
Sulfur Standards

Federal law requires diesel to have a sulfur content less than 15 parts-per-million (ppm). Effective July 1, 2018, all heating oil and kerosene sold in Vermont must also be less than 15 ppm.

Vermont Air Pollution Control Regulations ([Section 5-221](#)) ban the purchase or sale of fuel oil (#2 fuel and lighter distillate oils) with a sulfur content greater than 15 ppm for heat or power generation. The prohibition on high sulfur fuel goes into effect on July 1, 2018. This applies to fuel dealers in Vermont **AND** out-of-state fuel dealers that sell within Vermont. The regulations also require sulfur content of #4 residual oil to not exceed 0.25% by weight and #5 and #6 residual fuel oil to not exceed 0.5% by weight.

The sale and use of high sulfur fuel oil is a Class III violation of Vermont law [10 V.S.A. Section 8003\(a\)](#). A Class III violation is subject to penalties of up to \$10,000 for the initial violation and up to \$4,000 for each day that the violation continues. Any fuel company marketing a high sulfur product in Vermont will be investigated by an officer with the Department of Environmental Conservation Compliance and Enforcement Division. The Vermont Agency of Natural Resources has several options available to verify compliance including review of distributor sales records, review of end user purchase records, and spot sampling of fuels either at the distributor or the end user.

Under EPA regulations 40 CFR 85.90(vi) and 40 CFR 85.90(vii)(c), the product description must be included on delivery tickets. While there are several approved versions of required product language for heating oil, the language noted below is the *shortest in length*.

**Dyed Unmarked Heating Oil:
Not for use in highway, non-road, locomotive or marine engines.**

The disclosure of sulfur content on heating oil delivery tickets is not required by federal or state law. While the state of Vermont can assess fines against companies for selling high sulfur fuel, there are no penalties for failure to put the sulfur content on a heating oil delivery ticket. If a fuel dealer wants to label heating oil delivery tickets to acknowledge the low sulfur specification, an example is provided below.

**Dyed Unmarked Heating Oil, 15 ppm sulfur (maximum):
Not for use in highway, non-road, locomotive or marine engines.**

All off-road (dyed) diesel must meet the federal standard of 15 ppm. Shipping papers and delivery tickets are required by the U.S. Environmental Protection Agency (EPA) to contain specific language. Under EPA regulations 40 CFR 85.90(vi) and 40 CFR 85.90(vii)(c), the following product description must be included on delivery tickets for off-road diesel:

15-ppm sulfur dyed ULSD. Non-road or tax exempt use only.

The Benefits of Ultra-Low Sulfur Heating Oil

The requirement for Ultra-Low Sulfur Heating Oil (ULSHO) is consistent across the northeast. There are several environmental and health benefits of this cleaner burning heating fuel. The primary benefit of reduced sulfur is a reduction in air pollution, as 99% of burned sulfur becomes SO₂, a PM_{2.5} particulate that irritates lungs, contributes to pulmonary disease and creates haze. Now that the oilheat industry in the northeast has transitioned to an exclusively ultra-low sulfur fuel, thousands of tons of SO₂ emissions will be eliminated.

Consumers can also benefit from reduced heating costs, as ULSHO makes existing heating systems more efficient, reduces the need for system maintenance, and increases system longevity.¹ ULSHO will also allow the introduction of inexpensive condensing technologies currently in use in Europe and elsewhere that can increase Annual Fuel Utilization Efficiency (AFUE), which is a measure of how efficiently your boiler or furnace uses its fuel. ULSHO will also enable a wide variety of competitively-priced appliances with ratings in some cases well above 90 AFUE.²

More information about the benefits of ULSHO can be found at:

heatcleanvt.com

MAKING THE SWITCH HEATING CLEAN



Vermont's oilheat companies now deliver only the cleanest and most efficient oilheat.

As of July 1, only Ultra-Low Sulfur Heating Oil (ULSHO) can be sold in Vermont.

Why It Matters

CLEANER AIR ULSHO eliminates particulate emissions, including sulfur dioxide and nitrogen oxide.

GREATER SAVINGS Heating clean means saving money. Oilheat equipment operates more efficiently on ULSHO.

RENEWABLE BLENDS ULSHO blended with renewable biodiesel can be used with existing equipment and tanks.

More than half of Vermont homes and businesses choose oilheat to keep them safe and warm.

Vermont's new clean fuel standards will help save money and the environment.

Learn more at heatcleanvt.com



VFDA **BIOHEAT** **NORA**
vermontfuel.com THE EVOLUTION OF OILHEAT NATIONAL OILHEAT RESEARCH ALLIANCE

¹ Source: the National Oilheat Research Alliance, 2009

² Benefits of Ultra-low Sulfur Heating Oil, Brookhaven National Laboratory. October 2009.



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AGENCY OF NATURAL RESOURCES

Vermont Mandated Fuel Oil Sulfur Content Reduction Effective July 1, 2018

Consistent with New England regional efforts, Vermont adopted regulations to lower the allowed sulfur content of fuel oils starting with an initial reduction in 2014 followed by a second reduction to occur in 2018. The initial reduction took effect on July 1, 2014 and lowered the allowed sulfur content of No.2 and lighter distillate oils sold within the state to a maximum of 0.05 percent by weight (500 ppm). The second reduction will take effect July 1, 2018 and will affect both distillate and residual oils sold after this date. Commencing July 1, 2018 the sulfur content of No.2 and lighter distillate oils sold within the state are not allowed to exceed 0.0015 percent by weight (15 ppm). Distillate fuel oils meeting the 0.0015% by weight sulfur limit are commonly referred to as ultra-low sulfur distillate (ULSD). Also commencing on July 1, 2018, the sulfur content of No.4 residual oil and No.5/No.6 residual fuel oil shall not exceed 0.25 percent by weight and 0.5 percent by weight, respectively.

As with the 2014 implementation date, fuel suppliers should ensure they have transitioned over to compliant fuels prior to July 1, 2018 in order to ensure that all fuel sold and delivered after this date are in compliance with the new sulfur levels. End users of the fuel oil are allowed to continue to store and use fuel oils stored on their premises after July 1, 2018 but may not purchase or receive fuel oils after this date that do not comply with the new 2018 sulfur levels.

You can find additional information on this issue and other gasoline and fuel oil air related regulations on our website at:

<http://dec.vermont.gov/air-quality/permits/source-categories/bulk-gasoline-and-dispensing-facilities>

