

**Find Out How UL 1254, The Testing Standard for  
Pre-Engineered Dry Chemical Extinguishing Units, Changes The  
Way Industrial Hazards Are Protected**

1. What type of systems are affected by the revised UL 1254 *Standard for Pre-Engineered Dry Chemical Extinguishing System Units*?

Answer: All pre-engineered dry chemical total flooding systems, auto refueling systems, spray paint booth systems.

2. What type of systems will not be affected by the revised UL 1254 *Standard for Pre-Engineered Dry Chemical Extinguishing System Units*?

Answer: All pre-engineered dry chemical local application systems (either tankside or overhead).

3. What caused UL to revise the UL 1254 Standard?

Answer: As we saw with the changes to UL 300, UL has been making an effort to design their testing protocols to more closely simulate real-world scenarios, commonly known as application based testing. For example, UL realized that the hazard presented by a vehicle paint spray booth was significantly different than that of a generator room, yet under the old UL 1254, they were both protected as general total flooding hazards. The revised UL 1254 addresses more specifically the various hazards protected by industrial pre-engineered systems.

4. What was the effective date of the new standard?

Answer: The original effective date was November 29, 1997, but this date was extended to September 29, 1998. Any system manufactured after the effective date must comply with the revised standard in order to bear the UL Listing mark.

5. What are the differences between the old standard and the revised standard?

Answer: The most significant change in the new standard is the addition of a completely new section covering vehicle paint spray booth protection. Under

the old standard, all total flooding hazards were protected in the same manner, with a general purpose total flooding system. The new standard makes a distinction between general total flooding applications and protection provided for vehicle paint spray booths. Also, general total flooding systems will have to pass an additional Class “B” fire test in order to maintain their UL Listing.

6. What impact, if any, will the new requirements have on existing Industrial Dry Chemical Systems?

Answer: That depends. UL has no jurisdiction over previously installed systems. It is up to the “Authority Having Jurisdiction” which includes the insurance companies, fire service, and building management to effect existing installations. FEMA strongly recommends upgrading of older systems to meet the application specific requirements of the new UL 1254 standard as these new designs meet the challenges associated with them. Further more, any changes in the hazard being protected, which will require a change to the system, will require that the system be upgraded to the new requirements of UL 1254. Individual manufacturers of these systems may have even stronger positions than that of FEMA. It is recommended that you contact them directly for more information regarding an existing installation you may have.

7. How are the new tests for vehicle paint spray booths different from the old, general total flooding tests?

Answer: There are 3 significant differences:

1. A large barrier, simulating a vehicle, will be placed in the hazard area and heptane fires will be positioned under it. The barrier represents 50% of the booths width, 60% of the overall height, and 75% of the depth and is located one foot off the floor.
2. There is a mandatory 10 to 20 second time delay (to allow for fan rundown) incorporated into both the automatic and manual means of system actuation.
3. Only multipurpose dry chemical (ABC) will be allowed.

8. Are there any styles of paint spray booths that are not affected by the changes in UL 1254?

Answer: No. The new testing requirements for paint spray booths are constructed to meet the testing needs of the many diverse styles and types of paint spray booths available today. It is, therefore, important for end-users to consider the adequacy of their existing system in the light of these new requirements.

9. How are the new tests for general total flooding different from the old general total flooding tests?

Answer: The testing protocol for general total flooding systems is the same as the old standard except that an additional Class “B” fire test will be required. This test involves the placement of a 2½ square foot square pan of heptane in the

hazard area in a position considered the most difficult to achieve extinguishment. This test was not part of the old standard.

10. What does this mean to the dealer?

Answer:

1. All Pre-Engineered industrial systems manufactured after September 29, 1998 will have to comply with the requirements of the revised UL 1254 Standard in order to bear the UL Listing mark.
2. Local application systems (both overhead and tankside) are not affected.
3. Total flooding systems used for the protection of vehicle paint spray booths are required to be specifically Listed for this application. These new vehicle paint spray booth systems require a mandatory time delay mechanical and/or electrical) of 10 to 20 seconds before system actuation and utilize multi-purpose dry chemical (ABC) only.
4. General total flooding systems are required to be re-tested. The result in many cases, is reduced area and volume coverage per nozzle. These systems are not UL Listed for the protection of vehicle paint spray booths, only for general total flooding hazards.

**Prepared by the members of FEMA's Systems Division**

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