
PRX™ Liquid Fire Suppressant – A New Agent Concept for Restaurant and Commercial Kitchens

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Ansul Incorporated has long been an innovator of fire protection equipment. Today, Ansul has introduced a revolutionary concept to restaurant fire protection which will serve that industry well into the twenty-first century.

Water has long been understood as a highly efficient extinguishing agent having a thermal capacity capable of removing tremendous amounts of heat. In extinguishing a kitchen fire, or more specifically a grease fire, the extinguishing and cooling advantage of water is lost. Water alone on a grease fire increases the intensity of the fire until enough of the liquid can be introduced to begin reducing the fuel temperature. On a typical restaurant deep fryer a water extinguishment can take up to six minutes.

Knowing the benefit of water in fighting fires, how can the mixture of oil and water be overcome to improve the science of fire protection?

Ansul chemists have combined several inorganic salts to maximize the heat and extinguishing capacity of the mixture. In this case, the sum of the whole has exceeded the sum of the individual components. The individual components each provide a measure of heat absorption or extinguishment. When combined in the proper mole ratio, the maximum effect of heat absorption is seen at the lowest melting point temperature. Properly combined, the mixture behaves as a eutectic. By definition, a eutectic is a mixture of two or more compounds having the lowest melting point.

In restaurant systems, the principle of a eutectic would be most familiar when applied to detection. Fusible links employ a eutectic to yield a specified melting point for detecting a fire and actuating the system. PRX agent uses the same principle to improve the fire extinguishing capabilities of the PIRANHA™ restaurant system resulting in rapid extinguishment, foam generation and rapid cool down of the burning grease.

The PIRANHA system discharges PRX agent to quickly extinguish a grease fire. The addition of water immediately after extinguishment activates the agent-fuel reaction, replenishing the foam blanket until the grease temperature has fallen below its re-flash temperature. The replenishment of the foam blanket is unique to PRX agent, maintaining a secure heat surface throughout the cooling process. Within two minutes, the fuel (grease) temperature will drop below the reflash temperature. This compares with about twenty minutes for a conventional restaurant system. Within the time it takes for a conventional restaurant system to cool below the reflash temperature (twenty minutes), the temperature of a grease fire extinguished by PRX agent is down to room temperature and can be easily handled.

PRX Liquid Fire Suppressant provides a solution which incorporates water, safely and efficiently, in the extinguishment of restaurant and commercial kitchen fires. Patents are pending on this unique agent, and also on the novel concept embodied in the Ansul hybrid (agent plus water) PIRANHA system.