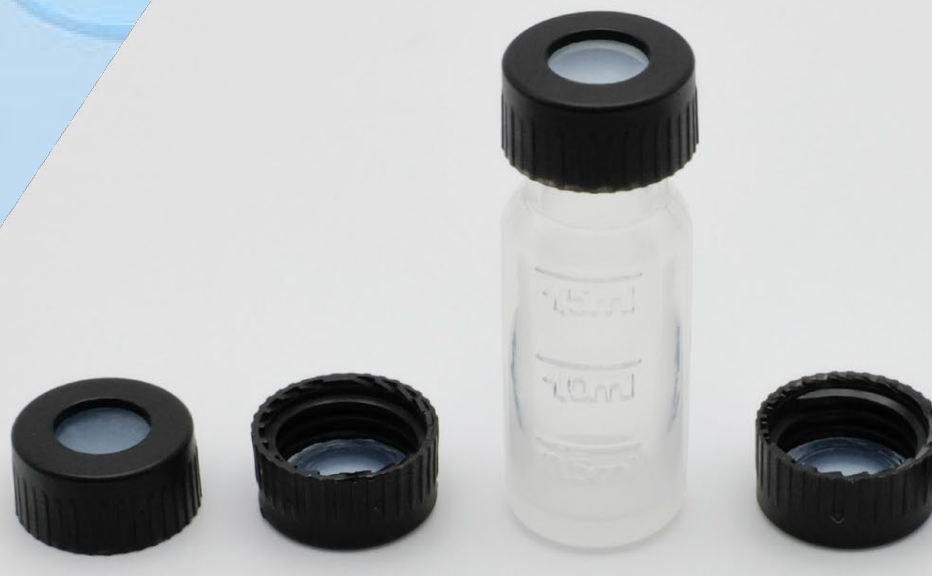
Certified PFAS-Free Caps for PFAS Testing

Patent No. US 12,202,649

Integrated Liner Technologies



ILT CAPS AND SEPTA

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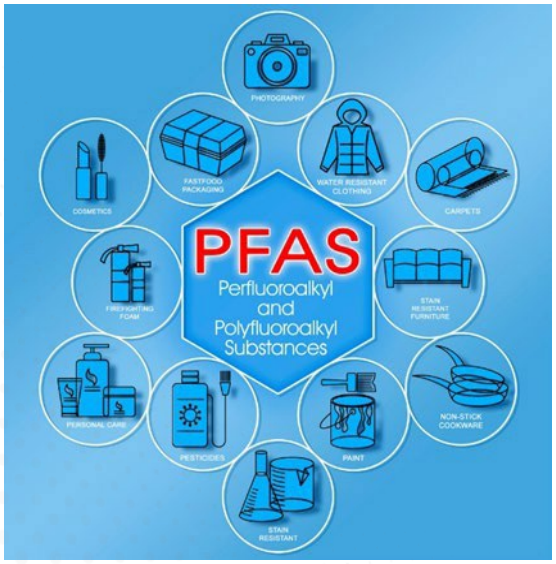
WHAT ARE PFAS AND FOREVER CHEMICALS?

PFAS stands for per- and polyfluoroalkyl substances and are colloquially known as “forever chemicals.” They are a group of man-made chemicals that have been widely used in various industrial and consumer products since the 1940’s. PFAS are known for their strong chemical bonds, which make them resistant to heat, water, and oil. This property has made them popular for use in a wide range of applications, including firefighting foams, non-stick cookware, waterproof fabrics, food packaging, and many other household and industrial products.



PFAS Can Be Found In:

- Drinking water
- Household items: carpeting, furniture
- Food packaging
- Clothing

The EPA is using science-based decision making to identify which PFAS may pose human health and ecological risks while developing test methods to measure and identify PFAS in the environment.

ILT’s Certified PFAS-Free Caps for PFAS Testing

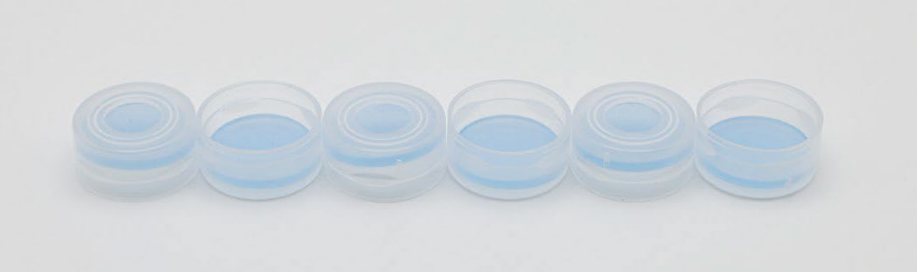
It is essential during testing for PFAS compounds that the cap and vial being used is free of PFAS. Using the certified PFAS-Free caps for PFAS testing from ILT ensures the integrity of the data collected, as the cap has been tested to be PFAS-Free. ILT has created a series of caps that are compatible with all standard screw or snap top vials. These caps are recommended for all current PFAS testing methods including LC-MS-MS.

CERTIFIED PFAS-FREE CAPS TESTED FOR PFAS

ILT's Polypropylene/Silicone liner material has been tested for Total Fluorine content as well as for eighteen specific PFAS compounds by an accredited outside testing lab. Testing reports are on file with ILT and can be viewed upon request.

- **Total Fluorine content testing had a result of N.D.** – not detected to <3 ppm total fluorine (specification of <100ppm of total fluorine to be PFAS-free)

- **PFAS compound testing had a result of N.D.** – not detected, less than specified detection limit for all PFAS compounds tested

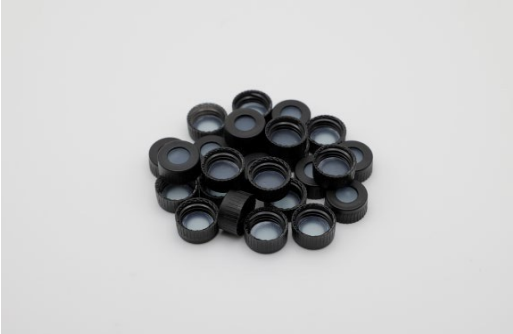


PFAS-Free Sample Caps Temperature Guide and Chemical Compatibility

Material	Min. Temp °C	Max. Temp °C	Min. Temp °F	Max. Temp °F
Polypropylene/Silicone	**-10**	**120**	**-14**	**248**

Polypropylene has good resistance to most organic solvents. However, it is not compatible with halogenated and aromatic hydrocarbons or strong oxidizing acids. If possible, a sample of ILT's PFAS-Free sample caps should be tested for compatibility for use with specific chemicals or methods.

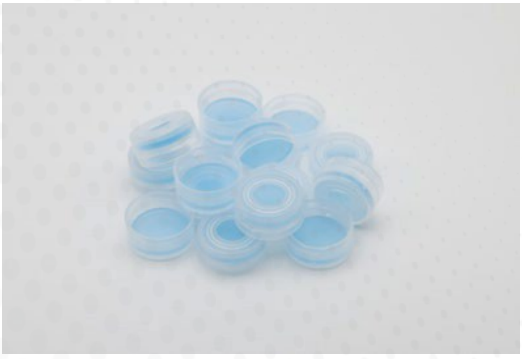
9mm Screw Caps



- Featuring high-grade platinum silicone with a polypropylene faced liner material for PFAS-free results.
- 9mm screw caps with translucent blue silicone/ clear polypropylene, bonded.
- Compatible with 12 x 32mm screw cap vials.

ILT Part Number	Description
009-13-5816	9mm black screw cap bonded with translucent blue silicone/clear polypropylene for PFAS analysis
009-13-5815	9mm black screw cap bonded, translucent blue silicone/clear polypropylene, pre-slit for PFAS analysis

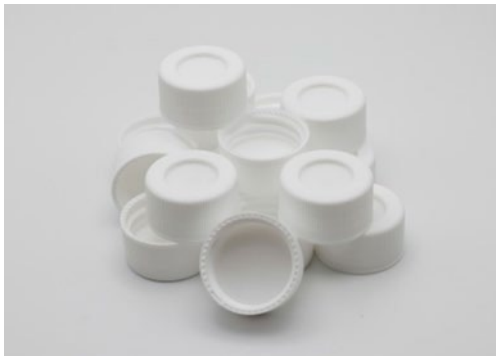
11mm Snap Caps



- Featuring high-grade platinum silicone with a polypropylene faced liner material for PFAS- free results.
- 11mm natural polypropylene snap caps with translucent blue silicone/clear polypropylene.
- Compatible with all standard snap ring top vials.

ILT Part Number	Description
011-03-5908	11mm natural snap cap, translucent blue silicone/clear polypropylene for PFAS analysis
011-03-5905	11mm natural snap cap, translucent blue silicone/clear polypropylene, pre-slit for PFAS analysis

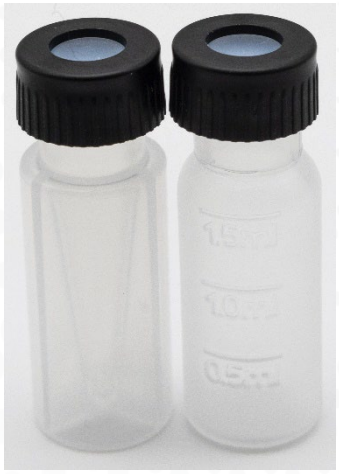
24mm Screw Caps



- 24mm screw caps bonded with white silicone/clear polypropylene.
- Excellent choice for PFAS-Free sample collection
- Keeps the sample contaminant free through point of collection to sample analysis.

ILT Part Number	Description
024-13-5902	24-414 white screw cap, white silicone/clear polypropylene

Polypropylene Vial Kits



ILT Part Number	Description
009-18-5816	Polypropylene 9mm screw top vial 1.5mL, 9mm black screw top cap bonded with translucent blue silicone/clear polypropylene for PFAS analysis - 100 Pk each of vials and caps
009-18-5815	Polypropylene 9mm screw top vial 1.5mL, 9mm black screw top cap bonded with translucent blue silicone/clear polypropylene, pre-slit for PFAS analysis - 100 Pk each of vials and caps
009-18-5913	Polypropylene 9mm screw top vial 0.3mL, 9mm black screw top cap bonded with translucent blue silicone/clear polypropylene for PFAS analysis – 100 Pk each of vials and caps
009-18-5914	Polypropylene 9mm screw top vial 0.3mL, 9mm black screw top cap bonded with translucent blue silicone/clear polypropylene, pre-slit for PFAS analysis – 100 Pk each of vials and caps

TEST DATA REPORT

Applied Technical Services is a third-party independent laboratory. ILT's certified PFAS-free caps for PFAS testing with a silicone/polypropylene liner, have been certified to meet the required regulatory standards and conditions for PFAS sample analysis.

Applied Technical Services

CHEMICAL TEST REPORT

Ref. 406570-4 **Date** October 18, 2023 Page 1 of 2

Attention: Chrystal McDuffie

Customer: Integrated Liner Technologies
45 Discovery Dr.
Rensselaer, NY 12144

P.O.# N/A

Sample: See below

Materials Specification: N/A

Test Methods: EPA Method 3545A *Pressurized Fluid Extraction (PFE)* and EPA Method 8321B *Solvent Extractable Nonvolatile Compounds by High Performance Liquid Chromatography/ Thermospray/Mass Spectrometry (HPLC/TS/MS) or Ultraviolet (UV) Detection*

Test Results

Sample	Results
Solvent After Inverted with the PP Cap*	See Table 1

*ATS has updated the sample identification for ATS #5 per the client's request.

ISO 9001

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Chemistry Technician

Approved by: William Carson
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TEST DATA REPORT (CONTINUED)

CHEMICAL TEST REPORT

Ref. 406570-4 **Date** October 18, 2023 Page 2 of 2

Table 1. Quantitative Results

	Solvent After Inverted with the PP Cap
Heptafluorobutyric Acid	N.D. <10 ppb
Perfluoropentanoic Acid	N.D. <10 ppb
Perfluorohexanoic Acid	N.D. <10 ppb
Perfluoroheptanoic Acid	N.D. <10 ppb
Perfluorooctanoic Acid	N.D. <100 ppt
Perfluorononanoic Acid	N.D. <10 ppb
Perfluorodecanoic Acid	N.D. <10 ppb
Perfluoroundecanoic Acid	N.D. <10 ppb
Perfluorododecanoic Acid	N.D. <10 ppb
Perfluortridecanoic Acid	N.D. <10 ppb
Perfluorotetradecanoic Acid	N.D. <10 ppb
Perfluorooctanesulfonic Acid	N.D. <100 ppt
Perfluorooctanesulfonamide	N.D. <1 ppm
Heptadecafluoro-N-Methyloctanesulphonamide	N.D. <1 ppm
N-Methylperfluorooctanesulfonamidoethanol	N.D. <1 ppm
N-Ethylperfluorooctanesulfonamidoethanol	N.D. <1 ppm
N-Ethyl-N-(2-Hydroxyethyl)Perfluorooctylsulphonamide	N.D. <1 ppm
Perfluorohexasulfonic Acid	N.D. <100 ppt

N.D. <– None detected, less than specified detection limit

INTEGRATED LINER TECHNOLOGIES

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OUR MISSION
is to redefine existing liner technology through cutting edge advances in manufacturing methods and material science.

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