

Thermo Scientific Nalgene Super-Speed Centrifuge Bottles, 1,000 mL

General Information

Polycarbonate Bottles with PP/Modified PPE Sealing Closure, and Blue Silicone o-ring. Cat. Nos.: 3140-1002, 3140-1006
Polypropylene Bottles with PP/Modified PPE Sealing Closure, and Red Silicone o-ring. Cat. Nos.: 3141-1002, 3141-1006

- Graduated
- High clarity polycarbonate
- Polypropylene for excellent chemical resistance
- USP Class VI, non-cytotoxic
- Performance from 4°C to 22°C
- Rated to 15,810 RCF

Thermo Scientific Nalgene Super-Speed 1L Centrifuge Bottles are available in either translucent polypropylene or in clear polycarbonate. When used as directed in specified Thermo Scientific Sorvall centrifuges and Thermo Scientific Fiberlite rotors, Nalgene® Super-Speed 1L bottles are rated to run to their maximum speed when filled with a homogeneous sample with density up to 1.2 g/mL.

Product Certificates of Compliance are available online at www.nalgenelabware.com - click on Technical Data, Certificate of Compliance. Enter the product part number, lot number, and a fax number to receive your Certificate of Compliance within 24 hours. If you have any questions, call Customer Service at 585-899-7851 or e-mail your request to certs@thermofisher.com.

Instructions for use:

Nalgene Super-Speed 1L Centrifuge Bottles require a sealing cap assembly that includes a closure, plug, and o-ring. Carefully follow all centrifuge and rotor instruction manual guidelines to ensure proper performance. Follow assembly instructions (Fig. 1).

1. Bottles may be filled with up to 1,000 mL*. At 1,000 mL the liquid level will fall at the first thread of the bottle neck.
2. Pre-assemble the plug and o-ring. Ensure the o-ring is seated under the ledge of the plug. Visually check that the o-ring is seated evenly around the circumference of the plug.
3. Fill bottle and place the plug/o-ring assembly in the bottle. Visually check that the red o-ring is seated evenly between the plug and lip of the bottle.
4. Place the closure onto the plug, turn closure until hand-tight. Closures should be tightened to approximately 40 in-lbs torque; hand-tighten, then turn an additional 30° (1/12 turn) to firmly compress the o-ring.
5. Before placing bottles into rotor, weigh bottles to ensure bottles are balanced within the acceptable limit for the respective rotor being used for the run. Consult the centrifuge and rotor operation manuals for instructions and the acceptable imbalance tolerance.

Nalgene Super-Speed 1L Centrifuge bottles are recommended for all rotor types, including swinging bucket and fixed angle rotors. Consult the centrifuge and rotor operation manuals for instructions.

The Nalgene Super-Speed 1L Centrifuge Bottle is a wearable part with a finite performance life. Bottles used with compatible samples would be expected to show physical signs of wear with repeated use; remove bottles from use which show signs of wear. **Despite an acceptable visual appearance, do not use centrifuge bottles more than 50 times maximum.**

***NOTE:** Bottles must be filled with at least 800 ml.

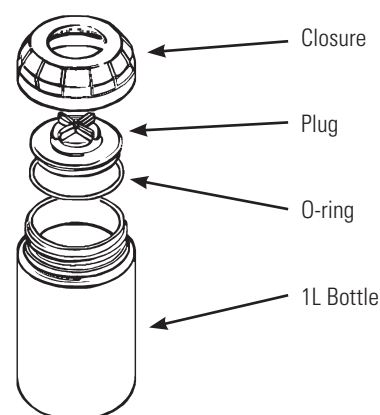


Fig. 1

CAUTION! Always securely tighten sealing cap assembly and check for signs of wear. Failure to do so can result in deformation or collapse of the bottle during centrifugation that could result in loss of sample, damage to the rotor, personal injury and/or damage to the centrifuge.

Nalgene Cat. No.	Bottle Material	Plug Material	Closure Material	O-ring Material	Max. Fill Volume, mL	Max RFC
3140-1002 3140-1006	PC	PP	Modified PPE	Blue Silicone	1,000 mL	15,810 x g
3141-1002 3141-1006	PPCO	PP	Modified PPE	Red Silicone	1,000 mL	15,810 x g

The compatibility between chemicals and plastic centrifuge ware is affected by temperature, chemical concentration, g-force, length of run and other factors. Check the resin properties and chemical resistance charts for both your sample and solvent. Also, consider operating temperature when selecting the bottle material, RCF ratings are available at 4°C and 22°C. All plastics undergo some degree of softening or hardening outside of the recommended ranges. Because of the stresses associated with centrifugation, these ratings are a general guide only. We recommend a trial run before using a certain chemical. If any doubt exists about a particular application, refer to the detailed chemical resistance charts in the Nalgene Labware Catalog or contact Technical Service at 1-800-625-4327 or e-mail Technical.nalgene@thermofisher.com.

NOTE: Your safest policy is to pre-test all bottles under actual conditions, using water rather than actual sample.

Before each use, carefully inspect the bottle, plug, o-ring and closure for signs of wear including cracks, crazing, discoloration, yellowing, deformation, surface scratches, abrasions or chemical attack. Remove from service immediately any bottles, plugs, o-rings or closures that show signs of wear.

CAUTION! Immediately remove from service any bottle and closure assembly showing signs of wear.



WARNING!

In any centrifugation process and particularly in large volume fixed-angle applications it is possible for a seal to leak or for an aging bottle to fail during use. Always take precautions when radioactive or pathogenic materials are centrifuged. Follow all procedures and recommendations cited in your centrifuge and rotor instruction manuals.

Cleaning: Soak centrifuge bottles in warm water with a mild, non-alkaline detergent to loosen debris. Hand wash and rinse thoroughly, with final rinse in distilled (or deionized) water. Do not use abrasive cleaners or brushes. Allow to air dry.

Autoclaving: PP/PPCO bottles can be autoclaved repeatedly for 15 minute cycles at 121°C/15 psig (1.02 bar). PC bottles can be autoclaved repeatedly, but a loss in mechanical strength will result. Inspect these materials before each use for signs of crazing (minute cracks). Immediately remove from service if crazing is readily visible to the unaided eye. Autoclave closures, plug and o-ring assembled on the bottle without engaging the threads.

NOTE: Do not autoclave bottles with closures engaged to prevent collapse of bottles when cooling.

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*Contact information contained within
this document may be incorrect.

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Resin Physical Properties Chart

Resin code	Max. Temp. °C	Brittleness Temp. °C ¹	Transparency	Autoclavable ²	Dry Heat Sterilization ²	Non-cytotoxicity ³
PP (plug)	121	0	Translucent	Yes	No	Yes
PPCO (bottle)	121	-40	Contact-clear	Yes	No	Yes
PC (bottle)	135	-135	Clear	Yes	No	Yes
Modified PPE	110	-40	Opaque	Yes	No	Yes
Silicone (o-ring)	204	-68	Opaque	Yes	Yes	Yes

Key: PP = Polypropylene, PPCO = Polypropylene Copolymer, PPE = Modified Polyphenylene Ether, PC = Polycarbonate

1. The brittleness temperature is the temperature at which an item made from the resin may break or crack if dropped.

2. Sterilization/ Autoclaving ratings based on cycle at 121°C and 15 psig/1.02 bar for 15 minutes. Clean and rinse items with distilled water before autoclaving. Always completely disengage threads before autoclaving. Certain chemicals which have no appreciable effect on resins at room temperature may cause deterioration at autoclaving temperatures unless removed with distilled water beforehand. Dry Heat ratings are based on exposure at 160°C for 120 minutes.

3. "Yes" indicates the resin has been determined to be non-cytotoxic based on USP and ASTM biocompatibility testing standards utilizing an MEM elution technique on a WI-38 human diploid lung cell line.

CAUTION! Do not exceed Max. Temp. Do not expose to chemicals which attack the plastic or are rapidly absorbed when heated.

Chemical Resistance Chart

Resin code	Acids, dilute/weak	Acids strong/concentrated	Alcohols	Aldehydes	Bases	Esters	Hydrocarbons/aliphatic	Hydrocarbons/aromatic	Hydrocarbons/halogenated	Ketones	Oxidizing agents, strong
PP	S	S2	S2	S2	S	S2	S2	U	M	M	M
PPCO	S	S2	S2	S2	S	S2	S2	U	U	M	M
PC	S	U	U	U	U	U	M	U	U	U	U
Modified PPE	S	M	S2	S2	S2	M	S2	U	U	M	M
Silicone	M	U	M	M	M	U	M	U	U	U	M

S = Satisfactory, M = Marginal, may or may not be satisfactory for centrifugation depending on length of exposure, speed and temperature. Test under operating conditions. U = Unsatisfactory; not recommended for use. S2 - Satisfactory at ≤25°C.

Super-Speed Safety



WARNING!

High capacity bottles at super speeds present a risk potential that requires users to have training and knowledge of the variables that may contribute to increased risk of failure. Each laboratory and application have unique variables, including chemical nature of sample solutions, instrument and rotor characteristics, cleaning and sterilization procedures, temperature, duration of run or "spin time", etc. Plastic super-speed bottles, like most laboratory products, have a finite life that is significantly affected by such variables. A failure event has the potential to cause irreparable harm to the rotor or centrifuge and may result in personal injury.

Establish good safety protocols based upon your usage variables.

ISO 13485 Certified and GMP Registered quality management system – your added assurance

From material selection to leak proof closure, safety features are inherent in the Nalgene bottle design. Both polypropylene and polycarbonate bottles have met performance and safety testing. Bottles operated at maximum speed with compatible samples would be expected to show physical signs of wear by 50 cycles. Every laboratory should establish its' own best practices.

Rotor Compartment Load

Strict adherence to the maximum allowable compartment mass or reduced speed is required to prevent rotor failure. Refer to the centrifuge and rotor operation manuals for maximum allowable compartment mass or for the formula for reduced speed.



WARNING!

If the Maximum Compartment Mass is exceeded, the speed must be reduced. Failure to do so can result in personal injury and/or centrifuge damage.

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