







Introduction

BT Medical devices have undertaken a quantitative analysis and modelling of the impact of prefilled syringes across the entire South African healthcare system. We estimate that the total cost of traditional flushing methods cost the healthcare system R2.5bn, the move to prefills will reduce this by approximately R1.5bn.

We have shared our study with a prominent private-sector hospital group, and we have considered the following cost components:

- · The rate and cost of bacteraemia events.
- · Medication error rate and related costs.
- Preparation cost.
- · Additional hospital stay costs.
- · Costs of related medical waste.

Details of our extensive study are available to you. Please visit www.bt-medicaldevices.co.za and we will get in touch with you soon.

Product Description

BT Optiflush™ Pre-filled Syringe syringe with sterile normal saline (0.9% Sodium Chloride injection). Consist of core plunger, syringe barrel, plunger rod, and large protective tip cap. Suitable for flushing various kinds of vascular access devices & catheters.

Product Indication

BT Optiflush™ Pre-filled syringes are used for flushing various kinds of vascular access device & catheters to:

- Assess catheter status / function and patency.
- Clear the catheter lumen after medication administration process to avoid drugs incompatibility and to ensure full dose delivery for patients.
- · Lock the catheters during its non-use period.

Advantages

- · Help to prevent catheter related infections.
- · Help to reduce the risks of needle stick injuries.
- Help to increase clinical staff efficiency.
- · Help to prevent catheter blood reflux.
- · Help to reduce medication error.
- Help to reduce drug incompatibility.

Product Features

- · Individually wrapped syringe.
- Specially design flush device to optimize patient safety.
- · Large protective syringe tip cap to avoid syringe tip contamination.
- Unique double layer plunger design to reduce blood reflux in catheters.
- Stubby design syringe profile to minimize the cost of medical waste discard.
 Steam sterilization method to provide highest sterility assurance level (SAL) of 106.
- Clear & bold printed label graduation scale with clearly labeled mentioning product name, syringe content and intended use
 to minimizes its misuse or error.
- The internal diameter of the syringe barrel for each filling volume (3ml, 5ml and 10ml) is identical to the 10ml standard syringe, to maintain low pressure during flushing process and to reduce the risks of catheter or vein damage and comply with PICC manufacturers recommendations.

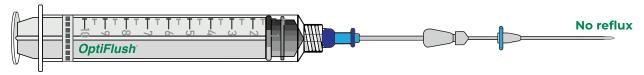
Product Packaging

Filling Volume	Syring diameter (ml)	Units per box shelf-pack (each)	Units per carton (each)	SKU No REF No
3 (ml)	10 (ml)	30	360	BTMD41211
5 (ml)	10 (ml)	30	360	BTMD41221
10 (ml)	10 (ml)	30	360	BTMD41231



Anti-Blood Reflux Technology

After flushing with BT Optiflush™ Pre-filled syringe



The BT Optiflush $^{\text{TM}}$ Pre-Filled syringe is designed specifically to reduce unintended blood reflux into the catheter lumen thus decreases the risk of catheter blockage.

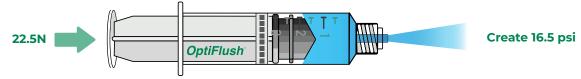
After flushing with standerd 10ml syringe.



*Reflux of blood after flushing may occur because standard syringe components are not specifically designed for flushing procedures.

Decreases The Risk of Catheter Damage

3 ml BT Optiflush™ Pre-filled flush syringe with the diameter of a 10 ml standard syringe



BT Optiflush $^{\text{TM}}$ Pre-filled syringe with uniform 10 ml diameter of the syringe barrel results in lower flushing pressure compared to 3 ml or 5 ml standard syringes and decreases the risk of catheter rupture.

3 ml standard syringe



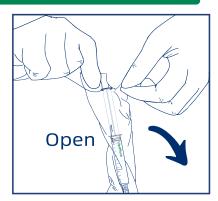
*The syringe size has an impact on the risk of catheter damage. Smaller diameter syringes generate greater pressure exerted against the catheter wall on injection than larger diameter syringes .



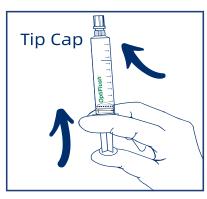
BT Optiflush[™] is available in the filling volumes 3 ml, 5 ml and 10 ml.The internal diameter of the syringe barrel for each filling volume is identical to the 10 ml standard syringe.



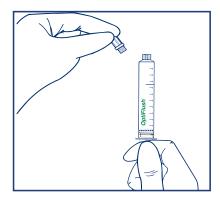
Instructions for Use



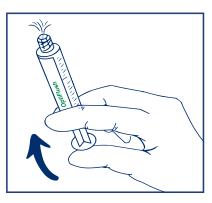
Open the unit package and remove syringe, inspect clarity of solution, check the protective tip cap is in place.



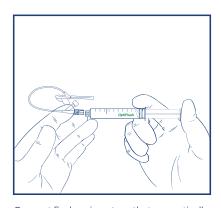
Push the plunder rod up to release the seal between the piston / plunger and the barrel before removing the protective tip



Remove protective tip cap by twisting off aspetically.



Expel air by pushing plunger forward.



Connect flush syringe to catheter aspetically and push the plunger rod to flush the required volume according to the institution's policy.



Discard the used syringe and residual part of the solution. <u>DO NOT RE-USE</u>.

Precautions

- · Do not freeze.
- · Do not re-sterilize.
- · Do not use it, if the package or content is damaged.
- · Do not use if the tip-cap or stopper on the syringe is not intact.
- · Do not place the product on sterile field area.



REFERENCES | 1. Flushing vascular access catheters: Risks for infection transmission by Lynn Hadaway, RN, C, MEd, CRNL Infection Control Resource 2007, Vol. 4 No. 2. 12, Infusion Therapy Standards of Practice, Journal of Infusion Nursing, Supplement to January/February 2016, Vol. 39, No. 1 S. I 3, P. Austin, M. Elia, Improved aseptic technique can reduce variable contamination rates of ward-prepared parenteral doses. Journal of Hospital Infection, 2013. I 4, S. Keogh et al., A Time and Motion Study of Peripheral Venous Catheter Flushing Practice Using Manually Prepared and PreFilled Flush Syringes. The Art and Science of Infusion Nursing. 2014 March/ April; 37(2): 96-101. Infusion Nurses Society 2014.



Manufactured under license for BT Industrial Group (Pty) Ltd. Phone: +27 101 09 1728; Email: adminmedical@bt-industrial.co.za, by: Jiangsu Embrace Science & Technology Development Co., Ltd. Add.: 29-2 Yingbin Road, Huai'an Economic and Technological Development Zone, Jiangsu, P.R.C.



