

SAFETY DATA SHEET

Safety data Sheet according to (EC No. 1907/2006 (REACH))

SECTION 1: Identification of the substance/mixture and of the company/undertaking**1.1. Product identifier:**

Formula 1

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

Card or liquid to clean audio and photographic equipment.

1.3. Details of the supplier of the safety data sheet:

AM Denmark A/S

1.1. Skudehavnsvej Phone: +45 - 49 14 22 00

DK-2150 Nordhavn Fax.: +45 - 49 14 11 81

Denmark

(e-mail): am@am-denmark.com

1.4. Emergency telephone:

+45 82 12 12 12 (Poison Line (Denmark) – 24-hour service)

SECTION 2: Hazards identification**2.1. Classification of the substance or mixture:**

Flammable and irritating liquid.

CLP (1272/2008): Flam. Liq. 3;H226 Eye Irrit. 2;H319 STOT SE 3;H336

2.2. Label elements:**WARNING**

H226: Flammable liquid and vapour.

H319: Causes serious eye irritation.

H336: May cause drowsiness or dizziness.

P210: Keep away from heat/sparks/open flames/hot surfaces. - No smoking.

P233: Keep container tightly closed.

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

Consumer use, add the following safety sentences:

P101: If medical advice is needed, have product container or label at hand.

P102: Keep out of reach of children.

P501: Dispose of contents/container according to national legislation.

2.3. Other hazards: None known.

PBT/vPvB: The ingredients are not considered PBT/vPvB according to criteria in Annex XIII.

SECTION 3: Composition/information on ingredients**3.2. Mixtures:**

% w/w	Name	CAS	EC-no.	Index-no.	REACH reg.no.	Classification
25-50	Propan-2-ol	67-63-0	200-661-7		603-117-00-0	- Flam. Liq. 2;H225 Eye Irrit. 2;H319 STOT SE 3;H336

Wording of hazard statements – see section 16.

SECTION 4: First-aid measures**4.1. Description of first aid measures:**

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Inhalation: Remove to fresh air. Keep at rest. In case of discomfort: Seek medical advice.

Skin contact: Remove contaminated clothing and wash with soap and water. If irritation persists: Seek medical advice.

Eye contact: Flush with water or physiological salt water, holding eye lids open, remember to remove contact lenses, if any.

If irritation persists: Seek medical advice.

Ingestion: Rinse mouth and drink plenty of water. Keep at rest. In case of discomfort: Seek medical advice.

Burns: Flush with water until pain ceases.

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

Causes eye irritation. Prolonged or frequent contact can cause eczema and inflammation of the skin as a result of degreasing.

Prolonged inhalation of vapours may result in inflammation of the nose and gastrointestinal tract and damage on liver,

kidneys, blood or central nervous system.

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

Show this safety data sheet to a physician or emergency ward.

SECTION 4: Fire-fighting measures

5.1. Extinguishing media:

Carbon dioxide, dry chemical, sand, foam or water fog. Do not use water jet.

5.2. Special hazards arising from the substance or mixture:

Do not breathe smoke fumes. In case of fire (decomposition) it emits toxic fumes such as carbon oxides.

5.3. Advice for firefighters:

When extinguishing surrounding fires use breathing apparatus with an independent source of air.

SECTION 4: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures:

Use personal protective equipment - see section 8. Ventilate area. Remove sources of ignition.

6.2. Environmental precautions:

Do not empty into drains - see section 12. Inform appropriate authorities in accordance with local regulations.

6.3. Methods and material for containment and cleaning up:

Take up with absorbent material (e.g. general-purpose binder) and place in marked container for disposal. Clean with water.

Further handling of spillage - see section 13.

6.4. Reference to other sections:

See above.

SECTION 7: Handling and storage

7.1. Precautions for safe handling:

Avoid breathing vapors. Provide sufficient ventilation. Avoid contact with skin, eyes and clothing. Change contaminated clothes. Wash hands and contaminated areas with water and mild soap after use.

The employer shall assess the working conditions and, if there is any risk to the safety or health and any effects on the pregnancy or breastfeeding of workers, take the necessary measures to adjust the working conditions (Directive 92/85/EEC).

Flammable, do not use near fire or sparks. Do not smoke.

7.2. Conditions for safe storage, including any incompatibilities:

Store in a well-closed original container and in a flammable liquid storage area. Dry, cool and separated from oxidizing agents. Keep out of the reach of children. Keep out of direct sunlight.

7.3. Specific end use(s):

See section 1.

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SECTION 8: Exposure controls/Personal protection

8.1. Control parameters: **8-hour TWA** **15-min STEL**
Occupational exposure limits (EH40/2007): Propan-2-ol 400 ppm = 999 mg/m³ 500 ppm = 1250 mg/m³
DNEL/PNEC: No CSR.

8.2. Exposure controls:

Appropriate engineering controls: Provide efficient ventilation.

Personal protective equipment:

Respiratory protection: Normally not necessary by adequate ventilation or short-term use. In case of working in not adequate ventilated areas, use an approved mask (EN140) with a gas filter: AX. The filter has a limited lifetime and must be changed. Read the instruction.

Skin protection: By direct contact with skin or long-term use (>1 hour): Wear protective gloves (EN374) of e.g. nitrile or butyl. Breakthrough time: App. 3 hours (nitrile and butyl).

Eye protection: Use safety goggles (EN166) when there is a risk of eye contact.

Environmental exposure controls: None particular.

SECTION 9: Physical and chemical properties**9.1. Information on basic physical and chemical properties:**

Appearance:	Liquid in different colours
Odour:	Characteristic alcohol
Odour threshold:	Not determined
pH:	Not determined
Melting point/freezing point (°C):	Not determined
Initial boiling point and boiling range (°C):	Not determined
Flash point (°C):	26
Evaporation rate:	Not determined
Flammability (solid, gas):	Not relevant
Upper/lower flammability or explosive limits (vol-%):	3.5 - 19
Vapour pressure:	Not determined
Relative density:	Not determined
Solubility:	Completely soluble in water
Partition coefficient:	n-octanol/water: Not determined
Auto-ignition temperature (°C):	Not relevant
Relative density (g/ml):	< 1 @ 20°C
Viscosity:	Not determined

9.2. Other information: None relevant

SECTION 10: Stability and reactivity**10.1. Reactivity:**

No available information.

10.2. Chemical stability:

Stable under normal conditions (see section 7).

10.3. Possibility of hazardous reactions:

Vapours can be ignited by a spark, a hot surface or a glow. Vapours are heavier than air.

10.4. Conditions to avoid:

Formation of sparks and glows. Excessive heating and sources of ignition.

10.5. Incompatible materials:

May react with strong oxidising agents.

10.6. Hazardous decomposition products:

When heated to high temperatures (decomposition) it emits toxic fumes such as carbon oxides.

SAFETY DATA SHEET**SECTION 11: Toxicological information****11.1. Information on toxicological effects:**

Hazard class	Data	Test	Reference
Acute toxicity: Inhalation Dermal Oral	LC50 (rat) = 46,5 mg/L/4h (Propan-2-ol) LD50 (rabbit) = 12800 mg/kg (Propan-2-ol) LD50 (rat) = 4570 mg/kg (Propan-2-ol)	No info No info No info	Merch RTECS ECHA diss.
Corrosion/irritation:	Eye irritation, rabbit (Propan-2-ol)	Draize	IUCLID
Sensitization:	No skin sensitization, guinea pig (Propan-2-ol)	Buehler	IUCLID
CMR:	Data for mutagenicity is unambiguous (Propan-2-ol)	Multiple	IUCLID

Information on likely routes of exposure: Skin, lungs and gastrointestinal tract.

Symptoms:

Inhalation: Vapours may irritate the upper respiratory tract and cause discomfort, headache and dizziness.

Skin: May cause irritation and degrease skin.

Eyes: Cause irritation with redness and pain.

Ingestion: May irritate the mucous membranes in mouth, throat and stomach.

Chronic effects: Prolonged or frequent exposure to vapours of volatile organic compounds may result in damage on liver, kidneys, blood or central nervous system.

SECTION 12: Ecological information**12.1. Toxicity:**

Aquatic	Data	Test (Media)	Reference
Fish	LC50 (Pimephales promelas, 96h) > 1000 mg/l (Propan-2-ol)	No info (FW)	UCLID
Crustacean	EC50 (Daphnia magna, 48h) > 1000 mg/l (Propan-2-ol)	No info (FW)	UCLID
Algae	No applicable/available data	-	-

12.2. Persistence and degradability:

Propan-2-ol is readily biodegradable (OECD 301).

12.3. Bioaccumulative potential:

Propan-2-ol: Log Kow < 1 – No significant bioaccumulation is expected.

12.4. Mobility in soil:

Propan-2-ol: Koc < 10 – Very large mobility expected in soil.

12.5. Results of PBT and vPvB assessment:

The ingredients are not considered PBT/vPvB according to criteria in Annex XIII.

12.6. Other adverse effects:

None known.

SECTION 13: Disposal considerations**13.1. Waste treatment methods:**

Disposal should be according to local, state or national legislation. Dispose through authority facilities or pass to a chemical disposal company. The mixture is to be considered as hazardous waste.

EWC-Code: 20 01 13

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SECTION 14: Transport information

14.1. UN-no.: 1987

14.2. UN proper shipping name: ALKOHOLS, N.O.S. (Propan-2-ol)

14.3. Transport hazard class(es): 3

14.4. Packing group: III

14.5. Environmental hazards: No.

14.6. Special precautions for user: Warning: Flammable liquids Kemler: 33 EMS: F-E,S-D

14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code: Not relevant.

SECTION 15: Regulatory information

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

Must not be used by persons under 18 years of age.

15.2. Chemical Safety Assessment:

No CSR.

SECTION 16: Other information

R-phrases and hazard statement mentioned in section 2 and 3:

H225: Highly flammable liquid and vapour.

H226: Flammable liquid and vapour.

H319: Causes serious eye irritation.

H336: May cause drowsiness or dizziness.

Abbreviations:

CMR = Carcinogenicity, mutagenicity and reproductive toxicity.

CSR = Chemical Safety Report

DNEL = Derived No-Effect Level

EC50 = Effect Concentration 50 %

ECB = European Chemicals Bureau.

ECHA = European Chemicals Agency

FW = Fresh Water

LC50 = Lethal Concentration 50 %

LD50 = Lethal Dose 50 %

PBT = Persistent, Bioaccumulative, Toxic

PNEC = Predicted No-Effect Concentration

vPvB = very Persistent, very Bioaccumulative

Literature:

ECHA diss. = REACH Registreringsdossier from ECHA's homepage.

IUCLID = International Uniform Chemical Database Information (International kemikaliedatabase med information om

kemiske stoffer)

Merck (Safety Data Sheet)

RTECS = Register of Toxic Effects of Chemical Substances (database over toksiske effekter af kemiske stoffer)

Training advice:

No special training is required. However, the user should be well instructed in the execution of the task, be familiar with

this Safety Data Sheet and have normal training in the use of personal protective equipment.

Changes since the previous edition:

All sections, according to 453/2010

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