



Safety Data Sheet according to HPR, Schedule 1

Printing date 04/25/2023

Version 5.01

Reviewed on 04/25/2023

Trade name: V 1

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Hazard-determining components of labeling:

cyclohexanone
acetic acid n-butylester
Benzenesulfonic acid, C10-13-alkyl derivs., sodium salts
2-methoxy-1-methylethyl acetate

Hazard statements

H226 Flammable liquid and vapour.
H315 Causes skin irritation.
H318 Causes serious eye damage.
H336 May cause drowsiness or dizziness.

Precautionary statements

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P261 Avoid breathing mist/vapours/spray.
P280 Wear protective gloves / eye 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.
P310 Immediately call a poison center/doctor.
P403+P233 Store in a well-ventilated place. Keep container tightly closed.
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

3 Composition/Information on ingredients

Chemical characterization: Mixtures
CAS-No. Components:

CAS: 123-86-4	acetic acid n-butylester	≥ 20 – ≤ 30% w/w
CAS: 34590-94-8	Propanol, 1(or 2)-(2-methoxymethylethoxy)-	10 – 30% w/w
CAS: 108-94-1	cyclohexanone	10 – 30% w/w
CAS: 68411-30-3	Benzenesulfonic acid, C10-13-alkyl derivs., sodium salts	10 – 30% w/w
CAS: 108-65-6	2-methoxy-1-methylethyl acetate	3 – 7% w/w

4 First-aid measures

Description of first aid measures
General information

Remove casualties from exposure.
Keep unprotected persons away.
Immediately remove any clothing soiled by the product.

After inhalation

Supply fresh air. If required, provide artificial respiration. Keep patient warm. Consult doctor if symptoms persist.
In case of unconsciousness place patient stably in side position for transportation.

After skin contact

Immediately rinse with water.
If skin irritation continues, consult a doctor.

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- **After eye contact**
Rinse opened eye for several minutes under running water. Then consult a doctor.
- **After swallowing**
Rinse out mouth and then drink plenty of water.
Do not induce vomiting; immediately call for medical help.
- **Information for doctor**
- **Most important symptoms and effects, both acute and delayed**
Skin irritation
Eye damage
Headache
Vertigo
Nausea
Dizziness
Unconsciousness
- **Indication of any immediate medical attention and special treatment needed**
Symptomatic treatment

5 Fire-fighting measures

- **Extinguishing media**
- **Suitable extinguishing agents**
CO₂, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **For safety reasons unsuitable extinguishing agents** Water with full jet.
- **Special hazards arising from the substance or mixture**
Formation of toxic gases is possible during heating or in case of fire.
- **Advice for firefighters**
- **Protective equipment:**
Do not inhale explosion gases or combustion gases.
Wear self-contained respiratory protective device.
- **Additional information**
Cool endangered receptacles with water spray.
Dispose of fire debris and contaminated fire fighting water in accordance with official regulations.

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**
Wear protective equipment. Keep unprotected persons away.
Avoid contact with eyes and skin.
Keep away from ignition sources
Ensure adequate ventilation
Do not breathe gases/ vapours.
- **Environmental precautions:** Do not allow to enter sewers/ surface or ground water.
- **Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (sand, diatomite)
Send for recovery or disposal in suitable receptacles.

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7 Handling and storage

- **Handling**
- **Precautions for safe handling**
Keep away from heat and direct sunlight.
Avoid contact with eyes and skin.
Ensure good ventilation/exhaustion at the workplace.
Ensure good interior ventilation, especially at floor level. (Fumes are heavier than air).
Prevent formation of aerosols.
- **Information about protection against explosions and fires:**
Keep ignition sources away - Do not smoke.
Formation of explosive vapour- / air mixture possible.
Protect against electrostatic charges.
Flammable gas-air mixtures may be formed in empty receptacles.
- **Conditions for safe storage, including any incompatibilities**
- **Storage**
- **Requirements to be met by storerooms and receptacles:**
Store only in the original receptacle.
Prevent any seepage into the ground.
- **Information about storage in one common storage facility:**
Store away from foodstuffs.
Store away from oxidizing agents.
Do not store together with alkalis (caustic solutions).
- **Further information about storage conditions:**
Protect from heat and direct sunlight.
Store in cool, dry conditions in well sealed receptacles.
Store receptacle in a well ventilated area.
Protect from frost.
- **Specific end use(s)** Dry-cleaning

8 Exposure controls/ Personal protection

- **Control parameters**

- **Components with limit values that require monitoring at the workplace:**

CAS: 123-86-4 acetic acid n-butylester

EL STEL: 150 ppm
TWA: 50 ppm

EV STEL: 950 mg/m³, 200 ppm
TWA: 710 mg/m³, 150 ppm

CAS: 34590-94-8 Propanol, 1(or 2)-(2-methoxymethylethoxy)-

EL STEL: 150 ppm
TWA: 100 ppm

EV STEL: 910 mg/m³, 150 ppm
TWA: 605 mg/m³, 100 ppm

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CAS: 108-94-1 cyclohexanone

EL STEL: 50 ppm
TWA: 20 ppm
Skin

EV STEL: 50 ppm
TWA: 20 ppm
Skin

CAS: 108-65-6 2-methoxy-1-methylethyl acetate

EL STEL: 75 ppm
TWA: 50 ppm

EV TWA: 270 mg/m³, 50 ppm

Regulatory information

EL: OHS Guidelines Part 5, Table of Exposure Limits for Chemical and Biological Substances

EV: O. Reg. 287/17

Additional information: The lists that were valid during the creation were used as basis.

Exposure controls
Personal protective equipment
General protective and hygienic measures

The usual precautionary measures for handling chemicals should be followed.

Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing

Do not eat, drink, smoke or sniff while working.

Wash hands before breaks and at the end of work.

Avoid contact with the eyes and skin.

Do not inhale gases / fumes / aerosols.

Breathing equipment:

Ensure good ventilation/exhaustion at the workplace.

Use suitable respiratory protective device in case of insufficient ventilation (exceeding the workplace limit values, formation of aerosols).

Protection of hands:

Solvent resistant gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Material of gloves

PE/EVAL/PE

Butyl rubber, BR

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

Penetration time of glove material

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

Eye protection: Tightly sealed goggles.

Body protection: Solvent resistant protective clothing

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9 Physical and chemical properties

· Information on basic physical and chemical properties	
· General Information	
· Appearance:	
Form:	Fluid
Color:	Yellow
· Odor:	Solvent-like
· Odor threshold:	No further relevant information available.
· pH-value (100 g/l) at 20 °C (68 °F):	~ 7.0
· Melting point/Melting range:	undetermined
· Boiling point/Boiling range:	undetermined
· Flash point:	36 °C (96.8 °F) (ASTM D93 c.c.)
· Flammability (solid, gaseous)	No further relevant information available.
· Ignition temperature:	No further relevant information available.
· Decomposition temperature:	No further relevant information available.
· Auto igniting:	Product is not selfigniting.
· Danger of explosion:	Product is not explosive. However, formation of explosive air/vapor mixtures are possible.
· Explosion limits:	
Lower:	No further relevant information available.
Upper:	No further relevant information available.
Oxidizing properties	No further relevant information available.
· Vapor pressure:	No further relevant information available.
· Density at 20 °C (68 °F):	~ 0.97 g/cm ³ (ISO 2811)
· Relative density	No further relevant information available.
· Vapor density	No further relevant information available.
· Evaporation rate	No further relevant information available.
· Solubility in / Miscibility with	
Water:	Not miscible or difficult to mix
· Partition coefficient (n-octanol/water):	No further relevant information available.
· Viscosity:	
Dynamic viscosity:	No further relevant information available.
Kinematic viscosity:	No further relevant information available.
· Other information	No further relevant information available.

10 Stability and reactivity

- **Reactivity** No further relevant information available.
- **Chemical stability**
Stable under normal ambient conditions.

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- No decomposition if used and stored according to specifications.
- **Possibility of hazardous reactions** Forms flammable gases / fumes
- **Conditions to avoid**
Protect from heat and direct sunlight.
Keep away from ignition sources
- **Incompatible materials:** Strong oxidizing agents
- **Hazardous decomposition products:** None if used as directed.

11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity (Oral, Dermal, by Inhalation)**

- **LD/LC50 values that are relevant for classification:**

ATE (Acute Toxicity Estimate)

Oral	LD50	4,855 mg/kg (rat)
Dermal	LD50	7,358 mg/kg
Inhalative	LC50 (4h)	73.6 mg/l

CAS: 123-86-4 acetic acid n-butylester

Oral	LD50	10,760 mg/kg (rat) (OECD 423)
Dermal	LD50	> 14,112 mg/kg (rabbit) (OECD 402)

CAS: 34590-94-8 Propanol, 1(or 2)-(2-methoxymethylethoxy)-

Oral	LD50	> 5,000 mg/kg (rat)
Dermal	LD50	9,510 mg/kg (rabbit)

CAS: 108-94-1 cyclohexanone

Oral	LD50	1,890 mg/kg (rat)
Dermal	LD50	1,100 mg/kg (ATE)
Inhalative	LC50 (4h)	11 mg/l (ATE)

CAS: 68411-30-3 Benzenesulfonic acid, C10-13-alkyl derivs., sodium salts

Oral	LD50	1,080 mg/kg (rat)
Dermal	LD50	> 2,000 mg/kg (rat)

CAS: 108-65-6 2-methoxy-1-methylethyl acetate

Oral	LD50	8,500 mg/kg (rat)
Dermal	LD50	> 5,000 mg/kg (rat)
Inhalative	LC50 (4h)	35.7 mg/l (rat)

- **SKIN - Skin corrosion/irritation** Causes skin irritation.
- **EYE - Serious eye damage/irritation** Causes serious eye damage.
- **By Inhalation or by skin - Respiratory or skin sensitisation**
No further relevant information available.
- **Additional toxicological information:**
Inhalation of concentrated vapours as well as oral intake will lead to anaesthesia-like conditions and headache, dizziness, etc.

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· Carcinogenic categories

· IARC (International Agency for Research on Cancer)

CAS: 108-94-1 cyclohexanone

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· CMR effects (carcinogenity, mutagenicity and toxicity for reproduction)

· **Germ cell mutagenicity** No further relevant information available.

· **Carcinogenicity** No further relevant information available.

· **Reproductive toxicity** No further relevant information available.

· **Specific target organ toxicity – single exposure** May cause drowsiness or dizziness

· **Specific target organ toxicity – repeated exposure** No further relevant information available.

· **Aspiration hazard** No further relevant information available.

12 Ecological information

· Toxicity

· Aquatic toxicity:

CAS: 123-86-4 acetic acid n-butylester

EC50 647.7 mg/l (algae/aquatic plants) (Desmodesmus subspicatus; 72h)

44 mg/l (crustacean) (Daphnia magna; 48h)

LC50 18 mg/l (fish) (Pimephales promelas; 96h; OECD 203)

NOEC 23 mg/l (crustacean) (Daphnia magna; 21 d; OECD211)

CAS: 34590-94-8 Propanol, 1(or 2)-(2-methoxymethylethoxy)-

EC50 > 969 mg/l (algae/aquatic plants) (96 h; Pseudokirchneriella subcapitata; OECD 201)

1,919 mg/l (crustacean) (48 h; Daphnia magna; OECD 202)

LC50 10,000 mg/l (fish) (96 h; Pimephales promelas)

EC10 4,168 mg/l (Bacteria) (18 h; Pseudomonas putida)

NOEC 0.5 mg/l (crustacean) (22 d; Daphnia magna; OECD 211)

CAS: 108-94-1 cyclohexanone

EC50 820 mg/l (crustacean) (Daphnia magna; 24 h)

LC50 527 mg/l (fish) (Pimephales promelas; 96 h)

EC5 192 mg/l (algae/aquatic plants) (Scenedesmus quadricauda; 192 h)

CAS: 108-65-6 2-methoxy-1-methylethyl acetate

EC50 > 500 mg/l (crustacean) (48 h; Daphnia magna)

LC50 100 – 180 mg/l (fish) (96 h; Oncorhynchus mykiss)

· **Persistence and degradability** No further relevant information available.

· **Behavior in environmental systems:**

· **Bioaccumulative potential** No further relevant information available.

· **Mobility in soil** No further relevant information available.

· **Additional ecological information:**

· **General notes:**

Do not allow product to reach ground water, water course or sewage system, even in small quantities.

The surfactant(s) contained in this preparation complies(comply) with the biodegradability criteria as laid down in Regulation (EC) No.648/2004 on detergents. Data to support this assertion are held at the disposal of the competent authorities of the Member States and will be made available to them,

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- at their direct request or at the request of a detergent manufacturer.
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **Other adverse effects** No further relevant information available.

13 Disposal considerations

- **Waste treatment methods**
- **Recommendation:** Disposal must be made according to official regulations.
- **Uncleaned packagings:**
- **Recommendation:** Disposal must be made according to official regulations.

14 Transport information

- **UN-Number**
- **DOT/TDG, ADR, IMDG, IATA** UN1993
- **UN proper shipping name**
- **DOT/TDG** Flammable liquids, n.o.s. (Butyl acetates, Cyclohexanone)
- **ADR** 1993 Flammable liquids, n.o.s. (Butyl acetates, Cyclohexanone)
- **IMDG, IATA** FLAMMABLE LIQUID, N.O.S. (BUTYL ACETATES, CYCLOHEXANONE)
- **Transport hazard class(es)**
- **DOT/TDG (Transport dangerous goods):**
- 
- **Class** 3 Flammable liquids
- **Label** 3
- **ADR**
- 
- **Class** 3 (F1) Flammable liquids

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· Label	3
· IMDG, IATA	
	
· Class	3 Flammable liquids
· Label	3
· Packing group	
· DOT/TDG, ADR, IMDG, IATA	III
· Environmental hazards:	Not applicable.
· Special precautions for user	Warning: Flammable liquids
· Hazard identification number (Kemler code):	30
· EMS Number:	F-E, S-E
· Stowage Category	A
· Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code	Not applicable.
· Transport/Additional information:	
· DOT/TDG	
· Quantity limitations	On passenger aircraft/rail: 60 L On cargo aircraft only: 220 L
· ADR	
· Excepted quantities (EQ)	Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml
· IMDG	
· Limited quantities (LQ)	5L
· Excepted quantities (EQ)	Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml
· UN "Model Regulation":	UN 1993 FLAMMABLE LIQUID, N.O.S. (BUTYL ACETATES, CYCLOHEXANONE), 3, III

15 Regulatory information

· **Canadian substance lists**

· **Canadian domestic substance list (DSL):**

All ingredients are listed.

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· Canadian ingredient disclosure list (limit 0.1%):

CAS: 108-94-1 cyclohexanone

· Canadian ingredient disclosure list (limit 1%):

CAS: 123-86-4 acetic acid n-butylester

CAS: 34590-94-8 Propanol, 1(or 2)-(2-methoxymethylethoxy)-

CAS: 68411-30-3 Benzenesulfonic acid, C10-13-alkyl derivs., sodium salts

· Safety, health and environmental regulations/legislation specific for the substance or mixture
· TSCA (Toxic Substances Control Act):

All ingredients are listed.

· MAK (German Maximum Workplace Concentration)

CAS: 108-94-1 cyclohexanone

3B

· Canadian Non-Domestic Substances List (NDSL)

None of the ingredients is listed.

· National regulations:
· Other regulations, limitations and prohibitive regulations
· Please note:

The information herein is presented in good faith and believed to be accurate as of the effective date shown above. However, no warranty, express or implied is given. Regulatory requirements are subject to change and may differ from one location to another. It is the buyers responsibility to ensure that its activities comply with Federal, State or provincial, and local laws. The following specific information is made for the purpose of complying with numerous laws and regulations.

· Other information: The product has been designed for professional use only.

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· Contact:
· Date of the latest revision of the safety data sheet 04/25/2023
· Abbreviations and acronyms:

LL50: Lethal loading, 50%

NOEC: No Observed Effect Concentration

ErC50: Effective Concentration 50%, growth rate

EC50: Effective Concentration 50%

EL50: Effect loading, 50%

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

· * Data compared to the previous version altered.