Common Myth #17

Posted on March 1, 2013 by Amerex

I always recommend an ABC dry chemical since it will be safe to use on any fire they may have.

Description

Absolutely not! We have two different tech tips that point out situations where you cannot use mono-ammonium phosphate (ABC dry chemical).

Tech Tip #5, talks about oxidizers. One of the more common places you may run into oxidizers would be in pool chemical supplies and waste water treatment facilities. If ABC dry chemical is used around these chemicals, a violent reaction may occur.

Tech Tip #20, talks about aircraft. Mono-ammonium phosphate is acidic in nature. It will cause corrosion on untreated metal like any other acid would if it is not cleaned up quickly after the incident or discharge. The problem with aircraft is that there are so many places for the chemical to hide making complete clean up impossible. It would be necessary (as one airline said a few years ago) to take the airframe apart "rivet by rivet" in order to clean it properly. Without complete clean up, the airframe will corrode over time and (being subject to severe stress during its use) it may fail. NFPA 407 Standard for Aircraft Fuel Servicing issued a TIA (Tentative Interim Amendment) to the 2012 edition stating that ABC dry chemical extinguishers were NOT to be used around aircraft fueling vehicles, fueling ramps, aprons or fuel facilities. The IFC (International Fire Code) in Chapter 11 – Aircraft facilities also requires BC extinguishers and further explains in the commentary why ABC dry chemical is not to be used.

In addition to these cases where ABC dry chemical cannot be used, there are other cases where you should not use it.

ABC dry chemical may have only a limited effect on deep seated Class A fires, or Class A fires that involve burning embers that "burrow" into the fuel such as debris piles, textiles and paper storage. Mono-ammonium phosphate works on Class A fires by melting into a sticky, molten residue at about 350 deg. F. This residue sticks to burning embers and excludes oxygen, thereby extinguishing the fire. In a deep-seated fire, the dry chemical may have trouble penetrating into the material where the burning embers are "burrowing." Water mist, water spray or foam would be the choice for combating these types of fires.

There is a requirement in NFPA 10 – 2010 edition, paragraph 5.5.6.1 stating that dry chemical is NOT to be used for the protection of delicate electronic equipment. Clean agents such as Halotron I are best suited for this hazard.

There are other considerations – the effect of discharging an ABC dry chemical extinguisher in a hospital, assisted living facility, laboratory, hotel or school. What will the clean-up cost, what reaction will the by-standers have?

Unfortunately, the ideal fire extinguishing agent that can be used on all types of fires and in all types of situations has yet to be discovered. ABC dry chemical is certainly versatile, but it is by no means the answer to every fire hazard.