UL® CLEARS THE AIR

BY CHARLIE SEYFFER

What does a simplified Standard 900 mean for manufacturers and users?

Air filter manufacturers have always presented many numbers that users included in their evaluations. These include dust spot efficiency, arrestance, dust holding capacity, and minimum efficiency reporting value (MERV), among others.

ASHRAE greatly simplified the selection process when they introduced MERV. This value supplied the user with the filter's minimum particle capture efficiency, ensuring that the filter would provide the protection level required for the process, or protect building occupants in specific applications.

In 2007, ASHRAE also added Appendix J, an additional testing step designed to expose filters that may not maintain their efficiency over time.

NEW CRITERIA

Now, Underwriters Laboratories (UL) has simplified its Standard UL 900 for evaluating a filter's combustibility and smoke generating potential when the filter is exposed to direct flame. The designations UL Class 2 and UL Class 1 designations are now outdated. UL 900 covers both washable and throwaway filters used for the removal of dust and other airborne particles from mechanically circulated air in equipment and systems.

The vast majority of air filters have historically tested as UL Class 2. The criterion for this filter classification is that when tested, the clean air filter burns moderately when attacked by flame, or emits moderate amounts of smoke, or both. A UL Class 1 filter, when clean, did not contribute fuel when attacked by flame and emitted only negligible amounts of smoke.

Some municipalities required the UL Class 1 product through local codes. In many cases, because of the different construction of Class 1 and Class 2 rated products, the user paid two to three times the cost of a UL Class 2 product.

Additionally, there was a widespread misconception within engineering circles that a UL Class 1 product was "fireproof." This was not the case, since a Class 1 product could burn if submitted directly to an open flame, although it was less likely to contribute combustion byproducts. Both classes, when clean, would self-extinguish when the flame source was removed from contact with the filter.

In the future, filters will only be required to meet the requirements that were formally recognized as UL Class 2. Filter frames and labels will carry one marking to designate that they meet the requirements of the standard. Most filter manufacturers have started the conversion process and will be in compliance well before the effective date of May 2012. The Underwriters Laboratories website provides complete listings as to which manufacturers follow the procedures as prescribed in the Standard and which of their filters are in compliance.

It is important to note, after a period of service, that the combustibility and smoke generation of an air filter depends upon the nature and quantity of the material collected by the filter. The test requirements of this Standard, for classification purposes, apply only to air filters in a clean condition. This is a critical step forward. UL is a recognized leader in independent safety certification and has facilitated a simplified, cost-conscious revision.

For more information on this subject, see *www.filterair.info/ULCert.* **ES**

Seyffer is manager of marketing and technical materials for Camfil Farr. Contact him at **seyfferc@camfilfarr.com**.