

Total Lubricants USA, Inc.

Glass Products Division
5 North Stiles Street
Linden, New Jersey 07036
U.S.A.

Date: 12/7/2005

Telephone (908) 862-7344

FAX (908) 862-5374

Revised 5/10/99

Product Name: Glass Lube DS

Product code: 000456

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1. Description of substance/preparation and company

Substance/preparation:

Description/trade name: Glass-Lube DS (Graphite Precoat)

Product code: 000456

Producer/supplier:

Name: ELNA International

Telephone No.: (908) 862-7344

Street/post box: 5 North Stiles Street

PLZ/town: Linden, New Jersey 07036 USA

FAX No.: (908) 862-5374

Contact: Mr. Chris Fensham

Emergency No.: (908) 862-7344

2. Composition/components

Chemical characterization:

Aqueous mixture containing orthophosphoric acid and graphite.

Dangerous Components: Orthophosphoric acid, 10-15 %
(CAS No. 7664-38-2, EEC No. 231-663-2)

Additional Comments: Irritant, Xi.

3. Possible dangers

Description of dangers: Irritant

Special comments for human being and environment: Primary route of exposure is skin contact.

- Skin contact: Prolonged skin contact may cause irritation.
- Ingestion: Can cause gastrointestinal irritation, nausea, vomiting, and diarrhea.
- Eye contact: Can cause eye irritation and redness of the eye.
- Inhalation: May cause breathing discomfort and irritation of the mucous membranes. Long term inhalation may result in silicosis or pneumoconiosis.

4. First-Aid

General comments: Remove contaminated clothing and shoes.

Inhalation: Remove person to fresh air. If effects persist, obtain medical advice.

Skin contact: Remove contaminated clothing and wash with soap and water.

Eye contact: Immediately Flush eyes with plenty of water for at least 15 minutes or until irritation subsides. If irritation persists, call a physician.

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Ingestion: Do not induce vomiting. Give large amounts of water or milk to person. Never give anything by mouth to an unconscious person. Call a physician or transport to an emergency facility.

Comments for physician: Describe symptoms, quantity and way of incorporation. Point out the danger of income of product in the lungs on vomiting.

5. Measures of fire fighting

Extinguishing media: Foam, water spray (fog), dry chemical, carbon dioxide.

Not suitable: N/A

Special dangers by the product/preparation itself, by products of combustion or by resultant gases: Resultant decomposition products include fumes, smoke, oxides of phosphorous and carbon, and other decomposition products in case of incomplete combustion.

Special equipment on fire fighting: Use self contained breathing apparatus (pressure demand MSHA/NIOSH approved or equivalent) and full fire fighting turn out gear in fighting fires near or involving the product. Thoroughly decontaminate fire fighting equipment after use.

Additional comments: Use water spray to keep fire-exposed containers cool. Graphite may cause slippery conditions. Water froth may be used to flush spills away from exposure. Retain contaminated water for fire fighting separately.

6. Measures on unintentional release

Personnel measures:

- Avoid contact with skin and eyes, do not breathe in vapors/aerosols/products of decomposition.
- Spilled product may cause slippery conditions.

Environmental measures:

- Keep product out of ground water, watercourses or sewage plants.
- Point out to the authorities, when the product came into ground water, watercourses or canalization or has contaminated the ground.

Procedure of purification/absorption:

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- After release absorb with suitable material (e.g. sand, sawdust). Dispose contaminated absorbent (see capt. 13). Clean contaminated areas thoroughly. Wash floor with soap and water.

Additional comments:

- Avoid contact with reactive metals, sulfur or sulfur compounds, and strong oxidizing materials.
- Dispose mixtures with water (see capt. 13).

7. Handling and storage

Handling:

Comments for safe handling:

- Avoid or minimize the formation of vapors/aerosols.
- On formation of vapors/aerosols/products of decomposition handle with adequate ventilation.
- Avoid to spill the product.
- Use with adequate personal protective equipment.

Comments on protection of fire and explosions:

- Avoid contact with heat, flames and other ignition sources.
- On mixing with oxidizing substances danger of inflammation and explosions!

Storage:

Requirements on storage rooms and containers:

- Keep containers cool, far from heat, sparks, flames, other ignition sources. Avoid contact with oxidizing substances; keep not used containers tightly closed.

Comments on storage together: Do not store with food, drinks, and animal food.

Additional comments:

- Avoid income in the ground safely.
- Empty not cleaned containers with residues of substances or vapors are a sources of dangers.

8. Limitation of exposition and personal protection

Additional comments on arrangement of technical equipment: See capt. 7.

Components with exposure limits in relation to the working place:

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CAS-No.	Description	Type of Limit	Value	Unit
7664-38-2	Orthophosphoric acid	TLV/PEL	1.0	mg/m ³
7782-42-5	Graphite	TLV/PEL	2.0	mg/m ³

TLV = Threshold Limit Value, PEL = Permissible Exposure Limit

Personal protection:**Respiratory requirements:**

- On formation of vapors/aerosols and if limit values are possibly exceeded in small rooms take breathing apparatus with filter type suitable filter. (for additional information see capt. 16).

Hand protection: Use chemical resistant gloves, if needed.

Eye protection: Use chemical goggles or face shield when eye contact may occur.

Body protection: Use chemical resistant apron or other impervious clothing, if needed.

Measures for protection and hygiene:

- Avoid contact with skin and eyes, do not breathe in vapors/aerosols/products of decomposition.
- Remove immediately contaminated clothing and shoes.
- Clean skin thoroughly after contact, before breaks and at end of work period; product is readily removed from skin by washing thoroughly with soap and water.
- As a precaution cream the hands with special cream for skin protection.
- Do not eat, drink and smoke in working place.

9. Physical and chemical properties**Appearance:**

Form: Liquid.

Color: Black.

Odor: Low.

Acknowledgments:**Safety data:**

pH-value (delivery state): (20°C)

n/e

pH-value (0.1M solution, water @ 20°C)

n/e

-

Melting point/range:

n/e

°C

Boiling point/range: Initial, approximate

100

°C

Flash Point:

n/a

°C

ASTM D-56

Ignition temperature:

n/e

°C

Flammability:

-

-

Autoignition:

-

-

Oxidizing properties:

-

-

Explosion limits:

n/e

vol. %

Vapor pressure: (25°C)

n/e

mm Hg (Air = 1)

Density: (20°C)

>1.0

g/cm³

Solubility in water: (20°C)

100%

g/l

Soluble in water.

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Solubility in solvent:	(20°C)	n/e	g/l
Solubility in fad:	(20°C)	n/e	g/l
Viscosity:	(20°C)	n/e	-
Content of organic solvent:		0	wt. %

Additional comments: 70 - 80% volatile.

10. Stability and reactivity

Avoid the following conditions:

- Keep the product far from heat, sparks, flames and other ignition sources!
- Do not heat over flash point - Danger of inflammation or explosions!

Avoid the following materials:

- Avoid contact with oxidizing substances - danger of inflammation or explosions!
- Avoid contact with reactive metals, sulfur or sulfur compounds.

Dangerous products of decomposition:

- On influence of fire or heat, formation of carbon monoxide, carbon dioxide, oxides of phosphorous, and other decomposition products in case of incomplete combustion.

Additional comments:

- Stable under normal conditions; no polymerization, no hazardous reaction with water (soluble in water).

11. Toxicological information

Toxicological tests:

Practical experience:

Observations relevant for classification:

- Acute toxicity: n/e
- Specific symptoms in animal experiment: n/e
- Irritating/corrosive effects: Can cause severe irritation to the skin and eye burns.
- Sensibilisation: n/a
- Effects after repeated or prolonged exposition: Can cause severe irritation to the skin.
- Carcinogenic influence: n/a
- Influence of genetic changes: n/a
- Influence on reproduction: n/a
- Further comments: Corrosive.

General acknowledgments: No.

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12. Ecological information

Measures of elimination (persistence and degradation):

Procedures/methods of analysis, yield of elimination: -

Text of valuation: -

Additional comments: No.

Behavior in environment: Avoid income of the product in environment.

Mobility: n/e

Potential of bio-accumulation: n/e

Additional comments: No.

Eco-toxical influence:

Toxicity in water: n/e

Influence on sewage plants: Not known, product is soluble in water.

Inhibition of fermentation of municipal sludge: n/e

Additional comments: No.

Additional comments on ecology:

CSB-value: n/e mg O₂/g

RSB0-value: n/e mg/O₂/g

AOX-information: Contains no organic bonded halogen.

Materials in according to EG law: Orthophosphoric acid.

General comments: Irritant.

13. Comments on waste disposal

Product: Reuse or dispose.

Recommendation: No.

Waste key No./Name: n/e

Recommended remedy for purification: Water and surface active agents.

14. Comments on transportation

Transportation on land:

ADR/RID/GGVS/GGVE:

Class: 8 (Corrosive)

Number/letter: UN 1805, PG III

Warning sign:

No. of danger: -

Substance No.: -

Name of the good: Phosphoric Acid Mixture

Comments: None

Transportation on inland waters: -

Maritime transportation: -

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Air transportation: -

Additional comments: Keep containers tightly closed.

15. Regulations

Labels

Letters: Xi

Nomination of danger: Irritant

Contains: Orthophosphoric acid.

R-sentence: R36/38

S-sentence: 39

Special labels: Irritant

National regulations

Restrictions of employment: -

Regulation in case of malfunction: -

Regulation on inflammable materials (VbF): -

Technical regulations air (TA LUFT): -

Classification on water hazards (WGK): -

Other regulations, restrictions and regulations of prohibition: -

16. Additional comments

Additional comments:

Educations: -

Recommended use: This product is destined only for industry use.

See technical bulletin.

Recommended restrictions: -

Additional information: -

Sources of data: -

Abbreviations: n/a = not applicable n/e = not established

Department which elaborated this data sheet: Luke McHale, Regulatory Manager,
Elf Lubricants North America, for the ELNA International Division.

Contact: See capt. 1.

The above information is accurate to the best of our knowledge. However, since data, safety standards, and government regulations are subject to change, and the conditions of

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handling and use, or misuse, are beyond our control, seller makes no warranty, either expressed or implied, with respect to the completeness or continuing accuracy of the information contained herein and disclaims all liability for reliance thereon. Users should satisfy themselves that they have all current data relevant to their particular use.

The safety data sheet of this product has been elaborated voluntarily. In according to TRGS 220 No. 4 Abs. 3 it subsides not the changing service. Nevertheless after an important change all our clients will get the revised version of the safety data sheet.