

PRODUCT STEWARDSHIP SUMMARY

OFF ROAD ADDITIVES

Introduction

Afton Chemical Corporation's family of driveline additives includes additives for off-road vehicles. These include universal additives for the agricultural segment and high performance additives for the construction and mining segments. Our off-road additives are formulated to meet specific customer needs for quality, performance, marketable claims, base stock compatibility, environmental responsibility and cost efficiency. Whether it is agriculture, construction, mining or one of a variety of many other off-road jobs, our products help to get more from the machinery by improving performance and extending parts life.

Uses and Advantages

Afton Chemical Corporation's off-road vehicle additives are designed to formulate fluids that meet the needs of the transmissions, hydraulics, and axles/wet brakes used in modern agricultural, construction, and mining equipment. The robust phosphorous chemistry safeguards the gears against extreme pressure and wear under severely loaded operating conditions. Sludge and varnish formation is reduced in order to keep the moving parts clean in the presence of elevated temperatures and during severe, long term operation. The additives are also designed to eliminate rust, corrosion and the formation of deposits that may compromise performance of the transmission or axle. Afton has also balanced the friction systems in the additives for robust friction stability in wet brake, pump and transmission performance.

- Gear protection under extreme pressure
- Excellent friction durability performance
- Superior antiwear performance
- Resists deposit formation and breakdown from Heat and Oxidation
- Compatible with Commonly used Seal Materials
- Protects against yellow metal corrosion
- Potential for extended drain intervals
- Excellent thermal and oxidative stability
- Very good handling and pumpability
- Good foam suppression

Health Effects

These additives generally range from not classified as hazardous to human health to irritants. Health problems such as irritation of the skin and eyes are associated with excessive skin and airborne exposures to the additives.

Environmental Effects

These additives are generally classified as Harmful to the Environment. They may cause long-term adverse effects in the aquatic environment; some contain components which may be persistent in the environment.

Exposure

The extent of exposure can depend on the type of system (open or enclosed), adequacy of engineering controls, adequacy of fluid management measures and other workplace practices. Methods of avoiding direct contact with off road additives include wearing chemical resistant gloves, boots, safety eyewear, and appropriate respiratory protection as necessary. Adequate exhaust ventilation or other engineering controls should be provided to keep airborne concentrations of fumes, mists and vapors below their respective threshold limit value.

Risk Management

Off Road Additives are formulated to meet a wide range of performance requirements. The health and environmental risks of these products can vary depending on the product as well as the conditions encountered during their use. Information on the safe handling of these products is provided to users through the provision of safety data sheets. Appropriate engineering controls, work practices and personal protective equipment are needed to control exposures during manufacture and use.

Conclusion

Afton's additives deliver superior performance across driveline applications by reducing end user costs, enhancing reliability and increasing durability of their off road additives. Afton is committed to providing its customers with the information they need to responsibly manage any health and environmental risks associated with the intended use of Afton products.

For additional information, contact us at:

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