	x 98% =	10.388 Kg	Water	

di de la	216	P	ACKAGED TEST WEI	GHT
	Ov	verall Pkg Tare We	ight (PTW) + 98% Overflo	w Capacity (OFC)
PTW	+	98% OFC =		
.674	+	10.192	10.866 Kg	23.955 Lbs. WW/A
.674	+	10.388	11.062 Kg	24.387 Lbs. Water

С	ALCULATE	D PACK	CAGE GROSS MASS (CPGM)
Overall	Pkg Tare Weigl	nt)PTW	+ (Product SG(PSG) x 98%Overflow (OFC)
<u>PTW</u> +	<u>(PSG</u> 1.6	x x	<u>98% OFC)</u> 10.388
1	7.3 Kg		38.1 Lbs.



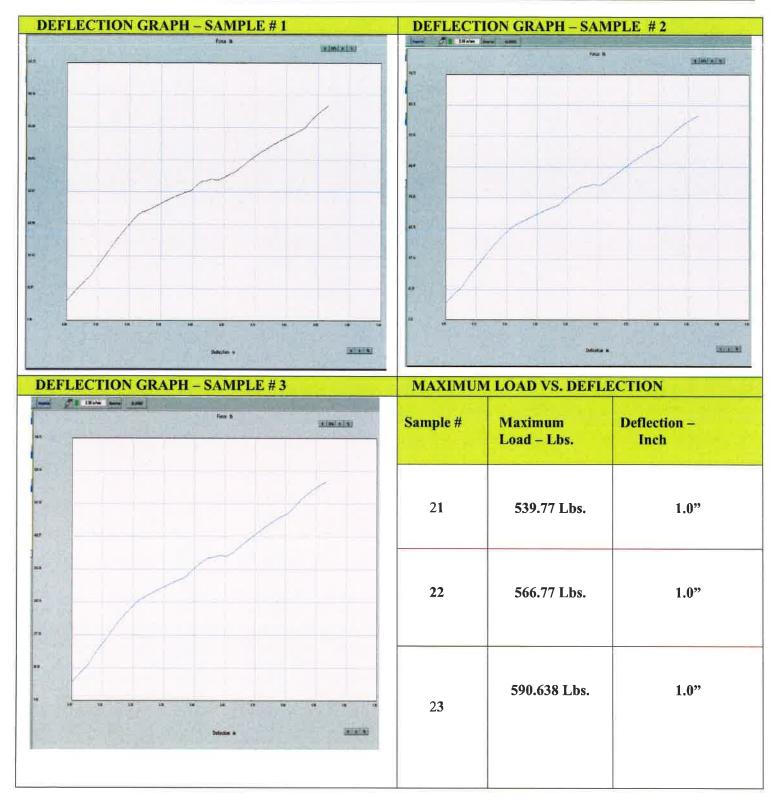
	Produ	ct Specific	Gravity (F	PSG) x Packing Group Mu	Itiplication Factor (MF)
PSG	x	MF		Pack	ting Group: II
1.6	x	1.00		Required Drop Height	Actual Drop Height
		1.60	Meter	62.99 Inches	63.0 Inches





Design Qualification Test Report # 2018-15 done by Priority Plastics, Inc. Test Report # 2020-12 March 30, 2020 Page 15of 16

### SECTION V: INDIVIDUAL LOAD VS. DEFLECTION GRAPHS AND DATA





Design Qualification Test Report # 2018-15 done by Priority Plastics, Inc. Test Report # 2020-12 March 30, 2020 Page 160f 16

# **Priority**Plastics

Corporate Office 500 Industrial Park Dr. Portland IN 47371 Tel 260.726.7000 Fax 260.726.8111 Date Created: Updated to New Format: 8.08.2019

# Closing Instructions for 2.5 Gallon Containers

Caps that this closing instruction includes are:

Priority Plastics 63mm cap manufactured by Miami Valley Plastics is 8728-204-060 (63mm Cap W/EPDM gasket.)





gasket is in the 63mm closure.

63mm cap to get started over the threads of the 63mm neck.

Step 3. Place an overcap fixture over the 63mm cap.

Step 4. Torque the cap to 150-160 in-lbs.

NOTE: Priority Plastics, Inc. certifies that these containers have been manufactured and certified in accordance with Performance Requirements of Part 178 Subpart M of title 49CFR. The chemical filler and the shipper may rely upon the marking as certification that the package meets the applicable UN performance standards. The shipper is responsible for ensuring the product is authorized in the package and must consult and General Shipper Requirements, including modal requirements. To meet UN standards, the package must be properly closed for shipment. Failure to follow the closure instructions or substitution of packaging components other than those identified in the closure instructions will render the UN Certification invalid.