

Durad 150B

As a very effective anti-wear and friction reducing agent, Durad 150B can be used to extend equipment life and reduce energy consumption. It can also improve the performance of other phosphorus-, sulfur- or chlorine-based extreme pressure additives. Durad 150B exhibits excellent solubility in mineral oil and synthetic base fluids, including the more difficult base fluids such as polyalphaolefins (PAOs) and silicones. Unlike other chemical types of anti-wear additive agents, Durad 150B contains no metallic elements and, thus, does not contribute any ash to the lubricant formulation. Durad 150B contains no chlorine. Durad 150B is easy to pump, mix and store at ambient temperatures. It also has low odor, low volatility and low skin irritation, thus minimizing plant handling and blending operation concerns. It is non-corrosive and non-staining to most metals and will not darken the color of the finished fluid.

Durad 150B has the capability to show multi-functional capabilities in providing metal surface passivation and anti-oxidant benefits, and it provides a controlled amount of desirable seal swell in the fully-formulated lubricant. Durad 150B is registered on all major worldwide chemical inventories.

Identification

Product Name: Durad 150B

• Substance Name: Phenol, isobutylenated phosphate 3:1, [Triphenyl phosphate>25%] Durad 150B is a synthetic butyl phenyl phosphate. It is classified in the lubricant industry as a triaryl phosphate.

CAS #: 68937-40-6EINECS #: 273-065-8

Description

Durad 150B is a lubricant additive supplied to professional users only. The applications it is used in include - but are not restricted to - compressor oils, hydraulic fluids, metal working fluids and greases.

At typical concentrations of up to 4%, Durad 150B improves the performance of industrial lubricants by providing friction reduction and wear control in high-load boundary lubrication conditions. As a multi-functional additive when used at higher treat rates of ~5%, it can also act as an effective additive solubilizer and can provide anti-oxidant benefits.

Last Revised: March 2015 Page 1 of 3

Physical/Chemical Properties:

Durad 150B is a colorless and odorless liquid. It is insoluble in water. Durad 150B has a specific gravity higher than water. It is stable under normal conditions as it has a high flash point (243° C) and high ignition temperature (535° C). It has no known hazardous reactions under conditions of normal and intended use.

Health Effects:

Avoid contact with skin, eyes, and clothing. Use with adequate ventilation, so as not to breathe vapor or mist. Material may have sensitizing effects, so repeat exposures are to be avoided. The material's triphenyl phosphate component has established workplace exposure limits of 3 mg/m3 (established by ACGIH & OSHA).

Potential Environmental Impact

Durad 150B is very toxic to aquatic life, and as such, is classified as a marine pollutant. It may cause long-term adverse effects in the aquatic environment. Avoid spills to prevent entry into surface water, sewer systems, and waterways. The material is readily biodegradable, but it is not considered persistent nor very bioaccumulating.

Product Stewardship:

It is important to refer to the Safety Data Sheet and information contained on the container label. All containers are to be kept tightly closed and stored in a dry, well-ventilated location. Exposure can be controlled through the use of personal protective equipment: proper gloves, clothing covering arms and legs, goggles, and engineering controls to provide proper ventilation. If there is insufficient ventilation, suitable respiratory equipment is to be worn. Product disposal and container disposal must be done through an approved waste disposal facility.

LANXESS Solutions US Inc. conducts an ongoing analysis of its products to evaluate potential risk areas throughout the product's life cycle. Chemical risks are identified at the very early stage of new products. They are evaluated by stage-gated reviews using environmental, health, and safety (EHS) criteria. The analysis of existing products will evaluate raw materials, manufacturing, transportation, customer end-use and disposal. Additionally, before changes in existing product formulations are made, a detailed evaluation is made of the proposed change. A critical component of all of these processes is the Safety Data Sheet, which lists detailed product hazard information. Potential product are reviewed according to current controls. In the context of a continually improving risk-reduction program, periodic reviews of current controls occur in order to identify

Last Revised: March 2015 Page 2 of 3

opportunities for improvements or enhancements. This includes adaption of existing procedures to changes in regulations (e.g., covering workplace and transportation).

Exposure Potential:

Worker exposure routes can be through inhalation and dermal contact while handling the additive. Exposure potential is typically much less in formulated products containing Durad 150B. Environmental exposure can be through spillage into waterways if not contained by absorbing on inert material such as sand, earth, or vermiculite. All cleanup of these absorbants is done by placing into suitable containers and following proper disposal practices.

Contact Information

For more information, please contact us by our web site: http://www.LANXESS.com

Notices

Use and Application Information

The manner in which you use and the purpose to which you put and utilize our products, technical assistance and information (whether verbal, written or by way of production evaluations), including any suggested formulations and recommendations are beyond our control. Therefore, it is imperative that you test our products, technical assistance and information to determine to your own satisfaction whether they are suitable for your intended uses and applications. This application-specific analysis must at least include testing to determine suitability from a technical as well as health, safety, and environmental standpoint. Such testing has not necessarily been done by us. Unless we otherwise agree in writing, all products are sold strictly pursuant to the terms of our standard conditions of sale. All information and technical assistance is given without warranty or guarantee and is subject to change without notice. It is expressly understood and agreed that you assume and hereby expressly release us from all liability, in tort, contract or otherwise, incurred in connection with the use of our products, technical assistance, and information. Any statement or recommendation not contained herein is unauthorized and shall not bind us. Nothing herein shall be construed as a recommendation to use any product in conflict with patents covering any material or its use. No license is implied or in fact granted under the claims of any patent.

Last Revised: March 2015 Page 3 of 3