



Safety data sheet Kølervæske (MEG baseret)

Date issued: 24.07 2012

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1. Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier

Product name Kølervæske (MEG baseret)
CAS no. 107-21-1 + 12179-04-3

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

Use of the substance/preparation Industrial applications

1.2 Details of the supplier or the safety data sheet

Company name Nymann Kemi A/S
Nyhåbsvej 2
8560 Kolind
Tel: 86 39 18 00
Fax: 86 39 15 74

1.3 Emergency telephone number

Emergency telephone NHS: 111
Emergency: 999

2. Hazard identification

2.1 Classification according to Regulation (EC) No 1272/2008 [CLP/GHS] Acute tox. 4; H302
STOT RE2; H373

Substance/mixture hazardous properties The product releases vapours which may cause lethargy and dizziness. At high concentrations, the vapours may cause headache and intoxications.

2.2 Label elements

Hazard pictograms (CLP)



Composition on the label 1,2 – Ethandiol 90-95 %, Dikaliumtetraborat 0,25 – 0,5 %



Signal word	Warning
Hazard statements	H302 Harmful if swallowed. H373 May cause damage to organs [kidneys] through prolonged or repeated exposure [oral]
Precautionary statements	P260 Do not breathe vapours. P264 Wash hands thoroughly after handling. P270 Do not eat, drink or smoke when using this product. P301 + P312 IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell. P330 Rinse mouth. P314 Get medical advice/attention if you feel unwell.

2.3 Other hazards

PBT/vPvB The mixture does meet the criteria for PBT or vPvB

3. Composition/information on ingredients

3.1 Substances

Substance	Identification	Classification	Contents
1,2 Ethandiol	CAS nr.: 107-21-1 EC no.: 203-473-3	Acute tox. 4; H302; STOT RE2; H373;	90 - 95 %
Dikaliumtetraborat	CAS no.: 12045-78-2 EC No.: 21-575-5	Repr. RE 2; H361d	0,25 – 0,5 %
Substance comments	The substance is an organic solvent		

4. First aid measures

4.1 Description of first aid measures

Inhalation	Seek fresh air. Keep victim under observation. Seek medical advice in case of persistent discomfort.
Skin contact	Remove contaminated clothing. Wash skin with soap and water. Seek medical advice in case of persistent discomfort.
Eye contact	Flush with water (preferably using eye wash equipment) until irritation subsides. Seek medical advice if symptoms persist.
Ingestion	Wash out mouth thoroughly and drink 1-2 glasses of water in small sips. Get medical advice/attention.



4.2 Most important symptoms and effects, both acute and delayed

4.3 Indication of any immediate medical attention and special treatment needed

5. Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media Extinguish with powder, foam, carbon dioxide or water mist. Use water or water mist to cool non-ignited stock.

Improper extinguishing media Do not use water stream, as it may spread the fire

5.2 Special hazards arising from the substance or mixture

Hazardous combustion products Hazardous fumes are formed in fire conditions.

5.3 Advice for firefighters

Personal protective equipment Wear fresh air respiratory protective equipment.

Other Information Send contaminated extinguishing water for destruction

6. Accidental releases measures

6.1 Personal precautions, protective equipment and emergency procedures

General measures Stay upwind/keep distance from source. Avoid breathing and contact with skin and eyes.

Personal protection measures Wear protective gloves/protective clothing/eye protection/face protection

6.2 Environmental precautions

Environmental precautionary measures Prevent spillage from entering drains and/or surface water. Notify proper authorities in case of contamination of soil or aquatic environment or discharge to drains.

6.3 Methods and material for containment and cleaning up

Containment Contain and absorb spill with sand or other absorbent, non-combustible material and transfer to suitable waste containers.

6.4 Reference to other sections

Other instructions See section 8 for type of protective equipment.
See section 13 for instructions on disposal

7. Handling and storage



7.1 Precautions for safe handling

Handling

Use the product under well-ventilated conditions, preferably outdoors. Wash hands before breaks, before using restroom facilities, and at the end of work. See section 8 for information about precautions for use and personal protective equipment.

7.2 Conditions for safe storage, including any incompatibilities

Storage

Keep in tightly closed original packaging. Store in a dry, cool, well-ventilated area.

Conditions to avoid

Keep away from heat/sparks/open flames/hot surfaces. – No smoking.

7.3 Specific and use(s)

8. Exposure controls/personal protection

8.1 Control parameters

Substance	Identifications	Exposure limits	TWA Year
1,2 Ethandiol	CAS no.: 107-21-1	Country of origin: EU Limit value (8 h): 20 ppm Limit value (8 h): 52 mg/m ³	
Dikaliumtetraborat	CAS no.: 12045-78-2		

DNEL/PNEC from substances

Substance

ethanediol

DNEL

Group: Professional
Route of exposure: Long term (repeated) – dermal-systemic effect
Value: 106 mg/kg bw/day
Reference: Data source: ECHA

Group: Consumer
Route of exposure: Long term (repeated) – dermal-systemic effect
Value: 53 mg/kg bw/day
Reference: Data source: ECHA

Group: Professional
Route of exposure: Long term (repeated) – Inhalation-local effect
Value: 35 mg/m³
Reference: Data source: ECHA
Group: Consumer



Route of exposure: Long term (repeated) – Inhalation-
local effect

Value: 7 mg/m³

Reference: Data source: ECHA

PNEC

Route of exposure: Freshwater

Value: 10 mg/L

Reference: Data source: ECHA

Route of exposure: Saltwater

Value: 1 mg/L

Reference: Data source: ECHA

Route of exposure: Sewage treatment plant STP

Value: 199.5 mg/L

Reference: Data source: ECHA

Route of exposure: Soil

Value: 1.53 mg/kg soil dw

Reference: Data source: ECHA

Route of exposure: Freshwater sediments

Value: 37 mg/kg sediment dw

Reference: Data source: ECHA

Route of exposure: Water

Value: 10 mg/L

Reference: Data source: ECHA

Route of exposure: Saltwater sediments

Value: 3.7 mg/kg sediment dw

Reference: Data source: ECHA

8.2 Exposure controls

Safety signs



Eye/face protection

Eye protection Wear safety goggles

Hand protection



Skin-/hand protection, short term contact	Wear protective gloves made of nitrile rubber
thickness of glove material	Value: > 0,3 mm
Skin protection	
Suitable protective clothing	Wear suitable protective clothing
Respiratory Protection	
Respiratory protection necessary	In case of insufficient ventilation, wear respiratory protection.
Recommended respiratory protection	Filter apparatus type: A
Appropriate environmental exposure control	
Environmental exposure controls	Ensure compliance with local regulations for emissions

9. Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical state	Liquid
Odour	Weak Characteristic
Flash point	Value: > 110 °C
Bulk density	Value: 1,1 g/cm ³ Test temperature: 20 °C
Solubility	Medium: water Comments: Soluble
Spontaneous combustability	Value: > 399 °C
Viscosity	Value: 21 mm ² /s Temperature: 20 °C Type: Dynamic

9.2 Other information

10. Stability and reactivity

10.1 Reactivity

10.2 Chemical stability

Stability	The product is stable when used in accordance with the supplier's directions
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10.3 Possibility of hazardous reactions

Possibility of hazardous reactions	No risk of reactions
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10.4 Conditions to avoid



Conditions to avoid Avoid heating and contact with ignition sources

10.5 Incompatible materials

Materials to avoid Avoid contact with strong oxidizing agents. Avoid contact with strong acids. Avoid contact with strong bases.

10.6 Hazardous decompositions products

Hazardous decomposition products No one at the recommended storage conditions.

11. Toxicological information

11.1 Information on toxicological effects

Toxicological data for substances

Substance	1,2 Ethandiol
Acute toxicity	Type of toxicity: Acute Effect tested: LD50 Route of exposure: Oral Value: 7712 mg/kg bw Animal test species: Rat Test reference: Supplier
	Type of toxicity: Acute Effect tested: LD50 Route of exposure: Dermal Value: > 3500 mg/kg bw Animal test species: Rabbit Test reference: Supplier
	Type of toxicity: Acute Effect tested: LC50 Route of exposure: Dermal Value: 10600 mg/kg Animal test species: Rat Test reference: Supplier
Substance	Dikaliumtetraborat
Acute toxicity	Route of exposure: Inhalation Method: LC50 Value: 3690 mg/kg Animal test species: Rat Test reference: Supplier
	Route of exposure: Dermal



Method: LC50
 Value: 2000 – 5000 mg/kg
 Animal test species: Rabbit
 Test reference: Supplier

Route of exposure: Inhalation
 Method: LC50
 Duration: 4 hours
 Value: > 2 g/m³
 Animal test species: Rat
 Comments: Supplier

Assessment of acute toxicity, classification Based on existing data, the classification criteria are deemed not to have been met.

Assessment of skin corrosion/irritation, classification Based on existing data, the classification criteria are deemed not to have been met.

Assessment of eye damage or irritation, classification Based on existing data, the classification criteria are deemed not to have been met.

Assessment of skin sensitization, classification Based on existing data, the classification criteria are deemed not to have been met.

Ingestion Harmful if swallowed

Assessment of germ cell mutagenicity, classification Based on existing data, the classification criteria are deemed not to have been met.

Assessment of carcinogenicity, classification Based on existing data, the classification criteria are deemed not to have been met.

Assessment of reproductive toxicity, classification Based on existing data, the classification criteria are deemed not to have been met.

Assessment of specific target organ toxicity – single exposure, classification Based on existing data, the classification criteria are deemed not to have been met.

Assessment of specific target organ toxicity – repeated exposure, classification Causes damage to organs through prolonged or repeated exposure

Assessment of aspiration hazard, classification Based on existing data, the classification criteria are deemed not to have been met.

**Symptoms of exposure****In case of inhalation**

The product releases organic solvent vapours. At high concentrations, the vapours may cause headache, dizziness, intoxication and possible unconsciousness.

12. Ecological information

12.1 Toxicity**Toxicological data for substances**

Substance	1,2 – Ethandiol
Aquatic toxicity, fish	Value: 41000 mg/L Test duration: 96 hours Species: Oncorhynchus mykiss Method: LC50 Test reference: Supplier
	Value: 15380 mg/L Test duration: 7 days Species: Pimephales promelas Method: NOEC (chronic) Test reference: Supplier
Substance	Dikaliumtetraborat
Aquatic toxicity, fish	Value: 80 – 627 mg/L Effect dose concentration: LC50 Species: Fish 1 Test reference: Supplier
Substance	1,2 – Ethandiol
Aquatic toxicity, crustacean	Value: 48300 mg/l Test duration: 48 hours Species: Daphnia magna Method: EC50 Test reference: Supplier
Substance	Dikaliumtetraborat
Aquatic toxicity, crustacean	Value: 133 mg/l Effect dose concentration: EC50 Species: Daphnia Magna Test reference: Supplier



12.2 Persistence and degradability

Persistence and degradability	Readily biodegradable
Substance	1,2 – Ethandiol
Biodegradability	Value: > 90 %
	Method: DOC removal
	Test period: 10 d

12.3 Bioaccumulative potential

Bioaccumulation, comments	The product is not bioaccumulable
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12.4 Mobility in soil

12.5 Results of PBT and vPvB assesments

Results of PBT and vPvB assessments	The mixture does not meet the criteria for PBT or vPvB
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12.6 Other adverse effects

13. Disposal considerations

13.1 Waste treatment methods

Appropriate methods of disposal for the chemicals	Collect spills and waste in closed, leak-proof containers for disposal at the local hazardous waste site.
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EWC waste code	EWC waste code: 07 01 04 other organic solvents, washing liquids and mother liquors.
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14. Transport information

14.1 UN Number

Comments	The product is not covered by the rules for transport of dangerous goods by road and sea according to ADR and IMDG
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14.2 UN proper shipping name

14.3 Transport hazard class(es)

14.4 Packing group

14.5 Environmental hazards

ADR/RID/ADN	No
IMDG	No

14.6 Special precautions for user



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

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

Declaration No. 2263526

15.2 Chemical safety assesment

Chemical safety assessment performed No

16. Other information**List of relevant H-phrases (Section 2 and 3).**H302 Harmful if swallowed
H361d Suspected of damaging the unborn child
H373 May cause damage to organs through prolonged or repeated exposure**Abbreviations and acronyms used** No special training is required, but a thorough knowledge of this safety data sheet should be a prerequisite condition.
