## unilube MICRO LUBRICATION

EC	-MATERIAL SAFETY DATA SHEET	Page : 1/ Date : 01.01.201 Revision :			
1	Identification of the substance/preparation and company				
1.1	Trade name UNILUB 2032				
1.2	<b>Use/application</b> Non-water soluble, high performance lubricant. The product is intended for direct use in case of minimal lubrication systems by means of locally delimited microscopic lubrication film application; standard ventilation of the facility is regarded as sufficient.				
1.3	<b>Manufacturer/Supplier</b> UNILUBE AG, Minimalschmiertechnik, Bächlistrasse 14 a, CH-8280 Kreuzlingen / Switzerland Telephone-No. +41-71 672 65 22 / Fax-No. +41-71 672 65 32 / Web www.unilube.ch				
1.4	Information service Application technology : Herr A. Brecht, DiplIng. (FH) Product safety : Herr W. Holweger, Dr. DiplChem. Telephone-No. +41-71 672 65 22 / Fax-No. +41-71 672 65 32 / E-Mail info@unilube.ch				
2	Hazards identification				
2.1	Indication of danger No hazardous contents in accordance with Regulation 1272/2008/EC. Not classified as hazardous in accordance with Directive 67/548/EEC.				
2.2	Special hazard information for humans and the environment Assuming intended use, this product is not classifiable as hazardous for humans and the environment. Refer to Section 8 for personal protection.				
3	Composition/Information on ingredients				
3.1	Chemical characterization Preparation (mixture of materials)				
3.2	Chemical characterization of the preparation Mixture of esters, manufactured from natural fatty acids (> C16) and sterically hindered alcohols.				
3.3	<b>Components not included in the product</b> The product is free of mineral oil and PCB/PCT, it does not contain any amines, boron, chlorine, nitrate, nitrite, phoshorus, sulfur, silicon, heavy metals or heavy metal compounds. For further details see Section 15.6.				
4	First-aid measures				
4.1	General guidelines				
4.2	Remove contaminated clothing immediately. If inhaled				
4.3	Remove victim to fresh air and make sure victim is comfortable. Consult a doctor in case of symptoms.				
	Wash affected skin immediately with soap and water.				
4.4	If in eyes In case of eye contact, rinse eyes immediately with plenty of water. Consult a doctor in case of symptoms.				
4.5	If swallowed Do not induce vomiting; rinse out mouth thoroughly and consult a doctor.				
5	Fire-fighting measures				
5.1	<b>Extinguishing Media</b> Foam, fire-fighting powder, carbon dioxid (CO <sub>2</sub> ), sand				
5.2	Unsafe extinguishing material Water jet				
5.3	Special hazards caused by the product, its preparation, its combustion products gases formed	or any			
	Assuming intended use, the product is not classifiable as hazardous. For gases see Se	ection 5.4.			
5.4	Special protective measures for fire-fighters Explosion and combustion gases must not be inhaled.				
5.5	Additional information Water spray can be used for cooling of unaffected containers. For further details see S	ection 5.2.			

EC-M/	ATERIAL SAFETY DATA SHEET UNILUB 2032	Page : 2/4 Date : 01.01.2012 Revision : 2			
6	Accidental release measures				
6.1	General guidelines				
	If large quantities escape, inform the fire service.				
6.2	Personal precautions				
	Spilled product can be slippery.				
6.3	Environmental protection measures				
	Prevent spreading (e.g., by use of spill barriers). Must not be allowed to enter the substrate/soil/bodies of water/sewers/groundwater/e	tc			
6.4	Procedure for cleaning/collection				
	Soak up using an absorbent (e.g., oil-binding agent, sawdust). Remove from water surface (skimming, pumping).				
7	Handling and storage				
7.1	Handling				
7.1.1	Safety Informations				
	No specific measures required in case of intended use. Avoid formation of oil spray.				
7.1.2	Fire and explosion protection				
	No specific measures required. Hot product forms flammable gases/vapors.				
7.2	Storage				
7.2.1	Storage room and container requirements				
	Avoid penetration into the soil. Use only approved containers (as supplied) and keep containers tightly sealed.				
7.2.2	Restrictions on combined storage				
	Do not store with animal foodstuffs. Do not store with foodstuffs. Do not store with oxidizing agents.				
7.2.3	Further information regarding storage				
	Protect against heat/overheating and contamination. Recommended storage temperature : Room temperature (ca. 10 – 20 °C) Recommended shelf-life : Closed containers can be stored for up to 24 months	s under suitable conditions.			
8	Exposure controls and personal protection				
8.1	Additional information regarding the installation of engineering units				
	Observe the following German regulations or equivalent: Technical Rules for Hazardo Ordinance on Facilities Used for Containment, Handling and Filling of Substances Haza Technical Rules for Flammable Liquids (TRbF), the Water Resources Act (WHG) and th of the respective federal state.	ardous to Water (VAwS),			
8.2	Components with occupational levels that must be monitored None				
8.3	Personal protection equipment				
	The use of personal protection as per Sections 8.4, 8.5, 8.6 and 8.7 is recommended.				
8.4	Respiratory protection				
	Do not inhale vapors; use respiratory protection in cases of aerosol or spray formation	n.			
8.5	Hand protection				
	When handling, the use of oil-resistant, protective gloves made of nitrile rubber latex i	s recommend.			
8.6	Eye protection				
	Wear protective glasses in case of spray formation.				
8.7	General protection and hygiene measures				
	Avoid contact with eyes and skin. Remove soiled and soaked clothing immediately. Wash your hands before breaks and after finishing work. No food, drinks, or smoking Use cream for skin protection. Exercise due caution when handling chemicals.	on the job.			

EC-MA	TERIAL SAFETY DATA SHEET UNIL	UB 2032		Page : 3/4 Date : 01.01.2012 Revision: 2		
9	Physical and chemical properties					
9.1	Appearance					
9.1.1	Aggregate State	liquid				
9.1.2	Colour	yellow				
9.1.3	Odor	slight odor				
9.2	Relevant safety data	Value/range	Unit	Method		
9.2.1	State change: Pour point	< - 30	°C	DIN-ISO 3016		
9.2.2	Flashpoint	> 250	°C	DIN-ISO 2592		
9.2.3	Ignition temperature	not determined				
9.2.4	Spontaneous ignition	not determined				
9.2.5	Explosion hazard	not determined				
9.2.6	Explosive limits	not determined				
9.2.7	Vapor pressure	< 1	hPa			
9.2.8	Density (at 20 °C)	~ 0.91	g/cm <sup>3</sup>	DIN 51757		
9.2.9	Water solubility	not soluble				
9.2.10	Solubility in other solvents	soluble in most orga	nic solvents.			
9.2.11	<b>pH-value:</b> aqueous solution (at 20 °C)	5.6		Phase separation		
	Viscosity (at 20 °C) (at 40 °C)	not determined ~ 35	mm²/s	DIN 51562		
9.2.13	Solvent content	the product contains no solvents.				
10	Stability and reactivity					
10.1	Conditions to be avoid					
	Storage and reactions with oxidizing agents.					
10.2	Substances to be avoid					
	Oxidizing agents and reactions with acids and bases.					
10.3	Hazardous decomposition products					
	No hazardous decomposition products in case of intended use.					
10.4	Additional data					
	Thermal decomposition products are gases including carbon monoxide (CO), carbon dioxide (CO <sub>2</sub> ).					
11	Toxicology data					
11.1	Acute toxicity					
	LD 50 Rat oral	> 2'000 mg/kg body	weight			
11.2	Specific symptoms in animal tests	0 0	J			
11.2.1	Primary skin irritations	Classified as non irrit	tant (OECD-Metho	d 404)		
11.2.2	Primary eye irritation	Classified as modera				
11.3	Other data			<i>,</i>		
	Registration in Switzerland	SZID 182444 (material preparation ID. Number) for commercial use and non-hazardous.				
	Federal Ministry of Health (BAG), CH-3097 Liebefeld					
12	Ecology data					
12.1	Aquatic toxicity					
12.1.1	Biodegradability	Easily biodegradable	e (OECD-Method 3	01)		
12.1.2	Fish toxicity acute LC 50	> 100 mg Product/l (	-			
12.2	General information					
	Product must not enter the environment. C the sewage system.	contaminated wastewate	r must be treated b	pefore its discharge in		

EC-M	IATERIAL SAFETY DATA SHEET U	NILUB 2032		Page : 4/ Date : 01.01.201 Revision :		
13	Disposal information					
13.1	<b>Recommendation</b> After prior treatment of the hazardous waste, this must be introduced in a hazardous-waste-landfill or a hazardous waste incinerator, according to the hazardous waste regulations.					
13.2	Waste classification according to "I Waste code Waste name					
13.3	<b>Uncleaned packages</b> Packages that cannot be cleaned must be disposed of according to the corresponding applicable regulations.					
14	Transportation information					
14.1	<b>Regulations on transportation</b> The product is not hazardous with regard to national/international road-, rail-, ship-, and air transport.					
	The transport of the product is not associated with any particular conditions.					
14.2	Other Informations					
	Original filling in recycling containers	5 liters	25 liters	200 liters		
	UN-permit number	3H1/X/250/CH-2521	3H1/X/250/CH-2527	1A1/X/2.0/400/CH-2024		
15	Regulations					
15.1	Classification according to the EEC	-Directive				
	According to EC-directives/(hazardous		product does not need	to be labelled.		
15.2	Hazard classification	0 //	•			
	None					
15.3	Hazard determining components fo	r labelling				
10.0	None	laboling				
15.4	Special classification					
	The product is not subject to mandatory labelling in line with R- and S -phrases, special labelling of certain specified preparations, usability limits, Major Accidents Ordinance, VbF classification and the Technical Guidelines on Air Quality Control.					
15.5	Water hazard class					
	WHC	Product not hazardo	us to water (water haza 17.05.1999			
15.6	Directive 1999/13/EC (VOC)					
	The product does not contain any materials subject to the VOC ordinance.					
16	Other information					
16.1	Further information					
	Based on current experience and avai UNILUB 2032 is not associated with a discharge the user from his/her respor	ny human health hazard	d. The details provided			
	All details relate to the current state of These documents serve the purpose of and thus do not constitute an assurance	of describing our produc	ts from the point of view	w of safety requirements		
16.2	Issuing department of MSDS See Section 1.3 and 1.4					
163	Regulation 1907/2006/EG (REACH)					
16.3	The materials are pre-registered. In ca 1'000 kg/year is not reached; the mate					
164	•••					
16.4	Basis of data and reason of the revi	sion				
16.4	Basis of data and reason of the revi The reason of revision (TS 3029.02 E) is		Directives and the RE	ACH regulations.		