Stat-X® Aerosol Fire Suppression

Date October 17, 2014 No. T14.6

To: All Stat-X® Fire Suppression System Distributors

Stat-X Condensed Aerosol Fire Suppression Systems Receive EPA SNAP List Approval for Occupied Space Protection

In September 2010, the Stat-X condensed aerosol fire suppressant agent (Powdered Aerosol D) was listed in the U.S. Environmental Protection Agency's (EPA) Significant New Alternatives Policy (SNAP) program list as a total flooding substitute to halon 1301 gas extinguishing systems for use only in normally unoccupied areas.

On October 10, 2014 the U.S. EPA informed Fireaway that the Director of the Office of Atmospheric Programs have signed and issued SNAP Determination Notice 29, ruling that Stat-X is acceptable for use in total flooding uses, in both occupied and unoccupied areas.

The US EPA advised that this ruling will be officially published in the federal government FDSys website:

http://fdsys.gpo.gov/fdsys/search/home.action) and on Regulations.gov (www.regulations.gov) in Docket Nos. EPA-HQ-OAR-2003-0118 and EPA-HQ-OAR-2014-0198.

The pre-publication version of the revised SNAP list for Stat-X is attached.

The new SNAP list description for Stat-X declares that Stat-X is acceptable for use as a total flooding system for both occupied and unoccupied areas.

Under further information the listing states:

- Use of this agent should continue to be in accordance with the safety guidelines in the latest edition of the National Fire Protection Association (NFPA) 2010 Standard for Aerosol Extinguishing Systems

- The active ingredients of Powdered Aerosol D are solids both before and after use; thus, their ODP and GWP are both zero. The gaseous post-activation products for Powdered Aerosol D also have zero ODP and negligible GWPs. The solid active ingredients and particulate post-activation products do not participate in atmospheric photochemical reactions and are not VOCs. The gaseous post activation products are excluded from the definition of Volatile Organic Compounds under Clean Air Act regulations (see 40 CFR 51.100(s)) addressing the development of State Implementation Plans to attain and maintain the National Ambient Air Quality Standards. None of the pre- or post-activation constituents of Powdered Aerosol D will exist in quantities approaching the respective reporting quantities under the Clean Water Act for priority or toxic pollutants. During post-activation clean-up procedures, clean-up residues should be disposed of in accordance with requirements appropriate for those materials, as outlined in the agent's MSDS and local, state, and federal regulations.

- The discharge of the aerosol results in a reduction of visibility in the protected space due to the uniform distribution of the particulate generated. Use according to the NFPA 2010 Standard will further reduce any safety risks due to reduced visibility.

- Units installed in normally occupied spaces will be equipped with features such as a system-isolate switch and cross-zone detection system to reduce risk of accidental activation of an agent generator while persons are present in the protected space. Also required is warning of pending discharge and delay in release to ensure egress prior to activation of the agent to reduce the risk of exposure.

Where possible or feasible, please consider the additional use of directional sounders and photo-luminescent exit signs at each point of egress for Stat-X aerosol fire suppression systems that are going to be installed to protect normally occupied areas. This will improve the ability of occupants to find room exits due to poor visibility following a system discharge. Note that this is not an EPA requirement.

Furthermore the U.S. EPA has released the following publication:

Significant New Alternatives Policy Program
Fire Extinguishing and Explosion Prevention Sector
Risk Screen on Substitutes for Total Flooding Systems in Normally Occupied Spaces
Substitute: Powdered Aerosol D (Stat-X®)
Final – October 9, 2014

Highlights:

"EPA's risk screen also indicates that the use of the proposed substitute will be less harmful to the atmosphere than the continued use of Halon 1301 and substitutes used in this sector, such as HCFC Blend A, HFC-227ea, and HFC-125, as it is less harmful to the ozone layer, has lower climate impact, and a shorter atmospheric lifetime. Stat-X®'s contributions to volatile organic compound (VOC) emissions is not significant, as all of its components following activation are exempt under CAA regulations (40 CFR §51.100(s))."

Please note that though Stat-X has been ruled by the US EPA as acceptable for use for occupied spaces, Fireaway cautions our distribution designers to apply good Fire Protection practices for applications involving manned spaces. Consideration of limited visibility following completion of discharge and the long retention time of the aerosol micro-particulates should be incorporated into facility and end-user abnormal event or emergency procedures related to a fire suppression discharge. Proper training of occupants of protected normally occupied areas is highly recommended to ensure that they know what to expect upon activation of the suppression system and to assure orderly evacuation during an alarm event.

Please be advised that Stat-X is the *very first* condensed aerosol fire suppression agent to receive an US EPA SNAP list approval for use in occupied spaces. At the time of publication of this bulletin, it is the *ONLY* aerosol fire suppression system to receive US EPA acceptance for use as a total flooding fire suppression system in normally occupied areas.

Signed by:

Anthony Gee
Chief Technology Officer
Fireaway Inc.

This document is a prepublication version, signed by the Director of the Office of Atmospheric Programs, Sarah Dunham. We have taken steps to ensure the accuracy of this version, but it is not the official version.

Fire Suppression and Explosion Protection

End-Use	Substitute	Decision	Further Information
Total flooding (occupied and unoccupied areas)	Powdered Aerosol D (Aero-K®, Stat-X®)	Acceptable	Use of this agent should be in accordance with the safety guidelines in the latest edition of the National Fire Protection Association 2010 standard for Aerosol Extinguishing Systems. For establishments manufacturing the agent or filling, installing, or servicing containers or systems to be used in total flooding applications, EPA recommends the following: - the appropriate safety and personal protective equipment (PPE) (e.g., protective gloves, tightly sealed goggles, protective work clothing, and particulate-removing respirators with National Institute for Occupational Safety and Health type N95 or better filters) consistent with Occupational Safety and Health Administration (OSHA) guidelines should be used during manufacture, installation, servicing, and disposal of total flooding systems using the agent; - adequate ventilation should be in place to reduce airborne exposure to constituents of agent; - an eye wash fountain and quick drench facility should be close to the production area; - training for safe handling procedures should be provided to all employees that would be likely to handle containers of the agent or extinguishing units filled with the agent; - workers responsible for clean up should allow for maximum settling of all particulates before reentering area and wear appropriate personal protective equipment; and - all spills should be cleaned up immediately in accordance with good industrial hygiene practices. As required by the manufacturer, units installed in normally occupied spaces will be equipped with features such as a system-isolate switch and cross-zone detection system to reduce risk of accidental activation of an agent generator while persons are present in the protected space. Also required by the manufacturer is warning of pending discharge and delay in release to ensure egress prior to activation of the agent to reduce the risk of exposure. See additional comments 1, 2, 3, 4, 5.

1. The EPA recommends that users consult Section VIII of the OSHA Technical Manual for information on selecting the appropriate types of personal protective equipment for all listed fire suppression agents. The EPA has no intention of duplicating or displacing OSHA coverage related to the use of personal protective equipment (e.g., respiratory protection), fire protection, hazard communication, worker training or any other occupational safety and health standard with respect to halon substitutes.
2. Use of all listed fire suppression agents should conform to relevant OSHA requirements, including 29 CFR part 1910, subpart L, sections 1910.160 and 1910.162.
3. Per OSHA requirements, protective gear (SCBA) should be available in the event personnel should reenter the area.
4. Discharge testing should be strictly limited to that which is essential to meet safety or performance requirements.
5. The agent should be recovered from the fire protection system in conjunction with testing or servicing, and recycled for later use or destroyed.