Priority Legislation

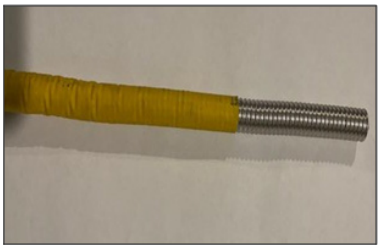
Public Safety - Corrugated Stainless Steel Tubing for Fuel Gas Piping Systems - Requirements and Prohibitions

The products we use in our buildings have the potential to have significantly safety impact our lives. Corrugated Stainless Steel Tubing (CSST) is a product used to deliver propane and methane gas in homes around the county. This product is prone to malfunctions that can cause propane and methane leaks to occur. In 2022, Maryland took a crucial step in improving the safety of this tubing by prohibiting the use of non-arc-resistant CSST with the passage of HB1052. While arc-resistant CSST is a safer product than non-arc-resistant CSST, there are still potential safety issue that must be addressed. Arc-resistant CSST is only sufficient for up to 4.5 Coulombs, while the average lightning strike in the US is approximately 24-28 Coulombs and can be much higher. This means even arc-resistant CSST is highly vulnerable to malfunction and higher safety standards are needed. In 2016, the International Code Council, Fire Service Membership Council, and the National Association of State Fire Marshals unanimously endorsed CSST of an LC1027 rating. LC1027-rated CSST is able to withstand up to 36 Coulombs, making it significantly more durable and less prone to malfunction.

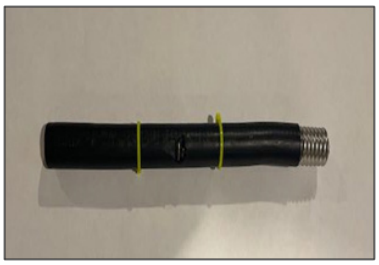
Proposed Legislation:

Frederick County urges legislators to improve the safety of our buildings by passing legislation that prohibits the sale and use of CSST that does not meet a LC1027 rating or higher. This CSST is the lowest-rated tubing capable of withstanding the average lightning strike. Lower arc-resistant tubing is not sufficient to protect residents and first responders from CSST malfunctions and resulting fires. This issue is particularly important to Frederick County because lightning-induced failure of CSST was a contributing factor in the line-of-duty death of Frederick County Battalion Chief Josh Laird. Improving the safety of buildings in Maryland, and therefore the safety of our first-responders, is a fitting and imperative way to honor the legacy of Battalion Chief Laird.

CSST Product Comparison:



◀ This image shows the “yellow” non-arc resistive, single layer jacket CSST. This product only meets the AN-SI LC-1 testing standard.



◀ This image shows the “black” arc-resistive, single-layer jacket CSST. This product meets requirements from 2022’s HB 1052. You can see a perforation from a lightning-induced arcing event, which caused a fire to a single -family home in Ellicott City in 2021.

◀ This image represents the multi-layered jacket CSST. This jacket consists of a conductive jacket, aluminum mesh, and a non-conductive jacket over the CSST. This product meets both the ANSI LC-1 and the ICC-ES-LC1027 testing standard.

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