Wildland Fire Fighting Chemical Products

The Forest Service uses several types of wildland fire fighting chemicals. The specific requirements and uses of each depend on the characteristics of the group. The following definitions may help to clarify the different types of products.

- **Long-term retardants** contain retardant salts (typically fertilizers) that alter the way the fire burns, decreasing the fire intensity and slowing the advance of the fire, even after the water they originally contained has evaporated.

  They continue to work until they are removed by rain or erosion.

  The water they contain serves primarily to aid in uniform dispersal of the chemical over the target area.

  Retardants can be supplied as wet or dry concentrates to be prepared at a tanker base to produce mixed retardant that is unthickened or low, medium, or high-viscosity, gum-thickened when mixed with water for use.

- **Foam fire suppressants** contain foaming and wetting agents. The foaming agents affect the accuracy of an aerial drop, how fast the water drains from the foam and how well the product clings to the fuel surfaces. The wetting agents increase the ability of the drained water to penetrate fuels.

  Appropriate selection of concentrate dilution and application equipment will yield a range of suppressants from wetting agent for mop-up through fluid foam for wet line to dry foam for exposure protection.

  They depend on the water that they contain to suppress the fire.

  Foam fire suppressants are supplied as wet concentrates.

- **Water enhancers** contain ingredients designed to alter the physical characteristics of water to increase effectiveness, accuracy of the drop, or adhesion to fuels. They also improve the ability of water to cling to vertical and smooth surfaces.

  They depend on the water that they contain to suppress the fire.

  They may be supplied as wet or dry concentrates.