HAMILTON®

Gastight® Syringes

Congratulations! You have purchased the finest quality precision syringe available today. We combine the highest quality materials with skilled workmanship, ensuring the highest possible performance level of every precision fluid device we manufacture. With proper care and handling, Gastight syringes will provide years of use.

Syringes and needles manufactured by Hamilton Company are intended for scientific research and laboratory use only and are not intended for human *in vivo* use.

Hamilton's Gastight syringes are precision measuring instruments. For prolonged syringe life and to obtain the maximum benefits of use, a few helpful tips should be observed:

Assured Accuracy and Precision

- When initially inserting a new plunger into a Gastight syringe barrel, wet (lubricate) the tip with deionized water or another solvent compatible with the sample.
- In using a Gastight syringe, grasp only the syringe flange and plunger button. By doing so, variations in fluid measurement due to body heat are avoided.
- Pump the plunger with the syringe needle immersed in the liquid or gas to be transferred. This will expel any trapped air in the needle and syringe and provide sufficient lubrication to the plunger in the case of liquids. For extended plunger tip life, minimize the use of a "dry" syringe.
- Every Gastight syringe is handcrafted to ensure only the highest precision liquid and gas transfers. Barrels and plungers within a given volume range are interchangeable and may be purchased separately for field repair and replacement.
- If the plunger is accidentally withdrawn completely from the syringe barrel, wipe it carefully with a lint-free tissue and re-wet it before reinserting into the barrel. Be careful of the plunger tip since any physical abrasions, scratches, or oil from one's fingers may cause the plunger to leak once re-assembled.

Cleaning

- The life of your Gastight syringe is directly related to its cleanliness!
- To clean syringes, it is best to use solvents known to be effective in solvating the sample and preferably that are non-alkaline, non-phosphate, and non-detergent based. A biodegradable, non-phosphate, organic Cleaning Solution Concentrate is available from Hamilton; order P/N 18311.
- High quality grade water and acetone prove to be good rinses.
- To clean the plunger, remove it from the syringe barrel and gently wipe with a lint-free tissue. Reinsert the plunger into the barrel and pump deionized water or acetone through the needle and syringe. Air dry the syringe for storage.

Solvent Compatibility

- The adhesive used to affix needles in Gastight/Microliter syringes is the most chemically resistant available. However, some solvents, with prolonged exposure, particularly halogenated hydrocarbons, may attack and deteriorate this highly resistive adhesive. For applications using such solvents, removable needle model syringes are recommended; no adhesive is present in the fluid path of this type of syringe. Avoid prolonged immersion of the syringe in any solvent while cleaning. Rinse the syringe thoroughly after use with deionized water, acetone or another solvent compatible with the sample. Allow to air dry.

Pressure Parameters

- Gastight syringes will withstand pressures of 1,000 psig for volumes ranging from 5–100 µL, 500 psig for 250 and 500 µL, 200 psig for 1–10 mL, and 100 psig for 25–100 mL volumes.
- Plugged needles can produce back-pressure on the plunger resulting in internal syringe pressures exceeding recommended levels. Use only cleaning wires or dissolution methods to dislodge any residue plugging the needle. A complete Needle Cleaning Kit is available from Hamilton; order P/N 76620.

Temperature Parameters

- For best results, Gastight syringes are intended for use above 10°C (50°F).
- Gastight syringes with cemented needles should not be heated above 50°C (122°F). For applications requiring elevated temperatures up to 115°C (239°F) for volumes ranging from 5 µL–10 mL and up to 80°C (176°F) for 25–100 mL volumes, removable needle and PTFE Luer Lock, Gastight syringes should be used.
- Even though only the highest quality glass is used for Gastight syringe barrels, rapid changes in temperature should be avoided.

Warranty Statement

Hamilton Company unconditionally guarantees its products to be free of defects in materials and workmanship. Any product which fails due to such a defect will be repaired or replaced at our discretion without cost, provided the device is returned on a Return Materials Authorization (RMA). It is the responsibility of the purchaser to determine the suitability of application and material compatibility of the products based on the published specifications of the products.

Return of Goods

Hamilton Company's return and repair policy is written to protect its employees from potentially hazardous materials (e.g. serum, radioactive materials, carcinogenic chemicals, etc.) or any substance that may cause them partial or permanent disability during the inspection or repair process. In returning product, the customer acknowledges that the product is free from any hazardous materials. Furthermore, the customer assumes responsibility should the returned product be determined to be hazardous.

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HAMILTON®

Web: www.hamiltoncompany.com
USA: 800-648-5950
Europe: +40-356-635-055

Hamilton Americas & Pacific Rim
Hamilton Company Inc.
4970 Energy Way
Reno, Nevada 89502 USA
Tel: +1-775-858-3000
Fax: +1-775-856-7259
sales@hamiltoncompany.com

Hamilton Europe, Asia & Africa
Hamilton Central Europe S.R.L.
Str. Hamilton no. 2-4
307210 Giarmata, Romania
Tel: +40-356-635-055
Fax: +40-356-635-060
contact.lab.ro@hamilton-ce.com

To find a representative in your area, please visit hamiltoncompany.com/contacts.