PRODUCT STEWARDSHIP SUMMARY
INDUSTRIAL GEAR OIL ADDITIVES

Introduction
Afton’s Industrial Gear Oil Additives are designed for the formulation of quality industrial gear oils, providing wear, corrosion and oxidation protection. Many lubricants formulated with Afton’s Industrial Gear Oil Additives retain a high level of phosphorus content throughout the life of the oil, thus providing long term wear protection. These additives are designed to meet or exceed all major OEM and industry organization specifications.

Uses and Advantages
Industrial Gear Oil Additives are developed to provide protection in industrial gearboxes, while also reducing oil consumption, operating and manpower cost and the impact on the environment. Advantages to using these additives are:

- Clean-gear performance under high temperature conditions
- EP protection and durability
- Retains phosphorus, ensuring extended wear protection
- Low chlorine content in blended industrial gear oils

Health Effects
Industrial Gear oil packages can cause adverse health effects through skin contact or through inhalation of sprays, mist, fumes, or aerosols. Health effects vary depending on the specific components in the Gear package, but may include irritation of eyes, skin and respiratory tract. There is also a chance of skin sensitization associated with some Industrial Gear Oil Additives.

Environmental Effects
Because of the long-chain alkyl amine present in some of these additives, many are considered toxic to aquatic organisms and may cause long term adverse effects in the aquatic environment. Some may contain components that may be persistent in the environment.

Exposure
Typically, worker exposure is managed with the following:

Industrial Use Exposure:
- Exhaust ventilation or other engineering controls to keep airborne concentrations of fumes, mists and vapors below their respective threshold
- Safety glasses with side shields, chemical resistant gloves, appropriate respiratory protection
- Good industrial hygiene practices and management
Commercial Use Exposure:
Industrial Gear Oil Additives are mainly targeted for the commercial sector. These are generally used as finished fluids and operate in a closed system. The total concentration of the hazardous materials in the additive package is significantly reduced in the finished fluid. The risks associated with the hazards from the additive package components are mitigated as direct exposure is low.

Risk Management
Industrial Gear Oil Additives may contain hazardous components at different concentrations across the portfolio. The primary hazards are associated with the long-chain alkyl amine found in many of the products. Depending on the product, there may be physical, health, or environmental hazards, and the risks are managed through the supply chain to ensure adequate protection for our employees, customers, consumers, and the environment. Information on the safe handling of these products is provided via the Safety Data Sheet (SDS). Appropriate engineering controls, work practices and PPE are required to control exposure during manufacturing and use.

Conclusion
Industrial gearboxes are increasing in power density, getting smaller in size while maintaining or increasing their output and performance. Protection technology is crucial. By providing improved resistance against pitting and general gear and bearing fatigue, Afton’s Industrial Gear Oil Additives are extending the life and improving the efficiency of today’s high performance gearboxes. 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.