



Barrierta IEL/V Grease

(Klüber Lubrication North America – Barrierta IEL/V)

MATERIAL SAFETY DATA SHEET

VARIAN Part Numbers - PTSS0600MK
PTSS0300MK
PTSS0600TK
PTSS0300TK

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Material Safety Data Sheet

Product name: **BARRIERTA IELV**

Date: September 1998

Replaces: July 1995

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Section I

Company: Klüber Lubrication North America L.P.

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Article Nr.: 320099

Product Use: High Temperature Lubricating Grease (Fluoride Base)

Section II - Hazardous Ingredients

Hazardous ingredients	CAS no.	wt.%	TLV	PEL
PTFE	Proprietary	Proprietary	N/A	N/A
Magnesium-oxide	Proprietary	Proprietary	N/A	N/A
Benzotriazole	Proprietary	Proprietary	N/A	N/A

Section III - Other Ingredients (Trade Secret)

Ingredients	CAS no.	wt.%	TLV	PEL
Perfluoroether oil	Proprietary	Proprietary	N/A	N/A

Section IV - Physical Data

Boiling point (°C): N/Av

Vapor pressure (at 20°C): Very little

Vapor Density (air=1): N/Av

Solubility in water: insoluble

Specific gravity (H₂O=1): ~1.9

Percent volatile by volume (%): 0

Percent solid by weight (%): <30

Evaporation rate (Butyl acetate=1): N/Av

pH: 7

Appearance and odor: white paste with a neutral odor

Section V - Fire and Explosion Hazard Data

Flash point: N/A

Lower explosion limit: N/A

Upper explosion limit: N/A

Extinguishing media: The product itself does not burn. Use media appropriate for the environment.

Unusual fire and explosion hazards: The product itself is not flammable, but it may produce toxic fumes. See Section VIII.

Special fire Fighting Procedures: If material is heated to extremes during a fire, wear a self-contained breathing apparatus.



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Section VI - Health Hazard Data

Toxicological information from products of similar composition

Acute toxicity : LD50/oral/rat = > 37.4 g/kg (perfluoropolyether)

Eye Contact: May cause mild irritation on direct contact.

Skin contact: Prolonged or repeated contact may cause the removal of skin oils, possibly leading to irritation and/or dermatitis.

Inhalation: Not applicable under conditions of normal use.

Ingestion: Obtain medical attention immediately. Do not induce vomiting, unless instructed by a physician. Never give anything by mouth to an unconscious person.

Section VII - Emergency and First Aid Procedures

After inhalation: Not applicable under normal conditions of use. However, under conditions described in Section VIII, remove the individual to fresh air. Provide artificial respiration if necessary.

After contact with skin: Wash off with soap and plenty of water. Apply skin cream if necessary. Seek medical attention if irritation or infection occurs. Remove contaminated clothing.

After contact with eyes: Flush with plenty of water. If irritation persists, or if an infection develops, seek medical attention.

After ingestion: If large amounts are swallowed, do not induce vomiting. Get medical attention.

Advice to doctor: Treat symptomatically.

Section VIII - Reactivity Data

Stability: Stable

Conditions to avoid: Open flames and other sources of heat.

Materials to avoid: AlCl_3 , SbF_3 , CoF_3 . Aluminum, titanium and their alloys, may cause a lower decomposition temperature, increasing the likelihood of the conditions described below.

Hazardous decomposition products: At temperatures $>280^\circ\text{C}$, the product may thermally decompose to a fluorocarbon chain in the air leading to formation of oxidized products containing carbon, fluorine, and oxygen. Because these products decompose in part by hydrolysis in alkaline solution, they can be quantitatively determined in air as fluoride to provide an index of exposure. No TLVs are recommended at this time, but air concentration should be controlled as low as possible.

Section IX - Spill or Leak Procedures

Steps to be taken in case material is released or spilled

Scoop up material and add absorbent if necessary. Collect product and absorbent, place in a chemical waste container. Keep product out of waterways.

Waste disposal method

Recovered lubricant must be disposed of or reclaimed in compliance with all federal, state and local regulations. Do not dump into sewers, on the ground, or into any body of water. If incinerated, ensure that the incinerator is designed to burn fluorine containing materials. See Section XII.



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Section X - Special Protection Information

Respiratory protection: No special protective equipment required under normal conditions of use.

Hand protection: Wear impervious gloves.

Eye protection: Wear safety glasses. Do not wear contact lenses when working with chemicals.

Body protection: Wear clean, body-covering clothing to minimize dermal exposure.

Ventilation: Under normal conditions of use, no special ventilation required. However, if process heats the product above 200C, use local exhaust ventilation.

Other protection measures: Safety showers, eye wash fountains, and washing facilities should be readily available.

Section XI - Special Precautions for Handling and Storage

Avoid prolonged and/or repeated contact with skin. Remove soiled or soaked clothing immediately. Clean skin thoroughly after work; apply skin cream. Wash hands with soap and water before eating, drinking, and/or smoking. Do not store together with food.

Store at room temperature in the original container. This product should not be stored near extreme heat sources nor ignition sources.

Section XII- Additional Information

PTFE is listed as a hazardous substance in the state regulated substance in the state of Pennsylvania.

Magnesium-oxide is a regulated substance in the state of New Jersey and must be disclosed in concentrations >1% under WHMIS.

Benzotriazole is a listed substance in the state of Massachusetts. This substance has also been selected for a general toxicology study under the National Toxicology Program (NTP).

<u>HMIS Rating</u>		<u>NFPA Rating</u>	
Health:	1	Health:	2
Flammability:	1	Flammability:	1
Reactivity:	0	Reactivity:	0
Protective Equipment:	B	Special:	N/A

Under RCRA, it is the responsibility of the user of products to determine, at the time of disposal, whether the product meets any of the criteria for a hazardous waste. Conditions may render the spent product as hazardous, under the criteria for characteristics of hazardous waste under EPA CFR 40, 261.20.

Not hazardous by D.O.T. regulations.

The information herein is given in good faith, but without warranty, express or implied. All risks of use of the product are therefore assumed by the user. Appropriate warnings and safe handling procedures must be provided to handlers and users.