



Product Alert – Counterfeit Tyco Fire Products - Automatic Fire Sprinklers (TY325)

July 14, 2023

Type of Notification: Counterfeit

FM Approvals has been made aware of counterfeit automatic fire sprinklers found in India bearing the FM Approvals certification mark. FM Approvals has neither tested nor certified these products.

Company Identity: Unknown

Product Identity: The sprinklers bear the sprinkler identification number (SIN) “TY325” which is designated to Tyco Fire Products and the letters “TFP,” however, these were not made by Tyco Fire Products. The identity of the manufacturer is unknown.

Description: ½ inch NPT bulb-type pendent style sprinkler

FM Approval Status: Not FM Approved.

Hazard Involved: These automatic sprinklers cannot be relied upon to react to or control a fire. Failure by any of the following mechanisms is possible: failure of the thermal element, orifice leakage, premature or delayed operation, separation of the deflector, inadequate or excessive discharge rate, corrosive attack, failure to operate, failure to produce an adequate discharge pattern, etc.

If you suspect you are in possession of counterfeit TY325 sprinklers bearing the FM Approvals certification marking or if you have any information relative to these referenced products, please bring that to the attention of:

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Figure 1 shows photographs of an authentic TY325 sprinkler next to one of the counterfeit TY325 sprinklers. Chrome-plated authentic versions are also FM Approved even though this particular example has no decorative finish. The markings on the wrench boss are similar and include the manufacturer's name "TYCO," the year of manufacture, and a mold cavity identification symbol. The "TYCO" marking on the counterfeit is not well centered like on the authentic version. The counterfeit also uses a visibly different compression screw, indicated by the arrows in the left photo, which is silver in color (in chrome-plated authentic sprinklers, the compression screw is also plain brass) and has several more exposed threads. The counterfeit also uses a different material for its orifice cap, which is visibly different, indicated by the arrows in the right photo. Authentic TY325 sprinklers use copper for this part while the counterfeit cap was a hard, brittle material that was found to be slightly translucent and not metallic.

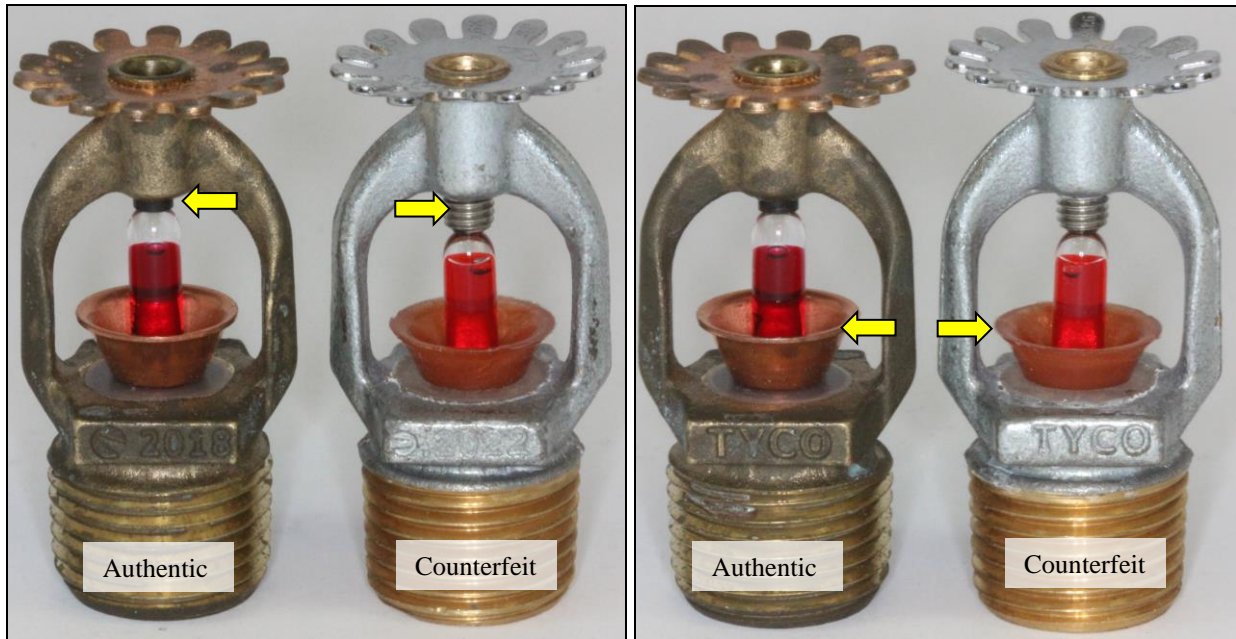


Figure 1. Photographs of the counterfeit TY325 sprinklers (at right in both photos) and an authentic Tyco TY325 pendent sprinkler (at left in both photos). The arrows show the different looking compression screws (left photo) and orifice caps (right photo).

Figure 2 on the next page is a close photograph of the orifice cap and glass bulb in the counterfeit sprinkler. The edges of the orifice cap rim were jagged and chipped which is unlikely to happen to an authentic, copper cap. The fluid filled cavity in the glass bulb has a flat or slightly convex profile at its top near the compression screw causing the gas bubble to settle to the side of the cavity when the sprinkler is upright. The bulb cavity in authentic sprinklers is slightly concave which tends to center the bubble when the sprinkler is upright.

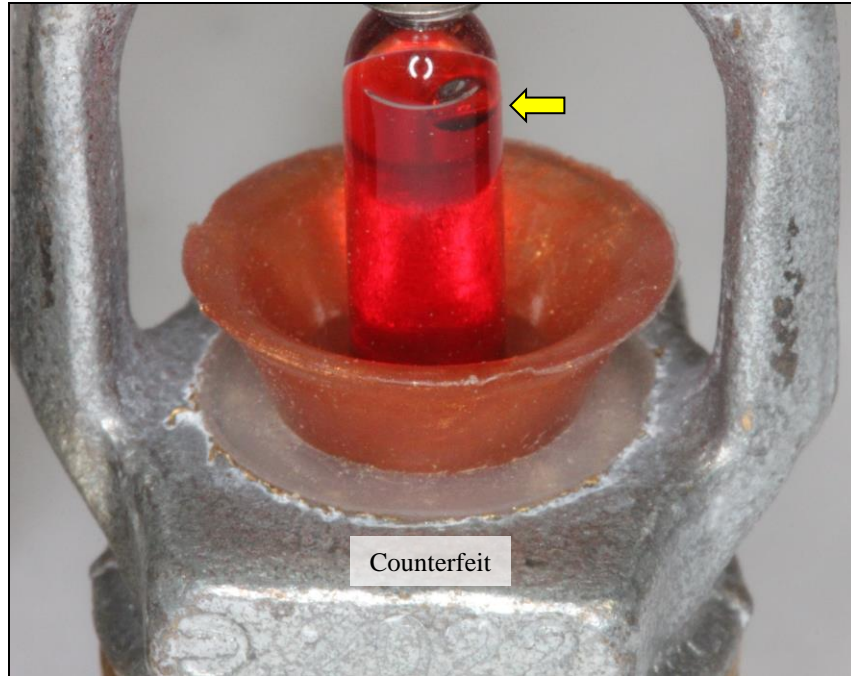


Figure 2. Close photograph of the orifice cap and glass bulb in the counterfeit sprinkler. The cap material is not metallic and the bubble in the glass bulb is not centered in the bulb cavity.

Figure 3 shows the inlets of the authentic (left) and counterfeit (right) TY325 sprinklers. The cap of the authentic TY325 has a much different appearance due to the different materials used.

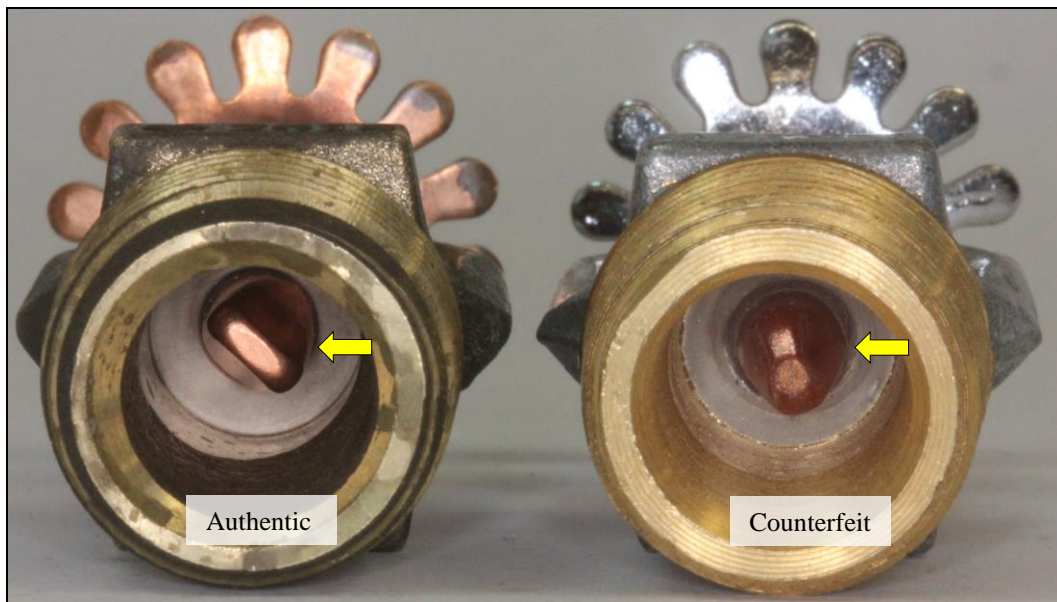


Figure 3. Authentic TY325 (left) and a counterfeit (right). The bottoms of the orifice caps are visible and indicated by the yellow arrows. The authentic cap is stamped from copper while the counterfeit appears to be a plastic or resinous material.

Figure 4 shows the deflectors the authentic and the counterfeit sprinklers. The content and positioning of the stampings on the deflectors are largely the same. The diamond of the FM Approvals marking on the counterfeit sprinkler is not complete and missing the top portion. The FM Approvals marking on authentic sprinklers will be complete; an incomplete marking is an indicator of a counterfeit sprinkler, however, it is not known if all of the counterfeits from this maker have similarly incomplete diamonds.



Figure 4. Authentic TY325 deflector (left) and counterfeit deflector (right). The markings are similar, including the appearance and position FM Approvals mark.