Safety data sheet in accordance with VO (EC) No. 1907/2006 (REACH-V) Annex II and proclamation 220 - Safety data sheet

1. Substance / preparation and company name

Designation of the substance or the preparation

Article designation: **Electronically controlled lubricator type 125 and type 475 cm³**

Application: The solid-state control lubricant dispensers (tins) are pressure presses for the automatic lubrication (of for example bearings and other machine parts that have to be constantly lubricated). The pressure for the pressure press is built up electronically by a dosed and beforehand via an electrical circuit chosen electrolysis of a solution of different chemicals (see below) in the nitrogen chamber, developing nitrogen that displaces the lubricant with the help of a piston. The current supply is accomplished by 2 dry batteries with 1.5 V. A sophisticated electronics allows a pre-selection of different setting times according to lubricant requirements possible. The battery chamber is explosion-proof. The manual contains further information about the application and setting possibilities.

Information on the manufacturer / supplier

Company:

ATLANTA Antriebssysteme
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2. Constituents of the chemical and physical drive unit

Components	CAS No.	EG-index no.	Critical value for the industrial safety [TLV]	Information about the toxicology	Critical value for the industrial safety [TLV]	r-sets s-sets
potassium iodide	7681-11-0	053-001-00-3	natural salt, harmful by inhalation	hazardous to health LD50 (orally, Rat) 14000 mg/kg	Acute Tox. 4, Skin Irrit. 2, Eye Irrit. 2;	R22-36/38
Sodium citrate	6132-04-3	200-675-3	Not classified as dangerous	Not classified as dangerous	Skin Irrit. 2, Eye Irrit. 2;	--/--
Potassium thiocyanate	333-20-0	615-004-00-3	hazardous to health.	hazardous to health.	Xn hazardous to health	20/21/22-32 13
Ethylene glycol	107-21-1	603-027-00-1	26 mg/m³ danger of skin resorption	LD50 (orally, Rat) 4700 mg/kg	Xn hazardous to health	22 --/--

A drive cartridge of the lubricant dispenser contains on the whole approx. 15 g of the abovementioned solution, hermetically enclosed by a polypropylene hide and absorbed in a solid sponge. In the event of puncture or wanton only up to about 2 ml of liquid leak from the unit!

3. Physical and chemical properties

Chemical characterization:

Appearance, smell:	clear, colourless, watery liquid with a faint, indistinct sulphur smell
Boiling point:	104°C
Vapour pressure:	15 mm Hg at 20°C
Mass gravity:	1.14
% volatile:	80 vol%
Vapour density:	approx. 1 (like air)
pH:	9
Solubility in water:	infinite
Evaporation rate:	as for water

4. Fire and explosion hazard

Flammability:	not flammable
Flash point:	-
Auto-ignition temperature:	-
Extinguishing media:	-

In the event of fire that is sustained by external sources wear full breathing protection and protective clothing.

Sensitivity to impact:	none
Sensitivity to static:	none
Charge:	none
Flammability:	not explosive

Above 60°C, nitrogen slowly develops. Above 150°C, rapid decomposition, which also gives rise to toxic fumes.

Forms explosive compounds with heavy metals and their salts (for example lead, silver, copper, mercury). Explosive decomposition with hypochlorites.

5. Reactivity / stability

Stability under normal circumstances:	stable
Conditions to avoid:	temperatures above 100°C contamination inside the nitrogen chamber with heavy metals and their salts contact of the nitrogen chamber filling with chlorine and hypochlorites contact of the nitrogen chamber filling with acids
Hazardous decomposition products:	oxidative decomposition above about 150°C gives sulphur dioxide, nitrogen oxide, formaldehyde, methyl mercaptan, hydrogen cyanide, hydrogen iodide, sodium oxide and potassium oxide contact with the acid leads to the development of instable hydrogen azide and instable thiocyanate acid and/or isothiocyanate acid
Hazardous polymerisation:	none
Relevant R-phrases:	T+: highly toxic; R 28: Very toxic if swallowed; R 32: Contact with acids liberates very toxic gas N: Dangerous for the environment R 51/53: Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

6. First aid measures / Health hazards

Exposure:	A drive cartridge of the lubricant dispenser contains on the whole approx. 15 g of the abovementioned solution, hermetically enclosed by a polypropylene hide and absorbed in a solid sponge. In the event of puncture or wanton only up to about 2 ml of liquid leak from the unit. Only if this is the case, the following exposition hazards can occur:
Eye contact:	irritation, redness
Skin contact:	irritation absorption through the skin by continuous contact causes azide poisoning which leads progressively to headache, dizziness, nausea and eventually collapse
Inhalation:	vapours or mist may irritate the respiratory tract continuous inhalation of weak vapours over several hours may lead to mild symptoms of azide poisoning inhalation of vapours lead to severe poisoning symptoms when swallowed
Carcinogenicity:	not present
Mutagenicity:	probably mutagenic

First aid measures with

Eye contact:	irrigate with water for at least 15 minutes contact eye specialist
Skin contact:	wash affected parts thoroughly with water remove contaminated clothing consult a doctor with longer skin contact
Inhalation:	take to open air immediately
swallowing:	wash mouth thoroughly with water give plenty of water to drink bring about vomiting

7. Accidental release measures / Leakages

If the lubricant dispenser is handled duly and as directed, there originate no dangers whatsoever from the constituents of the drive unit for the electro-pneumatic pressure generation, because the dispenser is situated hermetically-welded in a gas and liquid-tight, strong polypropylene hide which is itself enclosed in a strong plastic housing.

Only in the case of unintended damaging or malicious opening, a maximum of 2 ml of the liquid can leak, because all the liquid is absorbed in a sponge. If such a case occurs, proceed as follows:

Absorbing/cleaning:	wear appropriate personal protective gear (protective gloves, preferably of butyl rubber, and protective glasses) absorb liquid in porous medium (e.g. vermiculite, a sheet silicate or dry sand) do not use metal containers or metal tools for absorption! clean with a mild alkali solution, e.g. sodium bicarbonate
Disposal:	dispose of contaminated absorption materials, e.g. as appliances or absorption masses contaminated with chemicals ask the authorized person for disposal matters in your company!

If mist occurs, it is recommended to use a dust filter and to ventilate properly.

8. Storage / handling

Store the Electro-Lube lubricant tins in a storeroom with a room temperature below 40°C. Do not store the units together with acids and heavy metal salts to avoid hazardous reactions in case of unintentional damage or leakages!

9. Disposal of the used cartridges

Parts like the circuit board, the cylinder housing and the lid of the used lubricant dispenser are reusable. The battery nitrogen chamber as the drive unit has to be installed anew.

Dispose of the dry batteries, the printed wiring board with the micro-switch, the housing and the drive unit in accordance with the person responsible for the waste disposal, the waste disposal company and/or the local waste disposal authority.

Recommendations:
Dry batteries previous indication

German LAGA code LAGA indication
[LAGA=Federal working group waste disposal]
(35325) dry batteries (dry cells)

LAGA origin
manufacturing of batteries, distribution and application

LAGA waste disposal certificate
SAD (1), UTD (2)
[SAD=hazardous waste disposal site, UTD=underground disposal site]

Whole cartridge without battery previous indication

German LAGA code LAGA indication
(54209) solid appliances contaminated with grease and oil

LAGA origin
petrol stations, garages, commercial businesses

LAGA waste disposal certificate
SAV (1), HMV (2)
[SAV=hazardous waste combustion, HMV=domestic waste combustion plant]

Circuit board:
electronic industry waste

10. Other informations

Safety Data Sheet created by Dr. Dietmar Wange

Product Service

This information is based on present level of our knowledge and serves to describe the product with regard to appropriate safety precautions in the workplace. Make no guarantee of the properties of the product described dar. In the case of the occurrence of unanticipated effects or properties of this product is the safety not a substitute for consultation of trained professionals.

Literature used:

N. Irving-Sax “Dangerous Properties of Industrial Materials”, Van Nostrand Reinhold Comp., New York

Safety data sheets of the individual substances from the catalogue of the company Merck, CD-Rom version of the safety data sheets for laboratory chemicals, version D-A-CH 1998/1

The information and notes on safety in this data sheet are provided in good faith and are based on the present level of knowledge