

Manufacturer: Guala Dispensing S.p.A.
Model: TS3 CRP Screw & Snap-on Versions
ASTM Type: IXB(1)

Description:

The package consists of a plastic bottle, a one-piece plastic closure and a trigger spray pump (Figure 1). The trigger sprayer closure is permanently affixed to the container by two different methods, which are a continuously-threaded closure or a snap closure.



Figure 1

The continuously-threaded closure permanently attaches the trigger sprayer to the container by continuous threading and engagement of matching ratchets on the inside of the closure and four ratchets on the container. (See arrow to ratchets on the closure and the bottle in Figures 2A and 2B.)



Figure 2A

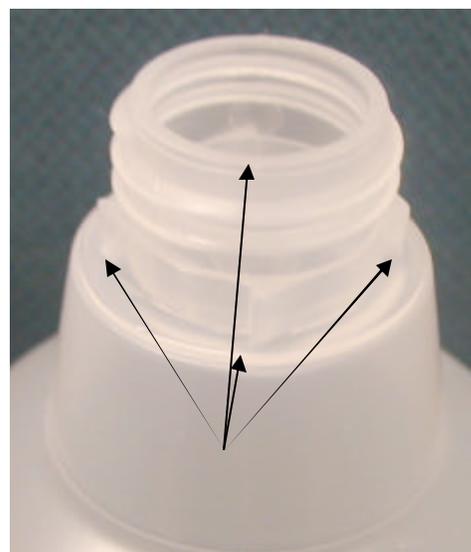


Figure 2B

The snap closure permanently attaches the trigger sprayer to the container by snapping three tabs inside the closure skirt (see black arrows Figure 3A) into three pairs of ratchets (see green arrows Figure 3B) on the container neck. The ratchets are on the lower neck thread (see black arrow Figure 3B). The container neck has three pairs of triangles (see blue arrows Figure 3B) that function to guide the closure tabs into place on the container neck. Once the closure is snapped into the ratchets on the container, the closure cannot rotate.

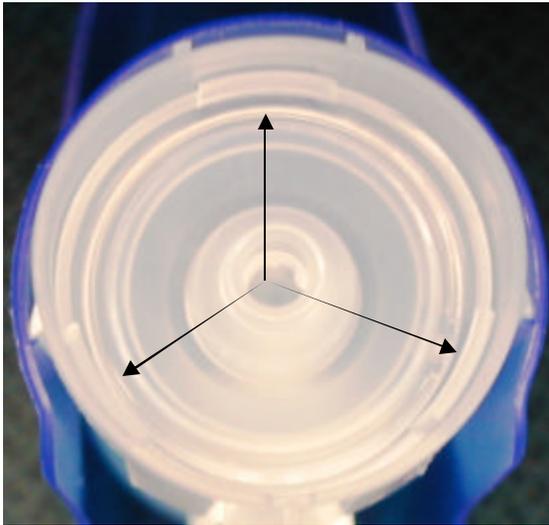


Figure 3A

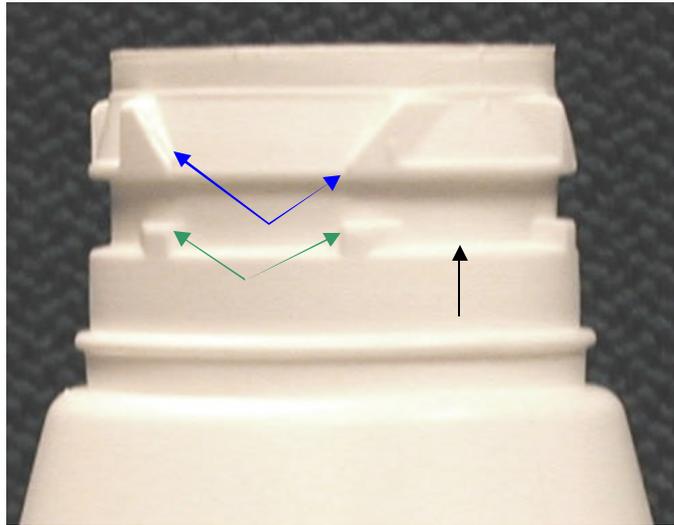


Figure 3B

The trigger sprayer nozzles for both the continuously threaded and snap closures are identical. The trigger's rectangular oval shaped nozzle (Figure 4) has 2 positions, an OFF position indicated by the word "OFF" (Figure 5) and an ON position located 180° apart and indicated by the word "ON" (Figure 6). The trigger sprayer is operated by pressing and holding down the rectangular tab on the trigger shroud (aqua arrow in Figure 5), rotating the nozzle from the OFF position to the ON position, and then squeezing the trigger. The tab does not lock once in the ON position, allowing the nozzle to be moved from the spray position to the OFF position without pressing the tab. Once in the OFF position, the nozzle is locked into place by means of the rectangular tab located on the trigger shroud (aqua arrow in Figure 5) that locks into a square cutout on the nozzle.



Figure 4



Figure 5



Figure 6

The manufacturer's instructions on the TS3, which are a mixture of pictorial and text instructions, are as follows (Figure 7):

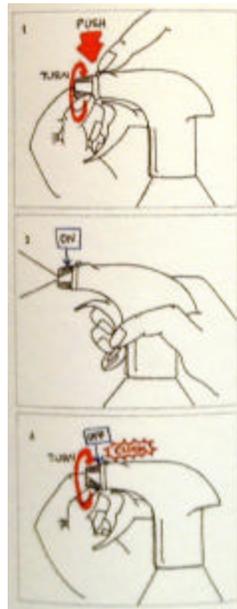


Figure 7

1. (There is a picture of an arrow with the word PUSH pointing to a tab on the trigger shroud. The picture shows the index finger of one hand pushing down, while the other hand rotates the nozzle in the direction of a counterclockwise arrow with the word TURN.)
2. (There is a picture of the word "ON" with an arrow pointing to the spray nozzle. The picture shows a fan of spray is emitting from the nozzle while a hand is depressing the trigger.)
3. (There is a picture of an arrow with the word OFF pointing to a tab on the trigger shroud. The picture shows a hand rotating the nozzle in the direction of a counterclockwise arrow with the word TURN and a balloon with the word "CLICK" on top of the trigger shroud to indicate the sound emitted when the nozzle is rotated to the off position.)