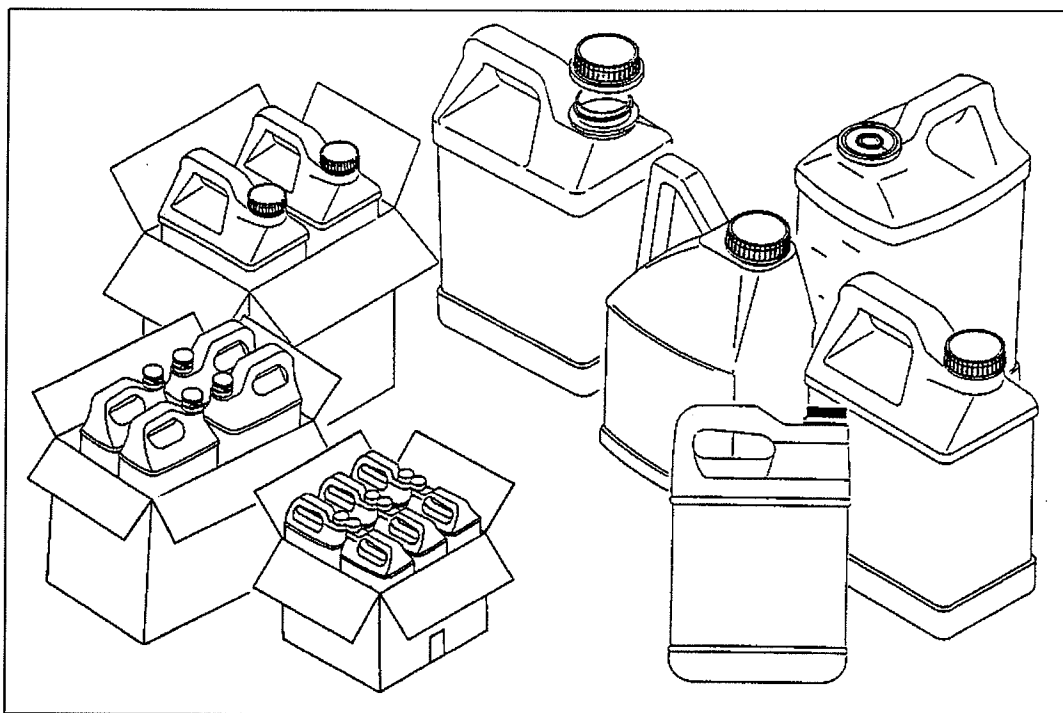




UN 4G PACKAGING NOTIFICATION

Revised 10/02



ASSEMBLY INSTRUCTIONS

Step 1

Determining Packaging Suitability:

Verify that the packaging has been certified to the proper Packing Group and is rated for liquids or solids at the required specific gravity or mass, respectively.

Verify that the pressure differential test required for air shipment has been conducted on the inner packaging to the appropriate test level, if necessary.

It is the shipper's responsibility to ensure:

1. That the packaging is authorized for the intended hazardous material.
2. That the packaging is compatible with its lading.
3. That the packaging meets all other general shipper requirements outlined in Title 49 CFR 173.24 and 173.24(a).

Step 2

Packaging Assembly:

1. The bottles are filled.
2. If a component, the plug is inserted into the bottle neck.
3. The closure is applied to the bottle using the specified application torque or is crimped on using the proper tool.
4. If necessary, the liner is induction sealed.
5. The bottom flaps of the shipper are sealed using tape, glue, or staples as indicated in the packaging components list.
6. If a component, the bottom pad is placed in the shipper.
7. If a component, the divider is placed in the shipper.
8. The bottles are placed in the shipper.
9. If a component, the top pad is placed in the shipper.
10. The top flaps are sealed using tape, glue, or staples as indicated in the packaging components list.

Note: Failure to assemble packaging in the manner described above may render this certification invalid.

CLOSURE APPLICATION INSTRUCTIONS

The following package completion instructions describe closures used in certified packaging, the dimension of each closure, the proper closing torque, and closing/crimp tools.

CLOSURES AND CLOSURE DIMENSIONS:

See the following table.

CLOSURE APPLICATION:

Proper assembly of the fitting to the NAMPAC container opening is absolutely essential to the safe containment and transport of hazardous materials.

For proper installation of a screw-on cap, the manufacturers' recommended torque application must be utilized. To ensure proper torque, a torque wrench or torque meter is required. See the following table for the torque utilized for testing. Any closure that is described as an induction sealed must be induction sealed as appropriate. Contact your closure manufacturer to determine torque requirements and to obtain information for induction sealing.

For proper installation of the crimp-on fitting, any of the manufacturers' recommended crimp tools may be utilized. Automatic crimping tools are available. NAMPAC recommends contacting the manufacturer for set-up procedures, maintenance recommendations, and tooling specifications prior to the use of automatic equipment with a crimp-on fitting and the NAMPAC container.

CLOSURE TOOLS:

Contact your closure manufacturer for recommended closure tools, crimping tools, and induction sealing equipment.

CLOSURE TABLE

Manufacturer	Model	Size (mm)	Description	Height (in)	Diameter (in)	Tested Torque (in-lb)
All-Pak		63	Screw Cap with Induction Seal	0.858	2.742	75
Rexam	Snap-Lok II Series	38	Child-Resistant Screw Cap with Foam Liner	0.710	1.70	19
			Child-Resistant Screw Cap with Three-Ply Coextruded Foam Liner	0.710	1.70	40
			Child-Resistant Screw Cap with Foam/Pulp Induction Sealed Liner	0.710	1.70	19
Rieke	FS-631	63	Screw Cap, Linerless	0.863	2.777	75
	FS-632		Screw Cap with Liner			
	FS-636		Screw Cap, Tamper Evident			
	SC63R	63	Screw Cap with 3/4" Thread Reducer	0.887	2.725	100
	FS-10-6-300		Crimp-On Flexspout with Tear-Away Tamper-Evident Seal and Buna Vent	1.20	2.295	--
	FS-10-6-624		Crimp-On Flexspout with Plain Tamper-Evident Seal			
	FS-10-8V-300		Crimp-On Flexspout with Tear-Away Tamper-Evident Seal			
Van Blarcom	Saf Cap Series	38	Child-Resistant Screw Cap with Foam Liner	0.680	1.735	19
			Child-Resistant Screw Cap with Foam Liner, Vented			
			Child-Resistant Screw Cap with Three-Ply Coextruded Foam Liner			
Weatherchem	Agricap	63	Screw Cap	1.223	2.748	85
			Screw Cap with Induction Seal	1.223	2.748	55



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ENGINEERING & TECHNICAL SERVICES *Quality & Compliance*

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SUBJECT: Closure Method for NAMPAC UN Open-Head (1H2) Package

As pointed out in the formal NAMPAC 1H2 UN Notification booklet, the use of a plunger type (cylinder) cover press is the method required for full compliance to the respective UN certifications carried by the specific 1H2 packages.

NAMPAC cannot recommend any other method of application, including a mallet. All design qualification testing was done with a cylindrical cover press and therefore is integral with the performance requirements of the package. Furthermore, the use of a mallet cannot be consistently controlled and can lead to damage to the critical locking mechanism of the package as well as the gasket.

Deviation from the recommended method of cover application may render the respective certification invalid.

Questions regarding this should be directed to the NAMPAC E & TS Office.

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