

SAFETY DATA SHEET



Issue Date 07-Aug-2013

Revision date 08-Dec-2015

Version 1.01

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product code 15550-0101
Product name CUTFLUID

1.2. Relevant identified uses of the substance or mixture and uses advised against Relevant identified uses of the substance or mixture and uses advised against

Recommended Use Cutting fluid.
Uses advised against No information available

1.3. Details of the supplier of the safety data sheet

COMPANY NAME

Luna AB
441 80 Alingsås
Sweden
+46 (0)322 60 60 00

SUPPLIER

Luna International AB
441 80 Alingsås
Sweden
+46 (0)322 60 60 00

FOR FURTHER INFORMATION, PLEASE CONTACT

Contact Point: Luna International AB
Email address: lunainternational@luna.se
Company Phone Number: +46 (0)322 60 60 00

1.4. Emergency telephone number

Emergency telephone - §45 - (EC)1272/2008	
Europe 112	112
Czech Republic	+420 224 91 92 93/+420 224 91 54 02 (Poison Information)
Denmark	+45 82 12 12 12 (Poison information)
Finland	+358 09 471 977 (Poison information)
Latvia	+371 67042473 (24 h) (Poison information)
Lithuania	+370 5 236 20 52 (Poison information)
Norway	+47 22 59 13 00 (Poison information)
Poland	+48 426 314 502 (Poison information)
Slovakia	+421 2 5465 2307 (Poison information)
Sweden	+46 8 33 70 43 (Emergency Responce Center)
Estonia	+372 626 9379 (Poison information)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008 [CLP]

Aspiration toxicity	Category 1
Skin corrosion/irritation	Category 2
Serious eye damage/eye irritation	Category 1

2.2. Label elements

Contains N,N"-methylenebismorpholine


Signal Word

DANGER

Hazard statements

H304 - May be fatal if swallowed and enters airways

H318 - Causes serious eye damage

H315 - Causes skin irritation

Precautionary Statements

P280 - Wear protective gloves/protective clothing/eye protection/face protection

P301 + P310 - IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician

P331 - Do NOT induce vomiting

P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing

P313 - Get medical advice/attention

P332 + P313 - If skin irritation occurs: Get medical advice/attention

2.3. Other hazards

This product contains a biocide (N,N'-methylenebisforpholine).

SECTION 3: Composition/information on ingredients

3.1 Substances / 3.2 Mixtures

Only hazardous substances above thresholds are shown below

Chemical name	EC No	CAS No	weight-%	Classification according to Regulation (EC) No. 1272/2008 [CLP]	REACH registration number
Distillates (petroleum), hydrotreated light naphthenic (H304)	265-156-6	64742-53-6	20-30%	Asp. Tox 1 (H304)	01-2119480375-34
Amine soaps containing the following components: EINECS no. 203-049-8; 205-483-3; 233-139-2 (boric acid)	-	-	10-20%	Eye Irrit. 2 ((H319) Skin Irrit. 2 (H315)	No data available
Fatty acid ethanol amide, ethoxylated	614-635-1	68603-39-4	5-10%	Skin Irrit. 2 (H315) Eye Irrit. 2 (H319)	No data available
N,N"-methylenebismorpholine	227-062-3	5625-90-1	1-5%	Acute Tox. 4 (H302) Acute Tox. 4 (H332) Skin Corr. 1C (H314) Eye Dam. 1 (H318)	No data available
2-(2-butoxyethoxy)ethanol	203-961-6	112-34-5	1-5%	Eye Irrit. 2 (H319)	01-2119475104-44
Poly(oxy-1,2-ethanediyl), .alpha.-hydro-.omega.-hydroxy-, mono(C8-18 and C18-unsatd. alkyl) ethers, phosphates	polymer	68909-67-1	1-5%	Skin Irrit. 2 (H315)	No data available
C9-11 Alcohol ethoxylate	polymer	68439-46-3	1-5%	Eye Irrit. 2 (H319)	01-2119980051-45
Alkyl polyglycol ether C16 and	500-236-9	68920-66-1	1-5%	Skin Irrit. 2 (H315)	01-2119489407-26

C18 unsaturated, ethoxylated					
------------------------------	--	--	--	--	--

Full text of H- and EUH-phrases: see section 16

SECTION 4: First aid measures

4.1. Description of first aid measures

General advice	If symptoms persist, call a physician. Do not breathe dust/fume/gas/mist/vapors/spray. Do not get in eyes, on skin, or on clothing.
Eye Contact	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: get medical advice/attention.
Skin Contact	Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. If skin irritation persists, call a physician. Wash contaminated clothing before reuse.
Ingestion	Clean mouth with water. Do NOT induce vomiting. Potential for aspiration if swallowed. Get medical attention.
Inhalation	Remove to fresh air. If symptoms persist, call a physician.
Self-protection of the first aider	Use personal protective equipment as required.

4.2. Most important symptoms and effects, both acute and delayed

Symptoms None under normal use conditions.

4.3. Indication of any immediate medical attention and special treatment needed

Note to physicians Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. Use CO₂, dry chemical, or foam.

Unsuitable extinguishing media

Do not use a solid water stream as it may scatter and spread fire.

5.2. Special hazards arising from the substance or mixture

Special Hazard

Incomplete combustion and thermolysis may produce gases of varying toxicity such as carbon monoxide, carbon dioxide, various hydrocarbons, aldehydes and soot. These may be highly dangerous if inhaled in confined spaces or at high concentration. Cool drums with water spray.

5.3. Advice for firefighters

Special protective equipment for fire-fighters

Wear self contained breathing apparatus for fire fighting if necessary.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Use personal protection recommended in Section 8.

Extremely slippery when spilled.

6.2. Environmental precautions

Prevent further leakage or spillage if safe to do so. Prevent entry into waterways, sewers, basements or confined areas. Local authorities should be advised if significant spillages cannot be contained.

6.3. Methods and material for containment and cleaning up

Contain and collect spillage with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see Section 13).

Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust).

6.4. Reference to other sections

Other information

See Section 12: Ecological information.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Advice on safe handling

Handle in accordance with good industrial hygiene and safety practice. Use personal protective equipment as required. Avoid contact with skin, eyes or clothing. Extremely slippery when spilled.

General hygiene considerations

Wash contaminated clothing before reuse. When using do not eat, drink or smoke. Regular cleaning of equipment, work area and clothing is recommended. This product contains a biocide that may release trace amounts of formaldehyde during use.

7.2. Conditions for safe storage, including any incompatibilities

Storage Conditions

Store in a dry place. Store in a closed container. Protect from moisture.

7.3. Specific end use(s)

Specific use(s)

Cutting fluid.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Chemical name	Sweden	Denmark	Norway	Finland	Estonia
Oil mist/smoke	NGV 8 h: 1 mg/m ³ , KTV 15 min: 3 mg/m ³	8h: 1 mg/m ³	8h: 1 mg/m ³	8h: 5 mg/m ³	TWA 8h: 1 mg/m ³
Chemical name	Latvia	Lithuania	Poland	Russia	Slovakia
Oil mist/smoke	8h: 5 mg/m ³	IPRV 8h: 1 mg/m ³ , TPRV 15 min: 3 mg/m ³	NDS: 8h: 5 mg/m ³ , NDSch, 15 min, 10 mg/m ³	5 mg/m ³	8h: 5 mg/m ³
Chemical name	Czech Republic	Germany	Hungary	Bulgaria	Ukraine
Oil mist/smoke	PEL: 5 mg/m ³ NPK-P: 10 mg/m ³	-	-	-	-
Chemical name			European Union		
2-(2-butoxyethoxy)ethanol			TWA: 10 ppm TWA: 67.5 mg/m ³		
Chemical name	Sweden	Denmark	Norway	Finland	Estonia

2-(2-butoxyethoxy)ethanol	15 ppm (LLV) 100 mg/m ³ (LLV) 30 ppm (STV) 200 mg/m ³ (STV)	TWA: 10 ppm TWA: 68 mg/m ³	TWA: 10 ppm TWA: 68 mg/m ³ STEL: 20 ppm STEL: 102 mg/m ³	TWA: 10 ppm TWA: 68 mg/m ³	TWA: 10 ppm TWA: 67.5 mg/m ³
Chemical name	Latvia	Lithuania	Poland	Russia	Slovakia
2-(2-butoxyethoxy)ethanol	TWA: 10 ppm TWA: 67.5 mg/m ³ STEL: 15 ppm STEL: 101.2 mg/m ³	-	STEL: 100 mg/m ³ TWA: 67 mg/m ³	MAC: 10 mg/m ³	TWA: 10 ppm TWA: 67.5 mg/m ³
Chemical name	Czech Republic	Germany	Hungary	Bulgaria	Ukraine
2-(2-butoxyethoxy)ethanol	Ceiling: 100 mg/m ³ TWA: 100 mg/m ³	TWA: 10 ppm TWA: 67 mg/m ³ Ceiling / Peak: 15 ppm Ceiling / Peak: 100.5 mg/m ³	STEL: 101.2 mg/m ³ TWA: 67.5 mg/m ³	STEL: 101.2 mg/m ³ TWA: 67.5 mg/m ³	-

Derived No Effect Level (DNEL) No information available

Predicted No Effect Concentration (PNEC) No information available.

8.2. Exposure controls

Engineering controls None under normal use conditions.

Personal protective equipment

Eye/face Protection
Hand protection

Wear safety glasses with side shields (or goggles).

Wear protective nitrile rubber gloves, Because specific work environments and material handling practices vary, safety procedures should be developed for each intended application. The correct choice of protective gloves depends upon the chemicals being handled, and the conditions of work and use. Most gloves provide protection for only a limited time before they must be discarded and replaced (even the best chemically resistant gloves will break down after repeated chemical exposures). Gloves should be chosen in consultation with the supplier / manufacturer and taking account of a full assessment of the working conditions. Breakthrough time data are generated by glove manufacturers under laboratory test conditions and represent how long a glove can be expected to provide effective permeation resistance. It is important when following breakthrough time recommendations that actual workplace conditions are taken into account. Always consult with your glove supplier for up-to-date technical information on breakthrough times for the recommended glove type. Our recommendations on the selection of gloves are as follows:
Continuous contact: Gloves with a minimum breakthrough time of 240 minutes, or >480 minutes if suitable gloves can be obtained. If suitable gloves are not available to offer that level of protection, gloves with shorter breakthrough times may be acceptable as long as appropriate glove maintenance and replacement regimes are determined and adhered to.
Short-term / splash protection: Recommended breakthrough times as above. It is recognised that for short-term, transient exposures, gloves with shorter breakthrough times may commonly be used. Therefore, appropriate maintenance and replacement regimes must be determined and rigorously followed.
Glove Thickness: For general applications, we recommend gloves with a thickness typically greater than 0.35 mm. It should be emphasised that glove thickness is not necessarily a good predictor of glove resistance to a specific chemical, as the permeation efficiency of the glove will be dependent on the exact composition of the glove material. Therefore, glove selection should also be based on consideration of the task requirements and knowledge of breakthrough times. Glove thickness may also vary depending on the glove manufacturer, the glove type and the glove model. Therefore, the manufacturers' technical data should always be taken into account to ensure selection of the most appropriate glove for the task. Note: Depending on the activity being conducted, gloves of varying thickness may be required for specific tasks. For example: Thinner gloves (down to 0.1 mm or less) may be required where a high degree of manual dexterity is needed. However, these gloves are only likely to give short duration protection and would normally be just for single use applications, then disposed of. Thicker gloves (up to 3 mm or more) may be required where there is a mechanical (as well as a

Body protection	chemical) risk i.e. where there is abrasion or puncture potential.
Respiratory Protection	Suitable protective clothing, Apron, Gloves made of plastic or rubber. No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required, In case of inadequate ventilation wear respiratory protection.
General hygiene considerations	Wash contaminated clothing before reuse. When using do not eat, drink or smoke. Regular cleaning of equipment, work area and clothing is recommended. This product contains a biocide that may release trace amounts of formaldehyde during use.
Environmental exposure controls	Local authorities should be advised if significant spillages cannot be contained. Prevent product from entering drains.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical State	Liquid	Odor	Amine
Appearance	Clear Sl.hazy&ho.	Odor Threshold	Not applicable
Color	Yellow Brown		

Property	Values	Remarks • Method
pH	9.7	Not applicable
Melting Point/Freezing Point		Not applicable
Boiling point/boiling range		No information available
Flash Point		
Flash point COC	-	Not applicable
Flash point PM		Not applicable
Evaporation Rate		Not applicable
Flammability (solid, gas)		Not applicable
Flammability Limits in Air		
Upper Flammability limits		Not applicable
Lower Flammability Limit		Not applicable
Vapor pressure @20°C (kPa)	< 0.01	
Vapor Density		Not applicable
Relative Density		No information available
Water Solubility	Miscible in water	
Solubility(ies)	Soluble in Solvent	
Partition Coefficient (n-octanol/water)	> 3	
Autoignition Temperature		No information available
Decomposition Temperature		No information available
Kinematic Viscosity		
Viscosity at 40°C Typical	16 mm ² / s	ISO 3104
Viscosity at 100°C Typical		No information available
Dynamic viscosity		No information available
Explosive Properties		Not applicable
Oxidizing Properties		Not applicable

9.2. Other information

Molecular Weight		No information available
VOC Content(%)		No information available
Density	1008 kg/m ³	ISO 12185
Bulk density		No information available
Research Octane Number		Not applicable
Sulphur Content		Not applicable

SECTION 10: Stability and reactivity

10.1. Reactivity

Not reactive.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

Possibility of hazardous reactions

None under normal processing.

10.4. Conditions to avoid

Heat, flames and sparks.

10.5. Incompatible materials

Strong oxidizing agents.

10.6. Hazardous decomposition products

None under normal use conditions. Thermal decomposition can lead to release of irritating and toxic gases and vapors. Carbon monoxide.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Product Information

Product does not present an acute toxicity hazard based on known or supplied information. Used product can contain harmful contaminants.

Acute toxicity

Inhalation

Inhalation of vapors in high concentration may cause irritation of respiratory system.

Eye Contact

Irritating to eyes. May cause burns.

Skin Contact

Prolonged contact may cause redness and irritation. May cause skin irritation and/or dermatitis. Product that under high pressure has been forced under the skin, may cause serious cell damage/death under the skin.

Ingestion

Potential for aspiration if swallowed. Aspiration may cause pulmonary edema and pneumonitis.

Chronic toxicity

Chemical name	Oral LD50	dermal LD50	Inhalation LC50
2-(2-butoxyethoxy)ethanol	3384 mg/kg (Rat)	2700 mg/kg (Rabbit)	

Skin corrosion/irritation

None known.

Serious eye damage/eye irritation

None known.

Sensitization

None known.

Germ cell mutagenicity

None known.

Carcinogenicity

None known.

Reproductive Toxicity

None known.

Developmental toxicity	None known.
Teratogenicity	None known.
STOT - single exposure	None known.
STOT - repeated exposure	None known.
Neurological effects	None known.
Target organ effects	None known.
Aspiration hazard	None known.

SECTION 12: Ecological information

12.1. Toxicity

Not harmful to aquatic organisms. Expected LC/EC 50 value >100 mg/l

Chemical name	Algae/aquatic plants	Fish	Crustacea
Distillates (petroleum), hydrotreated light naphthenic (H304)		5000: 96 h Oncorhynchus mykiss mg/L LC50	1000: 48 h Daphnia magna mg/L EC50
2-(2-butoxyethoxy)ethanol	100: 96 h Desmodesmus subspicatus mg/L EC50	1300: 96 h Lepomis macrochirus mg/L LC50 static	100: 48 h Daphnia magna mg/L EC50 2850: 24 h Daphnia magna mg/L EC50

12.2. Persistence and degradability

Potentially degradable, but will persist in the environment for long periods.

12.3. Bioaccumulative potential

Contain components with potential to bioaccumulate (logPow >3).

12.4. Mobility in soil

Mobility in soil

After release, adsorbs onto soil.

12.5. Results of PBT and vBvP assessment

This product is not, or does not contain, a substance that is a PBT or a vBvP.

12.6. Other adverse effects

No information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste from Residues / Unused Products

Disposal should be in accordance with applicable regional, national and local laws and regulations.

Other information

Provisions for waste transmitters:

Different types of hazardous waste shall not be mixed with each other. Wastes can be mixed if the purpose is to improve safety during disposal or recycling or otherwise is done in a manner acceptable to protect the environment. Waste may be transported professionally only by those who have special permission. Solvent and oil waste under certain given amounts may be transported without special permission, after notification to the County Board. Contact the County Board for further information.

Discharge Instructions:

Packs marked with a skull or environmental hazard symbol and risk phrase 50/53 should always be disposed of as hazardous waste. Other packs should be emptied well before they can be recycled or reconditioned. The contents may need to be disposed of as hazardous waste. Draining is best carried out at room temperature. The pack is placed upside down inclined somewhat, about 10 degrees, the runoff should be in such a way that the lowest point of the pack is the exit. Residual content should be collected and added to the process there the product is used. For steel drums especially the runoff must be at room temperature (min 15 ° C). Wait until the pack is drip dry. Do not reseal the packs after runoff. Note in particular the risks involved when emptying containers containing flammable liquids. Emptied packages should be ventilated in a safe place away from sparks and fire. Residues may cause an explosion. Do not puncture, cut or weld in uncleaned packages, containers or barrels. If possible, packs contained water-soluble product should be rinsed thoroughly (3 times) before emptying. The rinse water should, if possible, be used in the process there the product is used.

Classification of wastes:

Waste transmitters is required to classify the waste. All waste is identified by a six digit EWC code. The codes are listed in the Waste Regulation. The codes for oil waste are based on usage and the base oil. Information about the intended use is given in the safety data sheet, section 1. Oil waste is always hazardous waste. Examples of EWC codes for oil waste: 120107: mineral-based machining oils free of halogens 130111: Synthetic Hydraulic Oils 130105: Non-chlorinated emulsions 130208: other engine, gear and lubricating oils

Waste codes should be assigned by the user based on the application for which the product was used.

SECTION 14: Transport information

Note:

14.1.

IMDG

14.1 UN/ID no	Not regulated
14.2 Proper Shipping Name	Not regulated
14.3 Hazard Class	Not regulated
14.4 Packing group	Not regulated
14.5 Marine pollutant	Not applicable
14.6 Special Provisions	None
14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code	No information available

RID

14.1 UN/ID no	Not regulated
14.2 Proper Shipping Name	Not regulated
14.3 Hazard Class	Not regulated
14.4 Packing group	Not regulated
14.5 environmental hazard	Not applicable
14.6 Special Provisions	None

ADR

14.1 UN/ID no	Not regulated
14.2 Proper Shipping Name	Not regulated
14.3 Hazard Class	Not regulated

14.4 Packing group	Not regulated
14.5 environmental hazard	Not applicable
14.6 Special Provisions	None

ICAO (air)

14.1 UN/ID no	Not regulated
14.2 Proper Shipping Name	Not regulated
14.3 Hazard Class	Not regulated
14.4 Packing group	Not regulated
14.5 environmental hazard	Not applicable
14.6 Special Provisions	None

IATA

14.1 UN/ID no	Not regulated
14.2 Proper Shipping Name	Not regulated
14.3 Hazard Class	Not regulated
14.4 Packing group	Not regulated
14.5 environmental hazard	Not applicable
14.6 Special Provisions	None

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

National regulations This safety data sheet is created with use of legislation & regulation valid for the European Union, for example consolidated versions of REACH, 1907/2006; CLP, 1272/2008; DPD 1999/45 and national legislation. Other regulatory information: Boric acid is included in the candidate list (list of substances of very high concern (SVHC)) 2010/06/18

Danish PR number: 2426938

International Inventories

TSCA	Does not Comply
EINECS/ELINCS	Complies
DSL/NDSL	Does not Comply
PICCS	Does not Comply
ENCS	Does not Comply
IECSC	Does not Comply
AICS	Does not Comply
KECL	Does not Comply

Legend

EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances
DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List
PICCS - Philippines Inventory of Chemicals and Chemical Substances
ENCS - Japan Existing and New Chemical Substances
IECSC - China Inventory of Existing Chemical Substances
AICS - Australian Inventory of Chemical Substances
KECL - Korean Existing and Evaluated Chemical Substances

15.2. Chemical safety assessment

No information available

SECTION 16: Other information

Full text of H-Statements referred to under section 3

H302 - Harmful if swallowed
H304 - May be fatal if swallowed and enters airways

H314 - Causes severe skin burns and eye damage
H315 - Causes skin irritation
H318 - Causes serious eye damage
H319 - Causes serious eye irritation
H332 - Harmful if inhaled

Key or legend to abbreviations and acronyms used in the safety data sheet

vBvP = Very Bioaccumulative and very Pollutant.
PBT = Persistent Bioaccumulative Toxic chemical
REACH = Research Evaluation Authorization and Restriction of Chemicals
CLP = Classification, Labelling and Packaging
DPD = Dangerous Preparations Directive
VOC=Volatile Organic Compound

Issue Date 07-Aug-2013
Revision date 08-Dec-2015
Revision Note Indication of changes *** , if applicable.

This material safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006

End of Safety Data Sheet