



# **ANSUL® LVS Wet Chemical Agent**

**Suppressant and Coolant**

The ANSUL® LT-A-101 Dry Chemical Fire Suppression System was used for many years as a primary stand-alone solution for non-road mobile equipment. The LT-A-101 pre-engineered, fixed nozzle system was designed to suppress fires in Class B flammable fuels such as diesel, hydraulic, engine and transmission oils; steering fluid; grease; and other flammable liquids.

Today, most mid-to-large class non-road mobile equipment utilizes turbo-charged diesel engines to power the machine or generate electrical power. While turbo-chargers are widely used to increase engine horsepower and are extremely effective, a bi-product of their use is the generation of extreme heat.

The LT-A-101 dry chemical system, while very effective on flammable liquid fires, cannot provide the cooling needed for equipment such as turbo-chargers, exhaust manifolds, and other super-heated surface areas. Consequently, to cool hot surfaces in potential fire hazard areas, a water-based wet chemical agent is necessary.

*In fact, the addition of LVS wet chemical for cooling is a current TFPP requirement that MUST be incorporated any time dry chemical is protecting a vehicle with one or more turbochargers, as well as any other super-heated surfaces that meet or exceed 850 °F (454 °C).*

Re-ignition can occur when flammable liquids come into contact with extremely hot surfaces after the completion of a dry chemical discharge. The use of LVS wet chemical as a cooling agent helps reduce re-ignition potential. Tyco Fire Protection Products (TFPP) offers the ANSUL LVS wet chemical system, specifically designed to cool super-heated surfaces in non-road mobile equipment. The ANSUL LVS wet chemical system has been tested in extreme operating conditions of 1100-1200 °F (593-649 °C) and above to consistently cool surface temperatures below 850 °F (454 °C). This is the critical temperature at which fuels such as hydraulic and diesel oils can re-ignite.

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The ANSUL LVS wet chemical system has been extensively tested and is currently FM Approved for use in stand-alone systems providing fire suppression as well as superior cooling. LVS wet chemical fire suppression characteristics are very similar to dry chemical, with the added cooling feature that dry chemical lacks. In addition, the foaming characteristics of LVS wet chemical allow it to flow into spaces where flammable liquids may flow (that may be outside the initial protected area), often providing fire suppression there as well. In applications where there are Class-A common combustibles (such as forestry, landfill debris or coal dust buildup), LVS agent has the capability of soaking into the materials to cool deep-seated embers that dry chemical cannot reach.

Using the ANSUL LVS wet chemical system alone is the method many vehicle fire system designers are choosing today because wet chemical agent is effective at both fire suppression and cooling. While dry chemical systems are still available and effective in many fire suppression applications, those that include super-heated surfaces that can pose a re-ignition threat **must include LVS wet chemical for cooling**. Also, in certain applications where a fire can result in Class-A deep seated embers, the ANSUL LVS wet chemical system must also be used to mitigate re-flash potential.