

After the Fire: Cleaning Up Fire Retardant and Fire Suppressants

Protecting Water Quality

General

Firefighting chemicals – retardants and suppressants – can pose a threat to public health and safety. Take proper precaution when cleaning up after a fire. If a spill or material of concern is found Oregon Emergency Response System at 1800-452-0311. If there is a spill that poses a threat to public health and safety, call 911.

Fire fighting chemicals

Fire retardant or fire suppressant are substances that are used to slowdown or stop the spread of fire or reduce fire intensity. Firefighting chemicals are commonly manufactured as dry powders or as concentrated liquids and diluted with water prior to use to form long-term retardants, firefighting foams or firefighting gels. Retardants leave a dried residue after the water evaporates that helps to protect the fuel from burning while foams and gels all increase the ability of water to suppress fire.

Long-term retardants

Long-term retardants are usually applied with air tankers and helicopters. They are 85 percent water, 10 percent fertilizer and 5 percent coloring. The coloring is usually iron oxide. Retardant is typically dyed red for higher visibility over the drop zone. Retardants on streets and driveways must be wetted to control any hazardous dust before it is swept up. Streets and driveways should not be hosed off into storm drains due to potential impacts to local streams. Do not use a leaf blower to clean up retardant, it will create more airborne particles. Long-term retardants on homes or other surfaces can usually be removed with plain water, but if dried, may be more difficult to remove (avoid using a power washer on wood as it may drive the red dye deeper into the wood surface). Long-term retardants can be acidic and have high concentrations of nutrients that can damage landscape plants. Plants coated with fire retardant should be washed as soon as possible to prevent potential chemical burns to foliage.

Short-term fire suppressants

Foams and gels are short-term fire suppressants typically applied with ground equipment. Foams are typically 94-99% water and work by forming a foam blanket that smothers a fire. Foams can be removed by thoroughly rinsing an area with water. Gels are super-absorbent polymer slurries with a consistency like petroleum jelly. Gels come in two forms: orange or clear gels which can be removed by rinsing with water and blue gels which must be cleaned up with an oil-based solvent.

Proper cleaning and disposal of firefighting chemicals

Although most firefighting chemicals are not considered toxic, do not rinse any retardant or suppressant off your property or down the street or sidewalk or into any area that will drain into curb gutters, storm drains, river, creeks and lakes. These chemicals can have adverse impacts on water quality and on fish and other aquatic life. Washwater should be drained to the lawn or other surface that will allow the retardant and ash-containing washwater to soak in. Small quantities of swept-up retardant such as from a single home can be disposed of in your municipal trash. Check with your local waste hauler for larger quantities. At no time should chlorine bleach, or bleach-based products be used to clean up any type of firefighting chemical, as this could produce harmful and explosive gases. Note that retardant products are mostly water and will eventually evaporate leaving a residue behind.



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*DEQ is a leader in
restoring, maintaining
and enhancing the
quality of Oregon's air,
land and water.*

Remaining residue can cause eye irritation and cause cuts, scratches, or chapped skin to sting. Wear protective gear, including long sleeves, eye protection and a respirator when cleaning fire retardants. Cleanup of interior spaces should be done by professionals trained in fire restoration work. Although modern retardants are not considered toxic, it is a good idea to avoid making puddles when cleaning so that pets and wildlife do not ingest this material.

Sources for additional Information

- DEQ Wildfire Response webpage provides a clearinghouse of public information regarding wildfires, smoke, recovery and cleanup at ordeq.org/WildfireResources.
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Oregon Wildfire Resources website, offering information and links from a variety of state and federal agencies, wildfire.oregon.gov.

Alternative formats

DEQ can provide documents in an alternate format or in a language other than English upon request. Call DEQ at 800-452-4011 or email deqinfo@deq.state.or.us.