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DESIGN QUALIFICATION TESTING REPORT FOR DANGEROUS GOODS PACKAGING

Testing Facility / Manufacturer:	TEST REPORT NUMBER(S):	09-7402[A]-21
C. L. Smith Co.	REPORT DATE:	February 24, 2021
4003 Park Avenue	CLS NUMBER:	312
St. Louis, MO 63110	ITEM:	09-7402, 2- 10 liter F style bottles

Package Description

General Description:	A double-wall fiberboard RSC is tested as a 4G combination packaging, contains two 10 liter, HDPE, blow molded, F-style bottles.		
Part Number:	09-7402	Style / Code:	RSC (0201)
Manufacturer	C L Smith Company, St. Louis, MO	Material (Board Grade):	350# BC-DW (White) (42-23-42-23-42)
Inner Dimension (in):	13 3/4" x 9 1/4" x 14 1/2"	Outer Dimension (in):	14 1/4" x 9 3/4" x 15 7/8"
Manufacturer's Joint:	Inside cold-set glue	Tare Weight (kg):	0.739
Outer Package Closure Method:	Top/Bottom closure: Carton squared with major flaps tight against the body. Single strip method, polypropylene (BOPP) PST [CLS Part# 21-1237 Shurtape HP-400 or Vibac 830/8300, 48 mm minimum nominal width] placed longitudinally along and centered over the flap seam, extending a minimum of 2" onto the sides of the carton; tape adhered firmly in place.		
Primary Container(s) & Closure(s):	Container: [09-7599] Container Specialties, 10 liter, HDPE (natural), blow-molded, F style bottle, 350g, 63-485 finish.		
	Closure: [11-6425] Cap PP White plain CT ribbed 63-485 foam lined Rieke.		
Inner container closure protocol:	30 -35 in/lbs. closure torque		
Packaging Tare Weight:	1.4735 kg		
Comments:			

Fill Information

Fill Material:	Anti-Freeze		
Maximum Authorized net fill / package:	PG II: 15.613 kg x 2 = 31.226 kg (68.68 lb)	Maximum Authorized gross weight/ package:	PG II: 32.7 kg (71.9 lb)
Comments:			

Summary of Performance Tests

UN/DOT Test	TEST LEVEL	SECTION REFERENCE	RESULTS
DROP	64 in	49 CFR § 178.603	Pass
STACK	250 kg (24hr)	49 CFR § 178.606	Pass
VIBRATION	60 minutes @ 198 CPM	49 CFR § 178.608	Pass
Comments:			

ELIGIBLE UN CERTIFICATION MARKINGS FOR SUBJECT PACKAGING

		4G/Y32.7/S/**/ USA/M5586	
** indicates year of package manufacture			

The subject package meets applicable performance tests of 49 CFR §178 Subpart M. This package may also be certified for shipment under other International Regulatory Codes. However, it is the sole responsibility of the shipper to determine the proper packaging for shipping Dangerous Goods. The manufacturer and tester assume no liability for errors in compliance with any regulation, or other failure, resulting from the unsuitability and/or incompatibility of this package for shipping Dangerous Goods. The use of substitute components or packing methods, or failure to follow the supplied instructions will result in a package that is not compliant with this certification. The packages used for testing were closed as for transport.

Authorized Representative: Matthew Keller






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NOTIFICATION OF ASSEMBLY AND USE INSTRUCTIONS

ITEM NUMBER: 09-7402

CLS#: 312

CERTIFICATION REFERENCE #: 09-7402[A]-21

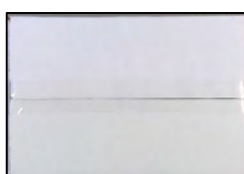
General Description:	A double-wall fiberboard RSC is tested as a 4G combination packaging, contains two 10 liter, HDPE, blow molded, F-style bottles.		
Maximum Authorized net fill / package:	PG II: 15.613 kg x 2 = 31.226 kg (68.68 lb)	Maximum Authorized gross weight/ package:	PG II: 32.7 kg (71.9 lb)
Fill Material:	Anti-Freeze		
Carton Closure Method:	Top/Bottom closure: Carton squared with major flaps tight against the body. Single strip method, polypropylene (BOPP) PST [CLS Part# 21-1237 Shurtape HP-400 or Vibac 830/8300, 48 mm minimum nominal width] placed longitudinally along and centered over the flap seam, extending a minimum of 2" onto the sides of the carton; tape adhered firmly in place.		
Inner Container(s) Closure(s):	Container: [09-7599] Container Specialties, 10 liter, HDPE (natural), blow-molded, F style bottle, 350g, 63-485 finish.		
	Closure: [11-6425] Cap PP White plain CT ribbed 63-485 foam lined Rieke.		
Inner Container Closure Protocol:	30 -35 in/lbs. closure torque		
UN Certification Markings for Subject Packaging			
	0 0		



Close the bottom of the carton using the closing method listed above.



Place properly closed inner containers into the carton.



Close the top of the carton using the closing method listed above.

Note: Suitable additional cushioning material may be used to fill the void space without further testing in accordance with 49CFR §178.601(g)(1)(ii), provided maximum rated gross mass is not exceeded. Equivalent level of performance is maintained through cushioning properties of the void fill material.

It is the sole responsibility of the shipper to determine the proper packaging for shipping Dangerous Goods. The packaging manufacturer assumes no liability for errors in compliance with any regulation, or other failure, resulting from the unsuitability and/or incompatibility of this package for shipping hazardous lading. The performance certification of this package requires that it be filled, assembled, and used in full accordance with the instructions herein. The use of substitute components or packing methods, or failure to follow the supplied instructions may result in a package that is not compliant with this certification. Instructions valid until revoked or superseded. **Air transportation:** Packages offered or intended for transportation by aircraft are subject to requirements additional to those of other modes of transport (e.g., quantity limitations, requirements for absorbent material, pressure differential requirements, appropriate closure procedures, and specific packaging requirements) and must conform to the general requirements for transportation by aircraft in §173.27.



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DESIGN QUALIFICATION TESTING REPORT FOR DANGEROUS GOODS PACKAGING

Testing Facility / Manufacturer:	TEST REPORT NUMBER(S):	09-7402[B]-21
C. L. Smith Co.	REPORT DATE:	February 24, 2021
4003 Park Avenue	CLS NUMBER:	312
St. Louis, MO 63110	ITEM:	09-7402, 2- 10 liter F style bottles

Package Description

General Description:	A double-wall fiberboard RSC is tested as a 4G combination packaging, contains two 10 liter, HDPE, blow molded, F-style bottles.		
Part Number:	09-7402	Style / Code:	RSC (0201)
Manufacturer	C L Smith Company, St. Louis, MO	Material (Board Grade):	350# BC-DW (White) (42-23-42-23-42)
Inner Dimension (in):	13 3/4" x 9 1/4" x 14 1/2"	Outer Dimension (in):	14 1/4" x 9 3/4" x 15 7/8"
Manufacturer's Joint:	Inside cold-set glue	Tare Weight (kg):	0.7296
Outer Package Closure Method:	Top/Bottom closure: Carton squared with major flaps tight against the body. Single strip method, polypropylene (BOPP) PST [CLS Part# 21-1237 Shurtape HP-400 or Vibac 830/8300, 48 mm minimum nominal width] placed longitudinally along and centered over the flap seam, extending a minimum of 2" onto the sides of the carton; tape adhered firmly in place.		
Primary Container(s) & Closure(s):	Container: [09-7599] Container Specialties, 10 liter, HDPE (natural), blow-molded, F style bottle, 350g, 63-485 finish.		
	Closure: [11-6425] Cap PP White plain CT ribbed 63-485 foam lined Rieke.		
Inner container closure protocol:	30 -35 in/lbs. closure torque		
Packaging Tare Weight:	1.4714 kg		

Comments:

Fill Information

Fill Material:	Anti-Freeze		
Maximum Authorized net fill / package:	PG II: 15.614 kg x 2 = 31.228 kg (68.7 lb)	Maximum Authorized gross weight/ package:	PG II: 32.7 kg (71.9 lb)
Comments:			

Summary of Performance Tests

UN/DOT Test	TEST LEVEL	SECTION REFERENCE	RESULTS
DROP	64 in	49 CFR § 178.603	Pass
STACK	250 kg (24hr)	49 CFR § 178.606	Pass
VIBRATION	60 minutes @ 198 CPM	49 CFR § 178.608	Pass
Comments:			

ELIGIBLE UN CERTIFICATION MARKINGS FOR SUBJECT PACKAGING



4G/Y32.7/S/**/
USA/M5586



** indicates year of package manufacture

The subject package meets applicable performance tests of 49 CFR §178 Subpart M. This package may also be certified for shipment under other International Regulatory Codes. However, it is the sole responsibility of the shipper to determine the proper packaging for shipping Dangerous Goods. The manufacturer and tester assume no liability for errors in compliance with any regulation, or other failure, resulting from the unsuitability and/or incompatibility of this package for shipping Dangerous Goods. The use of substitute components or packing methods, or failure to follow the supplied instructions will result in a package that is not compliant with this certification. The packages used for testing were closed as for transport.

Authorized Representative: Matthew Keller






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NOTIFICATION OF ASSEMBLY AND USE INSTRUCTIONS

ITEM NUMBER: 09-7402

CLS#: 312

CERTIFICATION REFERENCE #: 09-7402[B]-21

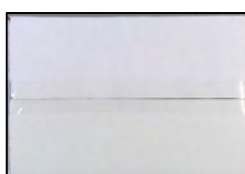
General Description:	A double-wall fiberboard RSC is tested as a 4G combination packaging, contains two 10 liter, HDPE, blow molded, F-style bottles.		
Maximum Authorized net fill / package:	PG II: 15.614 kg x 2 = 31.228 kg (68.7 lb)	Maximum Authorized gross weight/ package:	PG II: 32.7 kg (71.9 lb)
Fill Material:	Anti-Freeze		
Carton Closure Method:	Top/Bottom closure: Carton squared with major flaps tight against the body. Single strip method, polypropylene (BOPP) PST [CLS Part# 21-1237 Shurtape HP-400 or Vibac 830/8300, 48 mm minimum nominal width] placed longitudinally along and centered over the flap seam, extending a minimum of 2" onto the sides of the carton; tape adhered firmly in place.		
Inner Container(s) Closure(s):	Container: [09-7599] Container Specialties, 10 liter, HDPE (natural), blow-molded, F style bottle, 350g, 63-485 finish.		
	Closure: [11-6425] Cap PP White plain CT ribbed 63-485 foam lined Rieke.		
Inner Container Closure Protocol:	30 -35 in/lbs. closure torque		
UN Certification Markings for Subject Packaging			
	0 0		



Close the bottom of the carton using the closing method listed above.



Place properly closed inner containers into the carton.



Close the top of the carton using the closing method listed above.

Note: Suitable additional cushioning material may be used to fill the void space without further testing in accordance with 49CFR §178.601(g)(1)(ii), provided maximum rated gross mass is not exceeded. Equivalent level of performance is maintained through cushioning properties of the void fill material.

It is the sole responsibility of the shipper to determine the proper packaging for shipping Dangerous Goods. The packaging manufacturer assumes no liability for errors in compliance with any regulation, or other failure, resulting from the unsuitability and/or incompatibility of this package for shipping hazardous lading. The performance certification of this package requires that it be filled, assembled, and used in full accordance with the instructions herein. The use of substitute components or packing methods, or failure to follow the supplied instructions may result in a package that is not compliant with this certification. Instructions valid until revoked or superseded. **Air transportation:** Packages offered or intended for transportation by aircraft are subject to requirements additional to those of other modes of transport (e.g., quantity limitations, requirements for absorbent material, pressure differential requirements, appropriate closure procedures, and specific packaging requirements) and must conform to the general requirements for transportation by aircraft in §173.27.



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DESIGN QUALIFICATION TESTING REPORT FOR DANGEROUS GOODS PACKAGING

Testing Facility / Manufacturer:	TEST REPORT NUMBER(S):	09-7402[C]-21
C. L. Smith Co.	REPORT DATE:	February 24, 2021
4003 Park Avenue	CLS NUMBER:	312
St. Louis, MO 63110	ITEM:	09-7402, 2- 10 liter F style bottles

Package Description

General Description:	A double-wall fiberboard RSC is tested as a 4G combination packaging, contains two 10 liter, HDPE, blow molded, F-style bottles.		
Part Number:	09-7402	Style / Code:	RSC (0201)
Manufacturer	C L Smith Company, St. Louis, MO	Material (Board Grade):	350# BC-DW (White) (42-23-42-23-42)
Inner Dimension (in):	13 3/4" x 9 1/4" x 14 1/2"	Outer Dimension (in):	14 1/4" x 9 3/4" x 15 7/8"
Manufacturer's Joint:	Inside cold-set glue	Tare Weight (kg):	0.7326
Outer Package Closure Method:	Top/Bottom closure: Carton squared with major flaps tight against the body. Single strip method, polypropylene (BOPP) PST [CLS Part# 21-1237 Shurtape HP-400 or Vibac 830/8300, 48 mm minimum nominal width] placed longitudinally along and centered over the flap seam, extending a minimum of 2" onto the sides of the carton; tape adhered firmly in place.		
Primary Container(s) & Closure(s):	Container: [09-7599] Container Specialties, 10 liter, HDPE (natural), blow-molded, F style bottle, 350g, 63-485 finish.		
	Closure: [1-6450PHX] Cap PP White plain CT ribbed 63-485 induction liner.		
Inner container closure protocol:	Cap torque 30-35 in/lbs with closure then completely and properly induction seal.		
Packaging Tare Weight:	1.4771 kg		
Comments:			

Fill Information

Fill Material:	Anti-Freeze		
Maximum Authorized net fill / package:	PG II: 15.611 kg x 2 = 31.222 kg (68.68 lb)	Maximum Authorized gross weight/ package:	PG II: 32.7 kg (71.9 lb)
Comments:			

Summary of Performance Tests

UN/DOT Test	TEST LEVEL	SECTION REFERENCE	RESULTS
DROP	64 in	49 CFR § 178.603	Pass
STACK	250 kg (24hr)	49 CFR § 178.606	Pass
VIBRATION	60 minutes @ 199 CPM	49 CFR § 178.608	Pass
Comments:			

ELIGIBLE UN CERTIFICATION MARKINGS FOR SUBJECT PACKAGING

	4G/Y32.7/S/**/ USA/M5586	
** indicates year of package manufacture		

The subject package meets applicable performance tests of 49 CFR §178 Subpart M. This package may also be certified for shipment under other International Regulatory Codes. However, it is the sole responsibility of the shipper to determine the proper packaging for shipping Dangerous Goods. The manufacturer and tester assume no liability for errors in compliance with any regulation, or other failure, resulting from the unsuitability and/or incompatibility of this package for shipping Dangerous Goods. The use of substitute components or packing methods, or failure to follow the supplied instructions will result in a package that is not compliant with this certification. The packages used for testing were closed as for transport.

Authorized Representative: Matthew Keller



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NOTIFICATION OF ASSEMBLY AND USE INSTRUCTIONS

ITEM NUMBER: 09-7402

CLS#: 312

CERTIFICATION REFERENCE #: 09-7402[C]-21

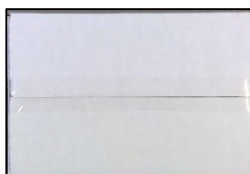
General Description:	A double-wall fiberboard RSC is tested as a 4G combination packaging, contains two 10 liter, HDPE, blow molded, F-style bottles.		
Maximum Authorized net fill / package:	PG II: 15.611 kg x 2 = 31.222 kg (68.68 lb)	Maximum Authorized gross weight/ package:	PG II: 32.7 kg (71.9 lb)
Fill Material:	Anti-Freeze		
Carton Closure Method:	Top/Bottom closure: Carton squared with major flaps tight against the body. Single strip method, polypropylene (BOPP) PST [CLS Part# 21-1237 Shurtape HP-400 or Vibac 830/8300, 48 mm minimum nominal width] placed longitudinally along and centered over the flap seam, extending a minimum of 2" onto the sides of the carton; tape adhered firmly in place.		
Inner Container(s) Closure(s):	Container: [09-7599] Container Specialties, 10 liter, HDPE (natural), blow-molded, F style bottle, 350g, 63-485 finish.		
	Closure: [1-6450PHX] Cap PP White plain CT ribbed 63-485 induction liner.		
Inner Container Closure Protocol:	Cap torque 30-35 in/lbs with closure then completely and properly induction seal.		
UN Certification Markings for Subject Packaging			
	0 0		



Close the bottom of the carton using the closing method listed above.



Place properly closed inner containers into the carton.



Close the top of the carton using the closing method listed above.

Note: Suitable additional cushioning material may be used to fill the void space without further testing in accordance with 49CFR §178.601(g)(1)(ii), provided maximum rated gross mass is not exceeded. Equivalent level of performance is maintained through cushioning properties of the void fill material.

It is the sole responsibility of the shipper to determine the proper packaging for shipping Dangerous Goods. The packaging manufacturer assumes no liability for errors in compliance with any regulation, or other failure, resulting from the unsuitability and/or incompatibility of this package for shipping hazardous lading. The performance certification of this package requires that it be filled, assembled, and used in full accordance with the instructions herein. The use of substitute components or packing methods, or failure to follow the supplied instructions may result in a package that is not compliant with this certification. Instructions valid until revoked or superseded. **Air transportation:** Packages offered or intended for transportation by aircraft are subject to requirements additional to those of other modes of transport (e.g., quantity limitations, requirements for absorbent material, pressure differential requirements, appropriate closure procedures, and specific packaging requirements) and must conform to the general requirements for transportation by aircraft in §173.27.



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DESIGN QUALIFICATION TESTING REPORT FOR DANGEROUS GOODS PACKAGING

Testing Facility / Manufacturer:	TEST REPORT NUMBER(S):	09-7402[D]-22
C. L. Smith Co.	REPORT DATE:	March 4, 2022
4003 Park Avenue	CLS NUMBER:	312
St. Louis, MO 63110	ITEM:	09-7402, 2- 2.5 gal F style bottles

Package Description

General Description:	A double-wall fiberboard RSC is tested as a 4G combination packaging, contains two 2.5 gal, HDPE, blow molded, F-style bottles.		
Part Number:	09-7402	Style / Code:	RSC (0201)
Manufacturer	C L Smith Company, St. Louis, MO	Material (Board Grade):	350# BC-DW (White) (42-23-42-23-42)
Inner Dimension (in):	13 3/4" x 9 1/4" x 14 1/2"	Outer Dimension (in):	14 1/4" x 9 3/4" x 15 7/8"
Manufacturer's Joint:	Inside cold-set glue	Tare Weight (kg):	0.7396
Outer Package Closure Method:	Top/Bottom closure: Carton squared with major flaps tight against the body. Single strip method, polypropylene (BOPP) PST [CLS Part# 21-1237 Shurtape HP-400 or Vibac 830/8300, 48 mm minimum nominal width] placed longitudinally along and centered over the flap seam, extending a minimum of 2" onto the sides of the carton; tape adhered firmly in place.		
Primary Container(s) & Closure(s):	Container: [09-7599] SFB, 2.5 gal, HDPE (natural), blow-molded, F style bottle, 330g, 63-485 finish.		
	Closure: [11-6425] Cap PP White plain CT ribbed 63-485 foam lined Rieke.		
Inner container closure protocol:	30 -35 in/lbs. closure torque		
Packaging Tare Weight:	1.4335 kg		
Comments:			

Fill Information

Fill Material:	Anti-Freeze		
Maximum Authorized net fill / package:	PG II: 15.633 kg x 2 = 31.266 kg (68.78 lb)	Maximum Authorized gross weight/ package:	PG II: 32.7 kg (71.9 lb)
Comments:			

Summary of Performance Tests

UN/DOT Test	TEST LEVEL	SECTION REFERENCE	RESULTS
DROP	64 in	49 CFR § 178.603	Pass
STACK	250 kg (24hr)	49 CFR § 178.606	Pass
VIBRATION	60 minutes @ 198 CPM	49 CFR § 178.608	Pass
Comments:			

ELIGIBLE UN CERTIFICATION MARKINGS FOR SUBJECT PACKAGING

** indicates year of package manufacture		

The subject package meets applicable performance tests of 49 CFR §178 Subpart M. This package may also be certified for shipment under other International Regulatory Codes. However, it is the sole responsibility of the shipper to determine the proper packaging for shipping Dangerous Goods. The manufacturer and tester assume no liability for errors in compliance with any regulation, or other failure, resulting from the unsuitability and/or incompatibility of this package for shipping Dangerous Goods. The use of substitute components or packing methods, or failure to follow the supplied instructions will result in a package that is not compliant with this certification. The packages used for testing were closed as for transport.

Authorized Representative: Matthew Keller



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NOTIFICATION OF ASSEMBLY AND USE INSTRUCTIONS

ITEM NUMBER: 09-7402

CLS#: 312

CERTIFICATION REFERENCE #: 09-7402[D]-22

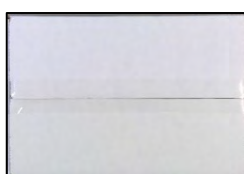
General Description:	A double-wall fiberboard RSC is tested as a 4G combination packaging, contains two 2.5 gal, HDPE, blow molded, F-style bottles.		
Maximum Authorized net fill / package:	PG II: 15.633 kg x 2 = 31.266 kg (68.78 lb)	Maximum Authorized gross weight/ package:	PG II: 32.7 kg (71.9 lb)
Fill Material:	Anti-Freeze		
Carton Closure Method:	Top/Bottom closure: Carton squared with major flaps tight against the body. Single strip method, polypropylene (BOPP) PST [CLS Part# 21-1237 Shurtape HP-400 or Vibac 830/8300, 48 mm minimum nominal width] placed longitudinally along and centered over the flap seam, extending a minimum of 2" onto the sides of the carton; tape adhered firmly in place.		
Inner Container(s)/ Closure(s):	Container: [09-7599] SFB, 2.5 gal, HDPE (natural), blow-molded, F style bottle, 330g, 63-485 finish.		
	Closure: [11-6425] Cap PP White plain CT ribbed 63-485 foam lined Rieke.		
Inner Container Closure Protocol:	30 -35 in/lbs. closure torque		
UN Certification Markings for Subject Packaging			
	0		



Close the bottom of the carton using the closing method listed above.



Place properly closed inner containers into the carton.



Close the top of the carton using the closing method listed above.

Note: Suitable additional cushioning material may be used to fill the void space without further testing in accordance with 49CFR §178.601(g)(1)(ii), provided maximum rated gross mass is not exceeded. Equivalent level of performance is maintained through cushioning properties of the void fill material.

It is the sole responsibility of the shipper to determine the proper packaging for shipping Dangerous Goods. The packaging manufacturer assumes no liability for errors in compliance with any regulation, or other failure, resulting from the unsuitability and/or incompatibility of this package for shipping hazardous lading. The performance certification of this package requires that it be filled, assembled, and used in full accordance with the instructions herein. The use of substitute components or packing methods, or failure to follow the supplied instructions may result in a package that is not compliant with this certification. Instructions valid until revoked or superseded. **Air transportation:** Packages offered or intended for transportation by aircraft are subject to requirements additional to those of other modes of transport (e.g., quantity limitations, requirements for absorbent material, pressure differential requirements, appropriate closure procedures, and specific packaging requirements) and must conform to the general requirements for transportation by aircraft in §173.27.



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DESIGN QUALIFICATION TESTING REPORT FOR DANGEROUS GOODS PACKAGING

Testing Facility / Manufacturer:	TEST REPORT NUMBER(S):	09-7402[E]-22
C. L. Smith Co.	REPORT DATE:	March 4, 2022
4003 Park Avenue	CLS NUMBER:	312
St. Louis, MO 63110	ITEM:	09-7402, 2- 2.5 gal F style bottles

Package Description

General Description:	A double-wall fiberboard RSC is tested as a 4G combination packaging, contains two 2.5 gal, HDPE, blow molded, F-style bottles.		
Part Number:	09-7402	Style / Code:	RSC (0201)
Manufacturer	C L Smith Company, St. Louis, MO	Material (Board Grade):	350# BC-DW (White) (42-23-42-23-42)
Inner Dimension (in):	13 3/4" x 9 1/4" x 14 1/2"	Outer Dimension (in):	14 1/4" x 9 3/4" x 15 7/8"
Manufacturer's Joint:	Inside cold-set glue	Tare Weight (kg):	0.7396
Outer Package Closure Method:	Top/Bottom closure: Carton squared with major flaps tight against the body. Single strip method, polypropylene (BOPP) PST [#400 Intertape, 72 mm minimum nominal width] placed longitudinally along and centered over the flap seam, extending a minimum of 2" onto the sides of the carton; tape adhered firmly in place.		
Primary Container(s) & Closure(s):	Container: [09-7599] SFB, 2.5 gal, HDPE (natural), blow-molded, F style bottle, 330g, 63-485 finish.		
	Closure: [11-6425] Cap PP White plain CT ribbed 63-485 foam lined Rieke.		
Inner container closure protocol:	30 -35 in/lbs. closure torque		
Packaging Tare Weight:	1.4335 kg		

Comments:

Fill Information

Fill Material:	Anti-Freeze		
Maximum Authorized net fill / package:	PG II: 15.633 kg x 2 = 31.266 kg (68.78 lb)	Maximum Authorized gross weight/ package:	PG II: 32.7 kg (71.9 lb)
Comments:			

Summary of Performance Tests

UN/DOT Test	TEST LEVEL	SECTION REFERENCE	RESULTS
DROP	64 in	49 CFR § 178.603	Pass
STACK	250 kg (24hr)	49 CFR § 178.606	Pass
VIBRATION	60 minutes @ 198 CPM	49 CFR § 178.608	Pass
Comments:			

ELIGIBLE UN CERTIFICATION MARKINGS FOR SUBJECT PACKAGING



4G/Y32.7/S/**/
USA/M5586



** indicates year of package manufacture

The subject package meets applicable performance tests of 49 CFR §178 Subpart M. This package may also be certified for shipment under other International Regulatory Codes. However, it is the sole responsibility of the shipper to determine the proper packaging for shipping Dangerous Goods. The manufacturer and tester assume no liability for errors in compliance with any regulation, or other failure, resulting from the unsuitability and/or incompatibility of this package for shipping Dangerous Goods. The use of substitute components or packing methods, or failure to follow the supplied instructions will result in a package that is not compliant with this certification. The packages used for testing were closed as for transport.

Authorized Representative: Matthew Keller






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NOTIFICATION OF ASSEMBLY AND USE INSTRUCTIONS

ITEM NUMBER: 09-7402

CLS#: 312

CERTIFICATION REFERENCE #: 09-7402[E]-22

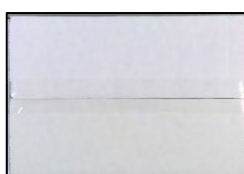
General Description:	A double-wall fiberboard RSC is tested as a 4G combination packaging, contains two 2.5 gal, HDPE, blow molded, F-style bottles.		
Maximum Authorized net fill / package:	PG II: 15.633 kg x 2 = 31.266 kg (68.78 lb)	Maximum Authorized gross weight/ package:	PG II: 32.7 kg (71.9 lb)
Fill Material:	Anti-Freeze		
Carton Closure Method:	Top/Bottom closure: Carton squared with major flaps tight against the body. Single strip method, polypropylene (BOPP) PST [#400 Intertape, 72 mm minimum nominal width] placed longitudinally along and centered over the flap seam, extending a minimum of 2" onto the sides of the carton; tape adhered firmly in place.		
Inner Container(s)/ Closure(s):	Container: [09-7599] SFB, 2.5 gal, HDPE (natural), blow-molded, F style bottle, 330g, 63-485 finish.		
	Closure: [11-6425] Cap PP White plain CT ribbed 63-485 foam lined Rieke.		
Inner Container Closure Protocol:	30 -35 in/lbs. closure torque		
UN Certification Markings for Subject Packaging			
	0		



Close the bottom of the carton using the closing method listed above.



Place properly closed inner containers into the carton.



Close the top of the carton using the closing method listed above.

Note: Suitable additional cushioning material may be used to fill the void space without further testing in accordance with 49CFR §178.601(g)(1)(ii), provided maximum rated gross mass is not exceeded. Equivalent level of performance is maintained through cushioning properties of the void fill material.

It is the sole responsibility of the shipper to determine the proper packaging for shipping Dangerous Goods. The packaging manufacturer assumes no liability for errors in compliance with any regulation, or other failure, resulting from the unsuitability and/or incompatibility of this package for shipping hazardous lading. The performance certification of this package requires that it be filled, assembled, and used in full accordance with the instructions herein. The use of substitute components or packing methods, or failure to follow the supplied instructions may result in a package that is not compliant with this certification. Instructions valid until revoked or superseded. **Air transportation:** Packages offered or intended for transportation by aircraft are subject to requirements additional to those of other modes of transport (e.g., quantity limitations, requirements for absorbent material, pressure differential requirements, appropriate closure procedures, and specific packaging requirements) and must conform to the general requirements for transportation by aircraft in §173.27.



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DESIGN QUALIFICATION TESTING REPORT FOR DANGEROUS GOODS PACKAGING

Testing Facility / Manufacturer:	TEST REPORT NUMBER(S):	09-7402[F]-22
C. L. Smith Co.	REPORT DATE:	March 4, 2022
4003 Park Avenue	CLS NUMBER:	312
St. Louis, MO 63110	ITEM:	09-7402, 2- 2.5 gal F style bottles

Package Description

General Description:	A double-wall fiberboard RSC is tested as a 4G combination packaging, contains two 2.5 gal, HDPE, blow molded, F-style bottles.		
Part Number:	09-7402	Style / Code:	RSC (0201)
Manufacturer	C L Smith Company, St. Louis, MO	Material (Board Grade):	350# BC-DW (White) (42-23-42-23-42)
Inner Dimension (in):	13 3/4" x 9 1/4" x 14 1/2"	Outer Dimension (in):	14 1/4" x 9 3/4" x 15 7/8"
Manufacturer's Joint:	Inside cold-set glue	Tare Weight (kg):	0.7386
Outer Package Closure Method:	Top/Bottom closure: Carton squared with major flaps tight against the body. Single strip method, polypropylene (BOPP) PST [CLS Part#: 21-1237, Vibac 830/8300, 48 mm minimum nominal width] placed longitudinally along and centered over the flap seam, extending a minimum of 2" onto the sides of the carton; tape adhered firmly in place.		
Primary Container(s) & Closure(s):	Container: [09-7599] SFB, 2.5 gal, HDPE (natural), blow-molded, F style bottle, 330g, 63-485 finish.		
	Closure: [11-6450PHX] Cap PP White plain CT ribbed 63-485 induction liner.		
Inner container closure protocol:	Cap torque 30-35 in/lbs with closure then completely and properly induction seal.		
Packaging Tare Weight:	1.4339 kg		
Comments:			

Fill Information

Fill Material:	Anti-Freeze		
Maximum Authorized net fill / package:	PG II: 15.633 kg x 2 = 31.266 kg (68.78 lb)	Maximum Authorized gross weight/ package:	PG II: 32.7 kg (71.9 lb)
Comments:			

Summary of Performance Tests

UN/DOT Test	TEST LEVEL	SECTION REFERENCE	RESULTS
DROP	64 in	49 CFR § 178.603	Pass
STACK	250 kg (24hr)	49 CFR § 178.606	Pass
VIBRATION	60 minutes @ 198 CPM	49 CFR § 178.608	Pass
Comments:			

ELIGIBLE UN CERTIFICATION MARKINGS FOR SUBJECT PACKAGING

	4G/Y32.7/S/**/ USA/M5586	
** indicates year of package manufacture		

The subject package meets applicable performance tests of 49 CFR §178 Subpart M. This package may also be certified for shipment under other International Regulatory Codes. However, it is the sole responsibility of the shipper to determine the proper packaging for shipping Dangerous Goods. The manufacturer and tester assume no liability for errors in compliance with any regulation, or other failure, resulting from the unsuitability and/or incompatibility of this package for shipping Dangerous Goods. The use of substitute components or packing methods, or failure to follow the supplied instructions will result in a package that is not compliant with this certification. The packages used for testing were closed as for transport.

Authorized Representative: Matthew Keller



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NOTIFICATION OF ASSEMBLY AND USE INSTRUCTIONS

ITEM NUMBER: 09-7402

CLS#: 312

CERTIFICATION REFERENCE #: 09-7402[F]-22

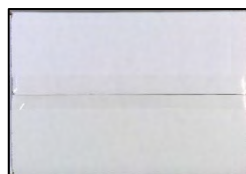
General Description:	A double-wall fiberboard RSC is tested as a 4G combination packaging, contains two 2.5 gal, HDPE, blow molded, F-style bottles.		
Maximum Authorized net fill / package:	PG II: 15.633 kg x 2 = 31.266 kg (68.78 lb)	Maximum Authorized gross weight/ package:	PG II: 32.7 kg (71.9 lb)
Fill Material:	Anti-Freeze		
Carton Closure Method:	Top/Bottom closure: Carton squared with major flaps tight against the body. Single strip method, polypropylene (BOPP) PST [CLS Part#: 21-1237, Vibac 830/8300, 48 mm minimum nominal width] placed longitudinally along and centered over the flap seam, extending a minimum of 2" onto the sides of the carton; tape adhered firmly in place.		
Inner Container(s)/ Closure(s):	Container: [09-7599] SFB, 2.5 gal, HDPE (natural), blow-molded, F style bottle, 330g, 63-485 finish.		
	Closure: [11-6450PHX] Cap PP White plain CT ribbed 63-485 induction liner.		
Inner Container Closure Protocol:	Cap torque 30-35 in/lbs with closure then completely and properly induction seal.		
UN Certification Markings for Subject Packaging			
	0		4G/Y32.7/S/**/ USA/M5586
	0		



Close the bottom of the carton using the closing method listed above.



Place properly closed inner containers into the carton.



Close the top of the carton using the closing method listed above.

Note: Suitable additional cushioning material may be used to fill the void space without further testing in accordance with 49CFR §178.601(g)(1)(ii), provided maximum rated gross mass is not exceeded. Equivalent level of performance is maintained through cushioning properties of the void fill material.

It is the sole responsibility of the shipper to determine the proper packaging for shipping Dangerous Goods. The packaging manufacturer assumes no liability for errors in compliance with any regulation, or other failure, resulting from the unsuitability and/or incompatibility of this package for shipping hazardous lading. The performance certification of this package requires that it be filled, assembled, and used in full accordance with the instructions herein. The use of substitute components or packing methods, or failure to follow the supplied instructions may result in a package that is not compliant with this certification. Instructions valid until revoked or superseded. **Air transportation:** Packages offered or intended for transportation by aircraft are subject to requirements additional to those of other modes of transport (e.g., quantity limitations, requirements for absorbent material, pressure differential requirements, appropriate closure procedures, and specific packaging requirements) and must conform to the general requirements for transportation by aircraft in §173.27.



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DESIGN QUALIFICATION TESTING REPORT FOR DANGEROUS GOODS PACKAGING

Testing Facility / Manufacturer:	TEST REPORT NUMBER(S):	09-7402[G]-23
C. L. Smith Co.	REPORT DATE:	February 6, 2023
4003 Park Avenue	CLS NUMBER:	312
St. Louis, MO 63110	ITEM:	09-7402, 2- 2.5 gallon F style bottles

Package Description

General Description:	A double-wall fiberboard RSC is tested as a 4G combination packaging, contains two 2.5 gallon, HDPE, blow molded, F-style bottles.		
Part Number:	09-7402	Style / Code:	RSC (0201)
Manufacturer	C L Smith Company, St. Louis, MO	Material (Board Grade):	350# BC-DW (White) (42-23-42-23-42)
Inner Dimension (in):	13 3/4" x 9 1/4" x 14 1/2"	Outer Dimension (in):	14 1/4" x 9 3/4" x 15 7/8"
Manufacturer's Joint:	Inside cold-set glue	Tare Weight (kg):	0.7346
Outer Package Closure Method:	Top/Bottom closure: Carton squared with major flaps tight against the body. Single strip method, polypropylene (BOPP) PST [CLS Part# 21-1237 Shurtape HP-400 or Vibac 830/8300, 48 mm minimum nominal width] placed longitudinally along and centered over the flap seam, extending a minimum of 2" onto the sides of the carton; tape adhered firmly in place.		
Primary Container(s) & Closure(s):	Container: [Cust/supplied] AYC, 2.5 gallon, HDPE (white), blow-molded, F style bottle, 63-485 finish.		
	Closure: [11-6425] Cap PP White plain CT ribbed 63-485 foam lined Rieke.		
Inner container closure protocol:	30 -35 in/lbs. closure torque		
Packaging Tare Weight:	1.6093 kg		

Comments:

Fill Information

Fill Material:	Anti-Freeze		
Maximum Authorized net fill / package:	PG II: 15.545 kg x 2 = 31.09 kg (68.38 lb)	Maximum Authorized gross weight/ package:	PG II: 32.7 kg (71.9 lb)
Comments:			

Summary of Performance Tests

UN/DOT Test	TEST LEVEL	SECTION REFERENCE	RESULTS
DROP	64 in	49 CFR § 178.603	Pass
STACK	250 kg (24hr)	49 CFR § 178.606	Pass
VIBRATION	60 minutes @ 198 CPM	49 CFR § 178.608	Pass
Comments:			

ELIGIBLE UN CERTIFICATION MARKINGS FOR SUBJECT PACKAGING



4G/Y32.7/S/**/
USA/M5586



** indicates year of package manufacture

The subject package meets applicable performance tests of 49 CFR §178 Subpart M. This package may also be certified for shipment under other International Regulatory Codes. However, it is the sole responsibility of the shipper to determine the proper packaging for shipping Dangerous Goods. The manufacturer and tester assume no liability for errors in compliance with any regulation, or other failure, resulting from the unsuitability and/or incompatibility of this package for shipping Dangerous Goods. The use of substitute components or packing methods, or failure to follow the supplied instructions will result in a package that is not compliant with this certification. The packages used for testing were closed as for transport.

Authorized Representative: Matthew Keller






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NOTIFICATION OF ASSEMBLY AND USE INSTRUCTIONS

ITEM NUMBER: 09-7402

CLS#: 312

CERTIFICATION REFERENCE #: 09-7402[G]-23

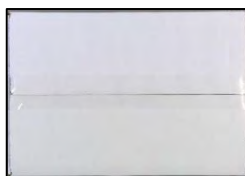
General Description:	A double-wall fiberboard RSC is tested as a 4G combination packaging, contains two 2.5 gallon, HDPE, blow molded, F-style bottles.		
Maximum Authorized net fill / package:	PG II: 15.545 kg x 2 = 31.09 kg (68.38 lb)	Maximum Authorized gross weight/ package:	PG II: 32.7 kg (71.9 lb)
Fill Material:	Anti-Freeze		
Carton Closure Method:	Top/Bottom closure: Carton squared with major flaps tight against the body. Single strip method, polypropylene (BOPP) PST [CLS Part# 21-1237 Shurtape HP-400 or Vibac 830/8300, 48 mm minimum nominal width] placed longitudinally along and centered over the flap seam, extending a minimum of 2" onto the sides of the carton; tape adhered firmly in place.		
Inner Container(s)/ Closure(s):	Container: [Cust/supplied] AYC, 2.5 gallon, HDPE (white), blow-molded, F style bottle, 63-485 finish.		
	Closure: [11-6425] Cap PP White plain CT ribbed 63-485 foam lined Rieke.		
Inner Container Closure Protocol:	30 -35 in/lbs. closure torque		
UN Certification Markings for Subject Packaging			
	0 0		



Close the bottom of the carton using the closing method listed above.



Place properly closed inner containers into the carton.



Close the top of the carton using the closing method listed above.

Note: Suitable additional cushioning material may be used to fill the void space without further testing in accordance with 49CFR §178.601(g)(1)(ii), provided maximum rated gross mass is not exceeded. Equivalent level of performance is maintained through cushioning properties of the void fill material.

It is the sole responsibility of the shipper to determine the proper packaging for shipping Dangerous Goods. The packaging manufacturer assumes no liability for errors in compliance with any regulation, or other failure, resulting from the unsuitability and/or incompatibility of this package for shipping hazardous lading. The performance certification of this package requires that it be filled, assembled, and used in full accordance with the instructions herein. The use of substitute components or packing methods, or failure to follow the supplied instructions may result in a package that is not compliant with this certification. Instructions valid until revoked or superseded. **Air transportation:** Packages offered or intended for transportation by aircraft are subject to requirements additional to those of other modes of transport (e.g., quantity limitations, requirements for absorbent material, pressure differential requirements, appropriate closure procedures, and specific packaging requirements) and must conform to the general requirements for transportation by aircraft in §173.27.