

Safety Data Sheet

RL10

Replaces date: 1/25/2022

Revision date: 8/29/2023
Version: 1.4.0

SECTION 1: Identification

1.1. GHS Product identifier

Trade name: RL10

1.2. Recommended use of the chemical and restrictions on use

Recommended uses: Functional fluids.

1.3. Supplier's details

Supplier

Company: Mouldpro ApS
Address: Baltorpbakken 10
Zip code: 2750
City: Ballerup
Country: DENMARK
E-mail: sales@mouldpro.com
Phone: +45 70 20 31 31
Homepage: www.mouldpro.com

1.4. Emergency phone Number

+ 45 70 20 31 31 (Mouldpro) The emergency telephone is open between 8 a.m. and 4 p.m. on workdays.

SECTION 2: Hazard(s) identification

2.1. Classification of the substance or mixture

GHS classification: Skin corrosion, Category 1B;H314
Serious eye damage, Category 1;H318
Specific target organ toxicity - single exposure, Category 3;H335

Most serious harmful effects: Causes severe skin burns and eye damage. May cause respiratory irritation.

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2.2. GHS label elements, including precautionary statements

Pictograms



Signal word: Danger

Contains

Substance: hydrochloric acid; but-2-yne-1,4-diol;

Hazard Statements

H314 Causes severe skin burns and eye damage.

H335 May cause respiratory irritation.

Precautionary statements

P260 Do not breathe dust/fume/gas/mist/vapours/spray.

P264 Wash skin thoroughly after handling.

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

P303+361+353+310 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower]. Immediately call a POISON CENTER or doctor/physician.

P304+340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.

P305+351+338+310 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER/doctor.

2.3. Other hazards which do not result in classification

None known.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

Substance	CAS No./ EC No./ REACH Reg. No.	Concentration	Notes
hydrochloric acid ... %	7647-01-0 231-595-7 01-2119484862-27	20 -< 32.5 %	
phosphoric acid ... %	7664-38-2 231-633-2 01-2119485924-24	2 -< 5 %	
but-2-yne-1,4-diol	110-65-6 203-788-6	0.05 - 0.1 %	

SECTION 4: First-aid measures

4.1. Description of necessary first-aid measures

Inhalation: Seek fresh air. Seek medical advice immediately.

Ingestion: Wash out mouth thoroughly and drink 1-2 glasses of water in small sips. Do not induce vomiting. Seek medical advice immediately.

Skin contact: Immediately remove contaminated clothing. Wash the skin thoroughly with water and continue washing for a long time. Immediately call a POISON CENTER or doctor/physician.

Eye contact: Open eye wide, remove any contact lenses and flush immediately with water (preferably using eye wash equipment). Seek medical advice immediately. Continue flushing until medical attention is obtained.

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General: Bring the safety data sheet or label when seeking medical advice.

4.2. Most important symptoms/effects, acute and delayed

Inhalation is irritating to the upper airways. Ingestion may cause caustic burning in mouth, esophagus and stomach. Pains in mouth, throat and stomach. Difficulty swallowing, feeling unwell and vomiting of blood. Brown spots and burns may appear in and around the mouth. Has a caustic burning effect and causes burning pain, reddening, blistering and burning sores if it comes in contact with skin. Eye contact may result in deep caustic burns, pain, tearing and cramping of the eyelids. Risk of serious eye injury and loss of sight.

4.3. Indication of immediate medical attention and special treatment needed, if necessary

Ensure that medical personnel are aware of the material involved, and take precautions to protect themselves.

SECTION 5: Fire-fighting measures

5.1. Suitable extinguishing media

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

Unsuitable extinguishing media: Do not use a jet of water, as it may spread the fire.

5.2. Specific hazards arising from the chemical

The product decomposes when combusted and the following toxic gases can be formed: Phosphorous oxides/ Hydrogenchloride.

5.3. Special protective actions for fire-fighters

Move containers from danger area if it can be done without risk. Avoid inhalation of vapor and smoke gases - seek fresh air. Wear Self-Contained Breathing Apparatus (SCBA) with a chemical protection suit. Extinguishing water which has been in contact with the product may be corrosive.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

For non-emergency personnel: Stay upwind/keep distance from source. Stop leak if this can be done without risk. Wear safety goggles/face protection. Wear gloves.

For emergency responders: In addition to the above: Chemical protective suit is recommended.

6.2. Environmental precautions

Prevent spillage from entering drains and/or surface water.

6.3. Methods and materials for containment and cleaning up

Contain and absorb spills using sand or other absorbent material and transfer to suitable waste containers. Caution! Causes burns. Rinse with water.

6.4. Reference to other sections

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

SECTION 7: Handling and storage

7.1. Precautions for safe handling

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Running water and eye wash equipment must be available. Wash hands before breaks, before using restroom facilities, and at the end of work. A safety shower should be available. Work under effective process ventilation (e.g. local exhaust ventilation).

7.2. Conditions for safe storage, including any incompatibilities

Store safely, out of reach of children and away from food, animal feeding stuffs, drugs, etc. Keep in tightly closed original packaging. Store in a dry, cool, well-ventilated area. Do not expose to heat (e.g. sunlight). Do not store with the following: Metals/ Alkalis/ Organic solvents/ Strong oxidizers/ Aldehydes/ Water/ Alkaline metals/ Alcohols/ Peroxides.

7.3. Specific end use(s)

No special uses in addition to identified uses in 1.2.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Occupational exposure limit: There are no official GHS occupational exposure limits. Be aware of possible national occupational exposure limits.

Measuring methods: Compliance with the stated occupational exposure limits may be checked by occupational hygiene measurements.

8.2. Exposure controls

Appropriate engineering controls: Wear the personal protective equipment specified below.

Personal protective equipment, eye/face protection: Wear safety goggles/face protection.

Personal protective equipment, hand protection: Wear gloves. Type of material: Butyl rubber/ Neoprene rubber/ Breakthrough time has not been determined for the product. Change gloves often. The suitability and durability of a glove is dependant on usage, e.g. frequency and duration of contact, glove material thickness, functionality and chemical resistance. Always seek advice from the glove supplier.

Personal protective equipment, respiratory protection: Light use (small volume, shortterm contact (below 10 min.)): Not required.
Medium use (medium volume, medium contact (1-2 hours)): Wear respiratory protective equipment. Filter type: E.

Environmental exposure controls: Ensure compliance with local regulations for emissions.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Parameter	Value/unit
Physical state	Liquid
Color	Red
Odour	Characteristic
Solubility	No data

Parameter	Value/unit	Remarks
Odour threshold	No data	
Melting point	No data	
Freezing point	No data	
Boiling point or initial boiling point and boiling range	No data	
Flammability	No data	
Lower and upper flammability limit	No data	

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Lower and upper explosion limit	No data	
Flash Point	No data	
Auto-ignition temperature	No data	
Decomposition temperature	No data	
pH (solution for use)	< 1	
pH (concentrate)	No data	
Kinematic viscosity	No data	
Viscosity	No data	
Partition coefficient n-octanol/water (log value)	No data	
Vapour pressure	17.97 mmHg	
Density	1,150 kg/l	
Relative density	No data	
Relative vapour density	No data	
Relative density (sat. air)	No data	
Particle characteristics	No data	

9.2. Other information

Parameter	Value/unit	Remarks
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Other Information: None.

SECTION 10: Stability and reactivity

10.1. Reactivity

Reacts with the following: Metals/ Alkalis/ Organic solvents/ Strong oxidizers/ Aldehydes/ Water/ Alkaline metals/ Alcohols/ Peroxides.

10.2. Chemical stability

The product is stable when used in accordance with the supplier's directions.

10.3. Possibility of hazardous reactions

None known.

10.4. Conditions to avoid

Do not expose to heat (e.g. sunlight). Avoid contact with moisture and water.

10.5. Incompatible materials

Metals/ Alkalis/ Organic solvents/ Strong oxidizers/ Aldehydes/ Water/ Alkaline metals/ Alcohols/ Peroxides.

10.6. Hazardous decomposition products

Phosphorous oxides/ Hydrogenchloride.

SECTION 11: Toxicological information

11.1. Information on health hazard classes

Acute toxicity - oral

hydrochloric acid ... %, cas-no 7647-01-0

Organism	Test Type	Exposure time	Value	Conclusion	Test method	Source
Rabbit	LD50		900 mg/kg			

phosphoric acid ... %, cas-no 7664-38-2

Organism	Test Type	Exposure time	Value	Conclusion	Test method	Source
Rat	LD50		2600 mg/kg			

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but-2-yne-1,4-diol, cas-no 110-65-6

Organism	Test Type	Exposure time	Value	Conclusion	Test method	Source
Rat	LD50		132 mg/kg			

The product does not have to be classified. Based on existing data, the classification criteria are deemed not to have been met. Ingestion may cause discomfort.

Acute toxicity - dermal

phosphoric acid ... %, cas-no 7664-38-2

Organism	Test Type	Exposure time	Value	Conclusion	Test method	Source
Rabbit	LD50		2740 mg/kg			

but-2-yne-1,4-diol, cas-no 110-65-6

Organism	Test Type	Exposure time	Value	Conclusion	Test method	Source
Rat	LD50		659 mg/kg			

The product does not have to be classified. Based on existing data, the classification criteria are deemed not to have been met.

Acute toxicity - inhalation

hydrochloric acid ... %, cas-no 7647-01-0

Organism	Test Type	Exposure time	Value	Conclusion	Test method	Source
Mouse	LC50	1 h	1108 ppm			

phosphoric acid ... %, cas-no 7664-38-2

Organism	Test Type	Exposure time	Value	Conclusion	Test method	Source
Rat	LC50	1 h	> 0.85 mg/l			

but-2-yne-1,4-diol, cas-no 110-65-6

Organism	Test Type	Exposure time	Value	Conclusion	Test method	Source
Rat	LC50	4 h	0.69 mg/l			

The product does not have to be classified. Based on existing data, the classification criteria are deemed not to have been met.

Skin corrosion/irritation

phosphoric acid ... %, cas-no 7664-38-2

Organism	Test Type	Exposure time	Value	Conclusion	Test method	Source
				Corrosive		

Has a caustic burning effect and causes burning pain, reddening, blistering and burning sores if it comes in contact with skin.

Serious eye damage/eye irritation

phosphoric acid ... %, cas-no 7664-38-2

Organism	Test Type	Exposure time	Value	Conclusion	Test method	Source
				Corrosive		

Eye contact may result in deep caustic burns, pain, tearing and cramping of the eyelids. Risk of serious eye injury and loss of sight.

Respiratory sensitization or skin sensitization:

The product does not have to be classified. Test data are not available.

Germ cell mutagenicity:

The product does not have to be classified. Test data are not available.

Carcinogenic properties:

The product does not have to be classified. Test data are not available.

Reproductive toxicity:

The product does not have to be classified. Test data are not available.

Single STOT exposure:

Inhalation is irritating to the upper airways.

Repeated STOT exposure:

The product does not have to be classified. Test data are not available.

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Aspiration hazard: The product does not have to be classified. Test data are not available.

11.2. Information on other hazards

Endocrine disrupting properties: None known.

Other toxicological effects: Ingestion may cause caustic burning in mouth, esophagus and stomach. Pains in mouth, throat and stomach. Difficulty swallowing, feeling unwell and vomiting of blood. Brown spots and burns may appear in and around the mouth.

SECTION 12: Ecological information

12.1. Toxicity

hydrochloric acid ... %, cas-no 7647-01-0

Organism	Species	Exposure time	Test Type	Value	Conclusion	Test method	Source
			Solubility in water				

phosphoric acid ... %, cas-no 7664-38-2

Organism	Species	Exposure time	Test Type	Value	Conclusion	Test method	Source
Crustacea	Daphnia magna		48hEC50	> 100 mg/l			
Fish	Name of species not specified		96hLC50	138 mg/l			

but-2-yne-1,4-diol, cas-no 110-65-6

Organism	Species	Exposure time	Test Type	Value	Conclusion	Test method	Source
Fish	Pimephales promelas		96hLC50	53.6 mg/l			
Crustacea	Daphnia magna		48hEC50	26.79 mg/l			
Crustacea	Daphnia magna		NOEC (chronic)	15 mg/l			

The product does not have to be classified. Based on existing data, the classification criteria are deemed not to have been met.

12.2. Persistence and degradability

hydrochloric acid ... %, cas-no 7647-01-0

Organism	Species	Exposure time	Test Type	Value	Conclusion	Test method	Source
				> 10000 mg/l			

phosphoric acid ... %, cas-no 7664-38-2

Organism	Species	Exposure time	Test Type	Value	Conclusion	Test method	Source
			Solubility in water	850000 mg/l			

but-2-yne-1,4-diol, cas-no 110-65-6

Organism	Species	Exposure time	Test Type	Value	Conclusion	Test method	Source
					Readily biodegradable.		
			Solubility in water	> 10000 mg/l			

Expected to be biodegradable. Mixable with water. May spread in the aquatic environment.

12.3. Bioaccumulative potential

but-2-yne-1,4-diol, cas-no 110-65-6

Organism	Species	Exposure time	Test Type	Value	Conclusion	Test method	Source
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		BCF	3.16			
		Log Kow	-0.73			

No bioaccumulation expected.

12.4. Mobility in soil

but-2-yne-1,4-diol, cas-no 110-65-6

Organism	Species	Exposure time	Test Type	Value	Conclusion	Test method	Source
			Log Kd:	-0.3016			

Expected to be mobile in soil.

12.5. Results of PBT and vPvB assessment

No assessment has been made.

12.6. Endocrine disrupting properties

None known.

12.7. Other adverse effects

The product affects the pH value of the local aquatic environment.

SECTION 13: Disposal considerations

13.1. Disposal methods

Avoid discharge to drain or surface water. Disposal should be in accordance with applicable regional, national and local laws and regulations. Local regulations may be more stringent than regional or national requirements. Uncleansed packaging is to be disposed of via the local waste-removal scheme. Empty, cleansed packaging should be disposed of for recycling.

SECTION 14: Transport information

Land transport (ADR/RID)

14.1. UN number:	3264	14.4. Packing group, if applicable:	II
14.2. UN proper shipping name:	CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (hydrochloric acid ... %) (phosphoric acid ... %)	14.5. Environmental hazards:	The product should not be labelled as an environmental hazard (symbol: fish and tree).
14.3. Transport hazard class(es):	8		
Hazard label(s):	8		
Hazard identification number:	80	Tunnel restriction code:	E

Inland water ways transport (ADN)

14.1. UN number:	3264	14.4. Packing group, if applicable:	II
14.2. UN proper shipping name:	CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (hydrochloric acid ... %) (phosphoric acid ... %)	14.5. Environmental hazards:	The product should not be labelled as an environmental hazard (symbol: fish and tree).
14.3. Transport hazard class(es):	8		
Hazard label(s):	8		
Transport in tank vessels:			

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Sea transport (IMDG)

14.1. UN number:	3264	14.4. Packing group, if applicable:	II
14.2. UN proper shipping name:	CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (hydrochloric acid ... %) (phosphoric acid ... %)	14.5. Environmental hazards:	The product is not a Marine Pollutant (MP).
14.3. Transport hazard class(es):	8	Environmental Hazardous Substance Name(s):	
Hazard label(s):	8	IMDG Code segregation group:	Segr. grp. 1 - Acids (SGG1)
EmS:	F-A, S-B		

Air transport (ICAO-TI / IATA-DGR)

14.1. UN number:	3264	14.4. Packing group, if applicable:	II
14.2. UN proper shipping name:	CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (hydrochloric acid ... %) (phosphoric acid ... %)	14.5. Environmental hazards:	The product should not be labelled as an environmental hazard (symbol: fish and tree).
14.3. Transport hazard class(es):	8		
Hazard label(s):	8		

14.6. Special precautions for user

None.

14.7. Transport in bulk according to IMO instruments

Not applicable.

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations specific for the product in question

Special Provisions: None.

15.2. Chemical Safety Assessment

Other Information: Chemical safety assessment has not been performed.

SECTION 16: Other information

Version history and indication of changes

Version	Revision date	Responsible	Changes
1.4.0	8/29/2023	Bureau Veritas HSE / DOL	2,16

Abbreviations:
PBT: Persistent, Bioaccumulative and Toxic
STOT: Specific Target Organ Toxicity
vPvB: Very Persistent and Very Bioaccumulative

Other Information: This safety data sheet has been prepared for and applies to this product only. It is based on our current knowledge and the information that the supplier was able to provide about the product at the time of preparation. The safety data sheet complies with applicable law on preparation of safety data sheets in accordance with GHS Rev. 9 (2021).

Training advice: A thorough knowledge of this safety data sheet should be a prerequisite condition.

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Classification method: Calculation based on the hazards of the known components. Test data. Extreme pH value (≤ 2 or ≥ 11.5).

SDS is prepared by

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