

SAFETY DATA SHEET



Product name:	DP-LUBRICANT BLUE	Page:	1/11
Revision date:	2018-11-27	Print date:	2018-11-27
Document No.:	M0015	SDS-ID:	SG-EN/22.0

SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1. Product identifier

Product name: DP-LUBRICANT BLUE
Cat. No. 40700005, 40700006, 40700056

Container size: 1 l, 5 l, 10 l

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

Application: Cooling and lubricating agent for grinding and polishing of metallographic specimens.

1.3. Details of the supplier of the safety data sheet

Supplier: Struers ApS, Singapore Branch
627A Aljunied Road
#07-08 BizTech Centre
389842 Singapore
Tel: +65 6299 2268

Responsible for safety data sheet authoring: Responsible for safety data sheet authoring: DHI
Any questions to the contents of this safety data sheet should be sent to:
struers@struers.dk

1.4. Emergency telephone number

24-hour Emergency Medical Service (EMS): 995.

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SECTION 2: HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture

GHS: Flammable liquid Cat 2
Serious eye damage/eye irritation 2
STOT repeated Cat 2

2.2. Label elements



Danger

H225	Highly flammable liquid and vapour.
H319	Causes serious eye irritation.
H373K	May cause damage to organs (kidneys) through prolonged or repeated exposure.
P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P260	Do not breathe dust/fume/gas/mist/vapours/spray.
P280	Wear protective gloves, eye and face protection.
P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337 + P313	If eye irritation persists: Get medical advice/attention.
P501	Dispose of contents/container in accordance with local regulations.
P233	Keep container tightly closed.
P240	Ground/bond container and receiving equipment.
P241	Use explosion-proof electrical, ventilating and lighting equipment.
P242	Use only non-sparking tools.
P243	Take precautionary measures against static discharge.
P264	Wash contaminated skin thoroughly after handling.
P303 + P361 + P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water.
P370 + P378	In case of fire: Use alcohol resistant foam, carbon dioxide or dry powder to extinguish.
P403 + P235	Store in a well-ventilated place. Keep cool.

2.3. Other hazards

PBT/vPvB: Not Classified as PBT/vPvB by current EU criteria.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.2. Mixtures

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The product contains: organic solvents and pigments .

GHS:

<u>%:</u>	<u>CAS-No.:</u>	<u>EC No.:</u>	<u>REACH Reg. No:</u>	<u>Chemical name:</u>	<u>Hazard classification:</u>	<u>Notes:</u>
70-85	64-17-5	200-578-6	-	Ethanol	Flammable liquid Cat 2 Serious eye damage/eye irritation 2	
10-15	107-21-1	203-473-3	-	Ethanediol	Acute oral toxicity Cat 4 STOT repeated Cat 2	
5-<10	67-63-0	200-661-7	-	Propan-2-ol	Flammable liquid Cat 2 Serious eye damage/eye irritation 2 STOT single Cat 3	
<1	94277-77-7	304-661-9	-	Blue dye	Aquatic, Chronic Cat 3	

Reference: The full text for all hazard statements is displayed in section 16.

SECTION 4: FIRST AID MEASURES

4.1. Description of first aid measures

Burns: Flush with water immediately. While flushing, remove clothes which do not adhere to affected area. Call an ambulance. Continue flushing during transport to hospital.

Inhalation: Move injured person into fresh air and keep person calm under observation. If uncomfortable: Seek hospital and bring along these instructions.

Skin contact: Remove contaminated clothes and rinse skin thoroughly with water.

Eye contact: Immediately flush with plenty of water for at least 15 minutes. Remove any contact lenses and open eyelids widely. If irritation persists: Continue flushing during transport to hospital. Bring along these instructions.

Ingestion: Immediately rinse mouth and drink plenty of water. Keep person under observation. If person becomes uncomfortable seek hospital and bring these instructions.

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

Symptoms/effects: See section 11 for more detailed information on health effects and symptoms.

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

Medical attention/treatments: Treat symptomatically.

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SECTION 5: FIREFIGHTING MEASURES

5.1. Extinguishing media

Extinguishing media: Extinguish with alcohol-resistant foam, carbon dioxide, dry powder or water fog. Cool containers exposed to heat with water spray and remove container, if no risk is involved.

Unsuitable extinguishing media: Do not use water jet as an extinguisher, as this will spread the fire.

5.2. Special hazards arising from the substance or mixture

Specific hazards: The product is highly flammable, and explosive vapours/air mixtures may be formed even at normal room temperatures. Vapours are heavier than air and may travel along the floor and in the bottom of containers. Vapours may be ignited by a spark, a hot surface or an ember.

5.3. Advice for firefighters

Protective equipment for fire-fighters: Use air-supplied respirator during fire fighting.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

Protective equipment: Do not smoke or use open fire, or other sources of ignition. Do not breathe vapour. Avoid contact with skin and eyes. For personal protection, see section 8. (*)

Emergency procedures: No specific recommendations. For personal protection, see section 8. (*)

6.2. Environmental precautions

Environmental precautions: Do not discharge into drains, water courses or onto the ground.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up: Large quantities of concentrate should not be discharged into the drain but removed with absorbing material. Do not use sawdust or other combustible material.

6.4. Reference to other sections

Reference: For personal protection, see section 8. For waste disposal, see section 13.

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SECTION 7: HANDLING AND STORAGE

7.1. Precautions for safe handling

Safe handling advice: Do not breathe vapour. Avoid contact with skin and eyes. Observe good chemical hygiene practices.

Technical measures: Do not smoke or use open fire or other sources of ignition.

Technical precautions: Local exhaust is recommended.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures for safe storage: Follow rules for flammable liquids.

Storage conditions: Store in a cool and well-ventilated place. Avoid contact with oxidizing agents.

7.3. Specific end use(s)

Specific use(s): No information available.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control parameters

Occupational exposure limits:

<u>CAS-No.:</u>	<u>Chemical name:</u>	<u>As:</u>	<u>Exposure limits:</u>		<u>Type:</u>	<u>Notes:</u>	<u>References:</u>
67-63-0	Isopropyl alcohol	-	400 ppm	983 mg/m3	PEL (Long Term)	-	SG
		-	500 ppm	1230 mg/m3	PEL (Short Term)	-	
107-21-1	Ethylene glycol	-	50 ppm	127 mg/m3	PEL (Short Term)	-	SG
64-17-5	Ethanol	-	1000 ppm	1880 mg/m3	PEL (Long Term)	-	SG

8.2. Exposure controls

Engineering measures: Provide adequate ventilation. Observe Occupational Exposure Limits and minimise the risk of inhalation of vapours.

Personal protection: Personal protection equipment should be chosen according to the ANSI standards and in discussion with the supplier of the personal protective equipment.

Respiratory equipment: In case of inadequate ventilation and work of brief duration, use suitable respiratory equipment. Use respiratory equipment with gas filter, type A2.

Hand protection: Wear protective gloves. Nitrile gloves are recommended, but be aware that the liquid may penetrate the gloves. Frequent change is advisable. The most suitable glove must be chosen in collaboration with the gloves supplier, who can inform about the breakthrough time of the glove material.

Eye protection: Wear goggles/face shield.

Skin protection: Wear apron or protective clothing in case of contact.

Environmental Exposure Controls: Not available.

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SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

(*)

<u>Form:</u>	Liquid.
<u>Colour:</u>	Blue.
<u>Odour:</u>	odour of alcohol
<u>Odour threshold:</u>	Not available.
<u>pH:</u>	Not available.
<u>Melting point:</u>	Not available.
<u>Boiling point:</u>	85°C
<u>Flash point:</u>	12°C
<u>Evaporation rate:</u>	Not available.
<u>Flammability (solid, gas):</u>	Not available.
<u>Explosion limits:</u>	2-12%
<u>Vapour pressure:</u>	Not available.
<u>Vapour density:</u>	Not available.
<u>Relative density:</u>	0.82
<u>Solubility:</u>	Miscible with water.
<u>Partition coefficient (n-octanol/water):</u>	Not available.
<u>Auto-ignition temperature (°C):</u>	Not available.
<u>Decomposition temperature (°C):</u>	Not available.
<u>Viscosity:</u>	Not available.
<u>Explosive properties:</u>	Not available.
<u>Oxidising properties:</u>	Not available.

9.2. Other information

Other data: Volatile Organic Compound (VOC): 812 g/l (calculated)

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SECTION 10: STABILITY AND REACTIVITY

10.1. Reactivity

Reactivity: No data available.

10.2. Chemical stability

Stability: Stable under normal temperature conditions.

10.3. Possibility of hazardous reactions

Hazardous reactions: No data available.

10.4. Conditions to avoid

Conditions/materials to avoid: Direct sunlight. Keep away from heat, sparks and open flame.

10.5. Incompatible materials

Incompatible materials: Oxidizing agents.

10.6. Hazardous decomposition products

Hazardous decomposition products: No information available.

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SECTION 11: TOXICOLOGICAL INFORMATION

11.1. Information on toxicological effects

<u>Acute Toxicity (Oral):</u>	Based on available data, the classification criteria are not met.
<u>Acute Toxicity (Dermal):</u>	Based on available data, the classification criteria are not met.
<u>Acute Toxicity (Inhalation):</u>	Based on available data, the classification criteria are not met.
<u>Skin Corrosion/Irritation:</u>	Based on available data, the classification criteria are not met.
<u>Serious eye damage/irritation:</u>	Causes serious eye irritation.
<u>Respiratory or skin sensitisation:</u>	Based on available data, the classification criteria are not met.
<u>Germ cell mutagenicity:</u>	Based on available data, the classification criteria are not met.
<u>Carcinogenicity:</u>	Based on available data, the classification criteria are not met.
<u>Reproductive Toxicity:</u>	Based on available data, the classification criteria are not met.
<u>STOT - Single exposure:</u>	Based on available data, the classification criteria are not met.
<u>STOT - Repeated exposure:</u>	May cause damage to organs (kidneys) through prolonged or repeated exposure.
<u>Aspiration hazard:</u>	Based on available data, the classification criteria are not met.
<u>Inhalation:</u>	<p>Small quantities: Vapours may irritate throat and respiratory system and cause coughing.</p> <p>Large quantities: Vapours may irritate throat and respiratory system and cause headache, dizziness and dullness. In serious cases, unconsciousness and permanent damage to the nervous system, including the brain, and liver may be seen. Frequent inhalation of even small concentrations may cause irritability, fatigue, memory failure and in time permanent damage to the nervous system, including the brain, and possibly kidneys, too.</p>
<u>Skin contact:</u>	Prolonged contact may cause redness, irritation and dry skin. Contains 2-propanol which may penetrate the skin.
<u>Ingestion:</u>	<p>May cause intoxication, headache, dizziness, stomach pains, convulsions, and in serious cases, unconsciousness, acute kidney failure, breathing and heart failure.</p> <p>Lethal dose for an adult person: approx. 50-100 ml (ethanediol).</p>

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SECTION 12: ECOLOGICAL INFORMATION

12.1. Toxicity

Ecotoxicity: The product is not expected to be hazardous to the environment.

12.2. Persistence and degradability

Degradability: The product is biodegradable. BOD₂₀ > 78%

12.3. Bioaccumulative potential

Bioaccumulative potential: The product is not bioaccumulating.

12.4. Mobility in soil

Mobility: No data available.

12.5. Results of PBT and vPvB assessment

PBT/vPvB: This product does not contain any PBT or vPvB substances.

12.6. Other adverse effects

Other adverse effects: None known.

SECTION 13: DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods

Waste from residues: Dispose of waste and residues in accordance with local authority requirements.

Contaminated packaging: Dispose of waste and residues in accordance with local authority requirements.

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SECTION 14: TRANSPORT INFORMATION

The product is covered by international regulation on the transport of dangerous goods (IMDG, IATA, ADR/RID).

14.1. UN number

UN-No: 1993

14.2. UN proper shipping name

Proper Shipping Name: FLAMMABLE LIQUID, N.O.S (Ethanol, Isopropylalcohol Mixture)

Additional IMDG information:

EmS: F-E , S-E

MFAG: 1

14.3. Transport hazard class(es)

Class: 3

14.4. Packing group

PG: II

14.5. Environmental hazards

Marine pollutant: No.

Environmentally Hazardous No.

Substance:

14.6. Special precautions for user

Special precautions: None known.

14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Transport in bulk: Not relevant.

SECTION 15: REGULATORY INFORMATION

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

National regulation: Singapore Standard SS 586: Part 2 : 2014; Globally harmonised system of classification and labelling of chemicals - Singapore's adaptations.
Singapore Standard SS 586: Part 3 : 2014; Preparation of safety data sheets (SDS).
Guidelines on prevention and control of chemical hazard.

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SECTION 16: OTHER INFORMATION

The user must be instructed in the proper work procedure and be familiar with the contents of these instructions.

The following sections contain revisions or new statements: 6, 9.

The (*) indicates the changes made with respect to the previous version.

Approved by DHI.



Additional information:

Classification according to Singapore Standard SS 586: Part 2 : 2014:
Calculation method.

The information on this data sheet represents our current data and is reliable provided that the product is used under the prescribed conditions and in accordance with the application specified on the packaging and/or in the technical guidance literature.

Made by DHI - Environment and Toxicology, Agern Allé 5, DK-2970 Hørsholm, Denmark.
www.dhigroup.com.
