SAFETY DATA SHEET

according to Regulation No. 1907/2006 of the European Parliament and of the Council, as subsequently amended

CLEAMEN 442

Date of revision: **03. 07. 2024** Version: **3.1**

Replaced version from: **29. 04. 2024**

Date of issue: **29. 07. 2021**

SECTION 1: Identification of the substance/mixture and of the company/ undertaking

1.1. Product identifier

Product Name

CLEAMEN 442

UFI code

UFI: SKS0-J0WW-V00Q-0NTX

Product code

None

Mixture description

An aqueous solution of inorganic acids, surfactant, propylene glycol, perfume and colorant.

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

Identified uses

Liquid concentrated, non-foaming, acidic detergent which is intended primarily for hand and machine cleaning surfaces.

Only for professional users.

Uses advised against

Do not use on materials containing lime or other non-acidic materials such as marble, travertine, granite, etc. Do not use in combination with chlorine-based products, free chlorine (dangerous gas) may be released. Do not use on wooden and veneered furniture. The formulation may cause slight clumping of the joint after application.

It is recommended to use it only for the intended use. Other uses may expose users to unpredictable risks.

1.3. Details of the supplier of the safety data sheet

CORMEN s.r.o.
Věchnov 73
593 01
Czech Republic
telephone: +420 566 550 961
Fax: +420 566 551 822
e-mail address for a competent person responsible for the SDS: info@cormen.cz

1.4. Emergency telephone number

112 (General emergency phone).

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

The mixture **is classified as hazardous** according to regulation 1272/2008/EC.

Classification according to 1272/2008/EC

Met. Corr. 1; H290
Skin Corr. 1; H314
Eye Dam. 1; H318

Full text of classifications and H-phrases: see section 16.

The most important adverse physical, human health and environmental effects

May be corrosive to metals. Causes severe skin burns and eye damage.

2.2. Label elements

Hazard pictograms

Signal word

Danger.

Substances of the mixture to be placed on the label

Contains Phosphoric acid, Undecanol, branched and linear, ethoxylated, propoxylated (≥ 2.5 moles EO/PO), Hydrochloric acid.

Hazard statements

H290	May be corrosive to metals.
H314	Causes severe skin burns and eye damage.

Precautionary statements

P234	Keep only in original packaging.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P301+P330+P331	IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P303+P361+P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.
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.
P501	Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation. Dispose of the cleaned packaging without any residual product content in the sorted waste.

Supplemental hazard information

Mandatory additional information is not required according to CLP regulation.

Composition according to regulation 648/2004/EC on detergents: ≥ 5 - < 15 % non-ionic surfactants, perfumes, HEXYL CINNAMAL, LINALOOL, LIMONENE, ALPHA-ISOMETHYL IONONE, preservation agents (BENZYL ALCOHOL, METHYLCHLOROISOTHIAZOLINONE AND METHYLISOTHIAZOLINONE).

2.3. Other hazards

Mixture does not contain substance(s) meeting the criteria for persistent, bioaccumulative and toxic (PBT) or very persistent and very bioaccumulative (vPvB) in accordance with Annex XIII of REACH regulation. The mixture and its substances are not mentioned on the Candidate list for possible inclusion in Annex XIV of REACH at the date of the revision of the safety data sheet (established in accordance with Article 59(1) of REACH regulation. Mixture does not contain the substance(s) identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

3.2.1. Substances of a mixture classified as hazardous

Identification of substance			Content wt. %	Classification according to 1272/2008/EC
Phosphoric acid; Orthophosphoric acid				
CAS Number	7664-38-2		10 - < 15	Met. Corr. 1; H290 Acute Tox. 4; H302 Skin Corr. 1B; H314 Eye Dam. 1; H318
EC Number	231-633-2			
Index Number	015-011-00-6			
Registration Number	01-2119485924-24-XXXX			
The substance has specific concentration limits:				
Met. Corr. 1; H290		C > 20 %		
Skin Corr. 1B; H314		C ≥ 25 %		
Skin Irrit. 2; H315		10 % ≤ C < 25 %		
Eye Irrit. 2; H319		10 % ≤ C < 25 %		
Undecanol, branched and linear, ethoxylated, propoxylated (≥ 2.5 moles EO/PO)				
CAS Number	not given		5 - ≤ 10	Acute Tox. 4; H302 Eye Dam. 1; H318
EC Number	940-634-3			
Index Number	not given			
Registration Number	is not subject to registration, it is a polymer			
Sulphamidic acid; Sulphamic acid; Sulfamic acid				
CAS Number	5329-14-6		5 - < 10	Skin Irrit. 2; H315 Eye Irrit. 2; H319 Aquatic Chronic 3; H412
EC Number	226-218-8			
Index Number	016-026-00-0			
Registration Number	01-2119488633-28-XXXX			
Hydrochloric acid				

CAS Number 7647-01-0 EC Number 231-595-7 Index Number 017-002-01-X Registration Number 01-2119475328-30-XXXX		< 1	Met. Corr. 1; H290 Skin Corr. 1B; H314 STOT SE 3; H335
The substance has specific concentration limits:			
Skin Corr. 1B; H314	C ≥ 25 %		
Skin Irrit. 2; H315	10 % ≤ C < 25 %		
Eye Irrit. 2; H319	10 % ≤ C < 25 %		
STOT SE 3; H335	C ≥ 10 %		
Met. Corr. 1; H290	C ≥ 0.1 %		
Ethanediol; Ethylene glycol			
CAS Number 107-21-1 EC Number 203-473-3 Index Number 603-027-00-1 Registration Number not yet available		< 0.001	Acute Tox. 4; H302 STOT RE 2; H373
Full text of classifications and H-phrases: see section 16.			

SECTION 4: First aid measures

In all cases keep the victim at physical and mental rest and warm. In case of doubt or if symptoms persist, seek medical attention. Never give anything by mouth if victim is rapidly losing consciousness, unconscious or convulsing. Protect yourself during rescue work.

4.1. Description of first aid measures

Inhalation

Interrupt the exposure, move the person to the fresh air. In case of persistent nausea, seek medical advice.

Skin contact

Remove contaminated clothing, shoes, and wash affected skin thoroughly with water (preferably lukewarm) and soap. Do not use solvents or thinners. Seek medical advice.

Eye contact

Rinse with a gentle stream of water for at least 15 minutes. Keep your eyelids wide open with your thumb and forefinger. If the affected person is wearing contact lenses, remove them before rinsing eyes if it is easy. Seek medical advice.

Ingestion

Rinse your mouth and then drink plenty of water. Do not induce vomiting. Do not give milk or alcoholic beverages. Never give anything by mouth to an unconscious person. Seek medical advice.

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

Are not known.

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

Treat symptomatically and supportively.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media

Small fire:

Carbon dioxide CO_2, dry extinguishing agent, sand or earth, alcohol-resistant foam.

Extensive fire:

Fragmented water streams (water mist), alcohol-resistant foam.

Unsuitable extinguishing media

Solid streams of water may be ineffective.

5.2. Special hazards arising from the substance or mixture

In case of fire extinguishing prevent leakage of water and rest of product into drains. Collect them separately and dispose of safely in accordance with current legislation and applicable local regulations.

In case of fires, hazardous combustion gases are formed: carbon oxides, phosphor oxides, phosphine, sulphur oxides, hydrogen sulphide, ammonia, nitrogen oxides, chlorine, chlorine oxides, hydrogen chloride and products of incomplete combustion.

5.3. Advice for firefighters

Stop further leakage of product if possible. Spilled product, which does not burn, cover with sand or foam. Move containers and barrels away from the fire to a safe place, if possible. Cool all affected containers down with flooding quantities of water. If the fire can´t be extinguished - evacuate the premises.

In case of fire, wear suitable respiratory protective equipment and fire-fighting suit.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Avoid contact with skin and eyes, use suitable protective equipment and clothing, see Section 8. Ensure adequate ventilation. Avoid formation of vapour and aerosol. At the point of leakage, prevent the movement of unauthorized persons.

6.2. Environmental precautions

Prevent further leakage or spillage if safe to do so. If this cannot be avoided, inform the competent authorities (police and firefighters) immediately.

6.3. Methods and material for containment and cleaning up

According to the amount of spilled liquid, drain away the substance (large spillage) or in case of small spillage, absorb it with suitable absorbent (vermiculite, dry sand), put into labelled closed containers and dispose of them accordingly to Section 13. Flush residues with water and collect it for waste disposal. Do not use solvents or dispersants unless instructed by an expert or government authority.

If container is damaged, remove the content to the new undamaged container and label it properly again.

6.4. Reference to other sections

Refer also to the provisions of sections 7, 8 and 13 of this safety data sheet.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Avoid contact with skin and eyes. Personal protection see Section 8. Ensure good ventilation to prevent formation of vapour and aerosol.

Smoking, eating and drinking should be prohibited at the place of use. Keep safety regulations for handling chemicals. Take off contaminated clothing and protective equipment before entering the dining area. Do not use dirty clothing. After work wash yourself carefully with warm water and soap, take a shower. Use protective cream.

7.2. Conditions for safe storage, including any incompatibilities

Store in original, tightly closed containers, in a dry, cool and well-ventilated place at room temperature.

Protect from frost.

Do not store together with incompatible materials (see subsection 10.5), food, drink and feed.

7.3. Specific end use(s)

It has a multi-purpose use, it is intended for building, periodic and daily cleaning. It is always used diluted according to the instructions for use and according to the purpose of use. Building cleaning consists in removing lime deposits, cement residues, clay after painting, cement veils on paving, magnesium and mineral deposits. For periodic and daily cleaning, it is used in the bathroom and sanitary area, where limescale, mineral deposits and rust occur. It is also suitable for swimming pools, balnea, spas and industrial plants. In lower concentrations, it is used to treat floors that are normally wiped with alkaline agents. It removes limestone and mineral deposits from them and revives their colors and shine.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

8.1.1. Exposure limit value

Phosphoric acid CAS: 7664-38-2

Limit values - Eight hours		Limit values - Short-term		Note
1 mg/m³	- ppm	2 mg/m³	- ppm	-

Hydrochloric acid - hydrogen chlorine CAS: 7647-01-0

Limit values - Eight hours		Limit values - Short-term		Note
8 mg/m³	5 ppm	15 mg/m³	10 ppm	-

Ethandiol CAS: 107-21-1

Limit values - Eight hours		Limit values - Short-term		Note
52 mg/m³	20 ppm	104 mg/m³	40 ppm	Skin

8.1.2. Biological limit values

Not determined in EU.

8.1.3. DNEL and PNEC values

Phosphoric acid CAS: 7664-38-2

DNEL

Area of use	Route of exposure	Effect	Exposure time	Value
Workers	Inhalation	Systemic effect	Long term	10.7 mg/m³
Workers	Inhalation	Local effect	Long term	1 mg/m³
Workers	Inhalation	Local effect	Acute/short term	2 mg/m³
General population	Inhalation	Systemic effect	Long term	4.57 mg/m³
General population	Inhalation	Local effect	Long term	0.36 mg/m³
General population	Oral	Systemic effect	Long term	0.1 mg/kg/day

PNEC - not yet available

Sulphamidic acid CAS: 5329-14-6

DNEL

Area of use	Route of exposure	Effect	Exposure time	Value
Workers	Inhalation	Systemic effect	Long term	70.5 mg/m^3
Workers	Dermal	Systemic effect	Long term	10 mg/kg/den
General population	Inhalation	Systemic effect	Long term	17.4 mg/m^3
General population	Dermal	Systemic effect	Long term	5 mg/kg/day
General population	Oral	Systemic effect	Long term	5 mg/kg/day

PNEC

Fresh water	Marine water	Intermittent releases		Sewage Treatment Plant (STP)
		Fresh water	Marine water	
1.8 mg/l	0.18 mg/l	0.48 mg/l	not given	20 mg/l

PNEC

Sediment (freshwater)	Sediment (marine water)	Air	Soil	Hazard for predators
8.36 mg/kg	0.84 mg/kg	no effect	5 mg/kg	no effect

Hydrochloric acid CAS: 7647-01-0

DNEL

Area of use	Route of exposure	Effect	Exposure time	Value
Workers	Inhalation	Local effect	Long term	8 mg/m^3
Workers	Inhalation	Local effect	Acute/short term	15 mg/m^3
General population	Inhalation	Local effect	Long term	8 mg/m^3
General population	Inhalation	Local effect	Acute/short term	15 mg/m^3

PNEC - not yet available

8.2. Exposure controls

8.2.1. Appropriate engineering controls

Use only in well-ventilated areas.

Observe usual safety precautions for working with chemicals. The degree of effectiveness of personal protective equipment depends on temperature and ventilation levels.

8.2.2. Individual protection measures, such as personal protective equipment

Do not eat, drink or smoke. After work, wash thoroughly with warm water and soap and take a shower. Use protective cream. Do not soiled protective equipment to wash, do not use solvents.

Eye/face protection

Wear safety glasses or face shield (EN 166, EN 149+A1).

Skin protection - hand protection

Wear protective gloves (EN 374-1, EN 374-2).

Recommended gloves material:

nitrile rubber, breakthrough time: ≥ 480 min., glove thickness: ≥ 0.11 mm

The selection of the glove material on consideration of the breakthrough time, permeability, degradation and next relevant factors; other chemicals that may come into contact, physical requirements (cut and puncture protection, dexterity, thermal protection), possible body reactions to the glove material and the glove supplier's instructions and specifications. In case of repeated use of gloves, clean and keep them in a well-ventilated place before taking off.

Skin protection - other

Suitable protective working clothing and protective footwear.

Respiratory protection

Not necessary in case of compliance concentration limits (if they were exceeded, use respiratory protection). In the event of an accident or a fire use self-contained breathing apparatus.

Thermal hazards

In normal use is not necessarily protective equipment to be worn for materials that represent a thermal hazard.

8.2.3. Environmental exposure controls

Uncontrolled release of the mixture into environment is to be avoided. Keep the emission limits according to national legislation.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Mixture

Physical state	Liquid.
Colour	Pink.
Odour	Characteristic.
Melting point/freezing point	Not determined.
Boiling point or initial boiling point and boiling range	100 °C
Flammability	Not determined, it is an aqueous solution which does not contain any flammable substances or the concentration of flammable substance(s) is lower than the limit for inclusion in Section 3.
Lower explosion limit	Not determined, it is an aqueous solution which does not contain any flammable substances or the concentration of flammable substance(s) is lower than the limit for inclusion in Section 3.
Upper explosion limit	Not determined, it is an aqueous solution which does not contain any flammable substances or the concentration of flammable substance(s) is lower than the limit for inclusion in Section 3.
Flash point	> 100 °C
Auto-ignition temperature	371 °C

Decomposition temperature	Not determined, the mixture does not contain self-reactive substances or organic peroxides or other substances which may decompose.
pH	1.0 - 2.0.
Kinematic viscosity	Not determined, the mixture does not contain a substance classified as aspiration toxic, or the sum of the concentrations of substances classified as aspiration toxic is less than 10 wt. %.
Solubility	Miscible.
Partition coefficient n-octanol/water (log value)	Does not apply to mixture.
Vapour pressure	23 hPa
Density and/or relative density	D_4^{20} = 1.183
Relative vapour density	Not determined.
Particle characteristics	Does not apply to liquid.
Phosphoric acid	CAS: 7664-38-2
Physical state	Solid.
Colour	Yellowish.
Odour	Not determined.
Melting point/freezing point	41.1 °C (EU method A.1).
Boiling point or initial boiling point and boiling range	296.5 °C (EU method A.2).
Flammability	The substance is not classified as flammable, pyrophoric or emit flammable gases under standard conditions.
Lower explosion limit	Does not apply to solid.
Upper explosion limit	Does not apply to solid.
Flash point	Does not apply to solid.
Auto-ignition temperature	Does not apply to solid.
Decomposition temperature	Not determined, it is not a self-reactive substance or an organic peroxide or a substance that may decompose.
pH	Not determined.
Kinematic viscosity	Does not apply to solid.
Solubility	The substance is miscible with water, the solubility in water is higher than 1000 g / l (20 ° C, literature).
Partition coefficient n-octanol/water (log value)	Not determined, it is an inorganic substance.
Vapour pressure	4 Pa (20 °C, literature)
Density and/or relative density	D_4^{38} = 1.84 (EU method A.3).
Relative vapour density	Does not apply to solid.
Particle characteristics	Not determined.

Sulphamidic acid	CAS: 5329-14-6
Physical state	Solid.
Colour	White.
Odour	Odourless.
Melting point/freezing point	ca. 250 °C (decomposition, OECD 102).
Boiling point or initial boiling point and boiling range	Not determined, substance decomposes.
Flammability	The substance is not classified as flammable (EU method A.10).
Lower explosion limit	Does not apply to solid.
Upper explosion limit	Does not apply to solid.
Flash point	Does not apply to solid.
Auto-ignition temperature	Not determined, the heating temperature of the substance is higher than 400 °C (EU method A.16).
Decomposition temperature	ca. 205 °C (OECD 102).
pH	0.41 (10 vol. % aqueous solution, 25 °C, literature). 0.5 (7.5 vol. % aqueous solution, 25 °C, literature). 0.63 (5 vol. % aqueous solution, 25 °C, literature). 0.87 (2.5 vol. % aqueous solution, 25 °C, literature). 1.18 (1 vol. % aqueous solution, 25 °C, literature). 1.41 (0.5 vol. % aqueous solution, 25 °C, literature). 2.02 (0.1 vol. % aqueous solution, 25 °C, literature).
Kinematic viscosity	Does not apply to solid.
Solubility	181.4 g/l (20 °C, pH = 0.02 - 0.03, OECD 105).
Partition coefficient n-octanol/water (log value)	Not determined, it is an inorganic substance.
Vapour pressure	0.8 Pa (20 °C, literature). 2.5 Pa (100 °C, literature).
Density and/or relative density	2.126 g/cm^3 (25 °C, literature).
Relative vapour density	Does not apply to solid.
Particle characteristics	D10 = 189.74 µm (OECD 110). D50 = 505.28 µm (OECD 110). D90 = 1 075.84 µm (OECD 110).
Hydrochloric acid	CAS: 7647-01-0
Physical state	Liquid.
Colour	Colourless.
Odour	Pungent.
Melting point/freezing point	Not determined.

Boiling point or initial boiling point and boiling range	-85.05 °C (hydrogen chloride, literature).
Flammability	Not determined.
Lower explosion limit	Not determined.
Upper explosion limit	Not determined.
Flash point	Not determined, it is an inorganic substance.
Auto-ignition temperature	Not determined.
Decomposition temperature	Not determined, it is not a self-reactive substance or an organic peroxide or a substance that may decompose.
pH	Not determined.
Kinematic viscosity	Not determined, it is not a hydrocarbon or a chlorinated hydrocarbon.
Solubility	Not determined, it is an aqueous solution.
Partition coefficient n-octanol/water (log value)	Not determined, it is an inorganic substance.
Vapour pressure	Not determined.
Density and/or relative density	1.17 - 1.18 g/ml (concentration 34.1 - 36.2 %, CIPAC Method MT 3.2.1).
Relative vapour density	Not determined.
Particle characteristics	Does not apply to liquid.

9.2. Other information

9.2.1. Information with regard to physical hazard classes

Mixture

Explosives

Data for the mixture are not available.

The mixture does not contain substances classified as explosives or oxidising, or the concentration of substance(s) is lower than the limit for inclusion in Section 3.

Flammable gases

It is not gas.

Aerosols

It is not aerosol.

Oxidising gases

It is not gas.

Gases under pressure

It is not gas.

Flammable liquids

The mixture is not classified as flammable liquid category 3 according to the value of the flash point and boiling point.

Flammable solids

It is not solid.

Self-reactive substances and mixtures

Data for the mixture are not available.

The mixture does not contain substances classified as self-reactive substances or explosives or organic peroxides or oxidising, or the concentration of substance(s) is lower than the limit for inclusion in Section 3.

Pyrophoric liquids

Data for the mixture are not available.

The mixture does not contain substances classified as pyrophoric liquids or the concentration of substance(s) is lower than the limit for inclusion in Section 3.

Pyrophoric solids

It is not solid.

Self-heating substances and mixtures

Data for the mixture are not available.

The mixture does not contain substances classified as self-heating or pyrophoric substances or the concentration of substance(s) is lower than the limit for inclusion in Section 3.

Substances and mixtures, which emit flammable gases in contact with water

Data for the mixture are not available.

The mixture does not contain substances classified as substances, which emit flammable gases in contact with water or the concentration of substance(s) is lower than the limit for inclusion in Section 3.

Oxidising liquids

Data for the mixture are not available.

The mixture does not contain substances classified as oxidising liquids or the concentration of substance(s) is lower than the limit for inclusion in Section 3.

Oxidizing solids

It is not solid.

Organic peroxides

Data for the mixture are not available.

The mixture does not contain substances classified as organic peroxides or the concentration of substance(s) is lower than the limit for inclusion in Section 3.

Corrosive to metals

Data for the mixture are not available.

The mixture is classified as corrosive to category 1 metals based on a calculation according to the general / specific concentration limits of the substance (s).

Desensitised explosives

Data for the mixture are not available.

The mixture does not contain substances classified as explosives or desensitised explosives, or the concentration of substance(s) is lower than the limit for inclusion in Section 3.

Phosphoric acid CAS: 7664-38-2

Explosives

Data for the substance are not available.

The substance does not contain chemical groups associated with explosive properties.

Flammable gases
It is not gas.
Aerosols
It is not aerosol.
Oxidising gases
It is not gas.
Gases under pressure
It is not gas.
Flammable liquids
It is not liquid.
Flammable solids
Data for the substance are not available. The substance is not classified as flammable solid.
Self-reactive substances and mixtures
Data for the substance are not available. The substance is not classified as self-reactive.
Pyrophoric liquids
It is not liquid.
Pyrophoric solids
Data for the substance are not available. The substance is stable in air, there is no spontaneous ignition.
Self-heating substances and mixtures
Data for the substance are not available. The substance is not classified as self-heating.
Substances and mixtures, which emit flammable gases in contact with water
Data for the substance are not available. The chemical structure of the substance does not contain metals or metalloids. The substance is soluble in water and forms a stable mixture with it.
Oxidising liquids
It is not liquid.
Oxidizing solids
Data for the substance are not available. It is an inorganic substance does not contain chemical groups associated with oxidising properties.
Organic peroxides
Data for the substance are not available. The substance does not contain a bivalent group -O-O- with at least one organic radical.
Corrosive to metals

Data for the substance are not available.
The substance is classified as corrosive to metal category 1.

Desensitised explosives

Data for the substance are not available.
The substance does not contain chemical groups associated with explosive properties.

Sulphamidic acid CAS: 5329-14-6

Explosives

Data for the substance are not available.
The substance does not contain chemical groups associated with explosive properties.

Flammable gases

It is not gas.

Aerosols

It is not aerosol.

Oxidising gases

It is not gas.

Gases under pressure

It is not gas.

Flammable liquids

It is not liquid.

Flammable solids

The substance is not classified as flammable solid (EU method A.10).

Self-reactive substances and mixtures

Data for the substance are not available.
The substance does not contain chemical groups associated with explosive or self-reactive properties.

Pyrophoric liquids

It is not liquid.

Pyrophoric solids

Data for the substance are not available.
The substance is stable in air, there is no spontaneous ignition.

Self-heating substances and mixtures

Data for the substance are not available.
The substance is not classified as self-heating.

Substances and mixtures, which emit flammable gases in contact with water

Data for the substance are not available.
The chemical structure of the substance does not contain metals or metalloids.
The substance is soluble in water and forms a stable mixture with it.

Oxidising liquids

It is not liquid.

Oxidizing solids

Data for the substance are not available.
It is an inorganic substance does not contain chemical groups associated with oxidising properties.

Organic peroxides

Data for the substance are not available.
The substance does not contain a bivalent group -O-O- with at least one organic radical.

Corrosive to metals

Data for the substance are not available.
The substance is not classified as corrosive to metals.

Desensitised explosives

Data for the substance are not available.
The substance does not contain chemical groups associated with explosive properties.

Hydrochloric acid CAS: 7647-01-0

Explosives

Data for the substance are not available.
The substance does not contain chemical groups associated with explosive properties.

Flammable gases

It is not gas.

Aerosols

It is not aerosol.

Oxidising gases

It is not gas.

Gases under pressure

It is not gas.

Flammable liquids

It is not liquid.
It is an aqueous solution of an inorganic substance.

Flammable solids

It is not solid.

Self-reactive substances and mixtures

Data for the substance are not available.
The substance does not contain chemical groups associated with explosive or self-reactive properties.

Pyrophoric liquids

Data for the substance are not available.
The substance is stable in air, there is no spontaneous ignition.

Pyrophoric solids

It is not solid.

Self-heating substances and mixtures

Data for the substance are not available.
The substance is not classified as self-heating.

Substances and mixtures, which emit flammable gases in contact with water

Data for the substance are not available.
The chemical structure of the substance does not contain metals or metalloids.
The substance is miscible with water and forms a stable mixture with it.

Oxidising liquids

Data for the substance are not available.
It is an inorganic substance does not contain chemical groups associated with oxidising properties.

Oxidizing solids

It is not solid.

Organic peroxides

Data for the substance are not available.
The substance does not contain a bivalent group -O-O- with at least one organic radical.

Corrosive to metals

Data for the substance are not available.
The substance is classified as corrosive to metal category 1.

Desensitised explosives

Data for the substance are not available.
The substance does not contain chemical groups associated with explosive properties.

9.2.2. Other safety characteristics

Mechanical sensitivity	Not determined, it is not an explosive substance.
Self-accelerating polymerisation temperature	Not determined, it is not a polymerising substance.
Formation of explosible dust/air mixtures	Not determined, it is not a dust.
Acid/alkaline reserve	Not determined.
Evaporation rate	Not determined.
Miscibility	Not determined.
Conductivity	Not determined.
Corrosiveness	Not determined.
Gas group	Not determined, it is not gas.
Redox potential	Not determined.
Radical formation potential	Not determined.
Photocatalytic properties	Not determined.

SECTION 10: Stability and reactivity

10.1. Reactivity

The mixture is stable under normal conditions of use. There aren´t any hazardous reaction.

10.2. Chemical stability

Stable under recommended storage conditions.

10.3. Possibility of hazardous reactions

Hazardous reactions aren´t known under normal conditions of use.

10.4. Conditions to avoid

Protect from frost.

10.5. Incompatible materials

Strong base, strong oxidizing agents.

10.6. Hazardous decomposition products

They do not form under normal use. Burning releases carbon oxides, phosphor oxides, phosphine, sulphur oxides, hydrogen sulphide, ammonia, nitrogen oxides, chlorine, chlorine oxides, hydrogen chloride and products of incomplete combustion.

SECTION 11: Toxicological information

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

Mixture

Acute toxicity

The mixture is not classified as toxic for all routes of exposure.

Oral	Data for the mixture are not available. The mixture is not classified by the additive formula. $ATE_{mixture}$ > 2 000 mg/kg.
Dermal	Data for the mixture are not available. The mixture does not contain substances classified as an acute toxicity by dermal route of exposure or the concentration of substance(s) is lower than the limit for inclusion in Section 3.
Inhalation	Data for the mixture are not available. The mixture does not contain substances classified as an acute toxicity by inhalation route of exposure or the concentration of substance(s) is lower than the limit for inclusion in Section 3.

Skin corrosion/irritation

Data for the mixture are not available.

The mixture is classified as corrosive for skin in category 1 based on value pH and inorganic acids content together with surfactant.

Serious eye damage/irritation

Data for the mixture are not available.

The mixture is classified as causes serious eye damage based on the general/specific concentration limits of substance(s), value pH and inorganic acids content together with surfactant.

Respiratory or skin sensitisation

Data for the mixture are not available.

The mixture does not contain substances classified as sensitizing or the concentration of substance(s) is lower than the limit for inclusion in Section 3.

Germ cell mutagenicity

Data for the mixture are not available.

The mixture does not contain substances classified as mutagenicity or the concentration of substance(s) is lower than the limit for inclusion in Section 3.

Carcinogenicity

Data for the mixture are not available.

The mixture does not contain substances classified as carcinogenicity or the concentration of substance(s) is lower than the limit for inclusion in Section 3.

Reproductive toxicity

Data for the mixture are not available.

The mixture does not contain substances classified as toxic for reproduction or the concentration of substance(s) is lower than the limit for inclusion in Section 3.

STOT – single exposure

Data for the mixture are not available.

The mixture is not classified as toxic for specific target organs in a single exposure in category 3 according to the recommended concentration limits of substance(s).

STOT – repeated exposure

Data for the mixture are not available.

The mixture is not classified as toxic for specific target organs in a repeated exposure according to the general/specific concentration limits of substance(s).

Aspiration hazard

Data for the mixture are not available.

The mixture does not contain substances classified as aspiration hazard or the concentration of substance(s) is lower than the limit for inclusion in Section 3.

Other information

See section 2 and 4.

Phosphoric acid CAS: 7664-38-2

Acute toxicity

Oral	The substance is classified in category 4. The LD_{50} for a 10% solution of 75.4% thermal phosphoric acid in rats was determined to be 1.70 ml/100 g body weight (approximately 2600 mg/kg bw, OECD 423) ATE = 500 mg/kg (for calculation by additive formula)
Dermal	Based on available data, the classification criteria are not met. LD_{50} > 2 000 mg/kg (rabbit, no death, 85% phosphoric acid, literature).
Inhalation	Data for the substance are not available.

Skin corrosion/irritation

The substance is classified as skin corrosion in category 1B.

Mean erythema score = 4 (intact and abraded skin, not fully reversible after 72 hours) and oedema = 2.3 (intact skin, not fully reversible after 72 hours), 2.2 (abraded skin, not fully reversible after 72 hours), primary dermal irritation index PDII = 6.6 (80% phosphoric acid, rabbit).

Serious eye damage/irritation

The substance is classified as seriously damaging to the eyes.

Respiratory or skin sensitisation

Data for the substance are not available.

Germ cell mutagenicity

Based on available data, the classification criteria are not met.

Negative (OECD 471, OECD 473, OECD 476).

Carcinogenicity

Data for the substance are not available.

Reproductive toxicity

Based on available data, the classification criteria are not met.

NOAEL ≥ 500 mg/kg/day (fertility, rat, oral, generation P0, OECD 422)

NOAEL ≥ 500 mg/kg/day (rat, oral, generation F1, OECD 422)

STOT – single exposure

Data for the substance are not available.

STOT – repeated exposure

Based on available data, the classification criteria are not met.

LOAEL = 155 mg/kg/day (nephrocalcinosis, rat, oral).

Aspiration hazard

The substance is not a hydrocarbon or a chlorinated hydrocarbon with a kinematic viscosity of 20.5 mm^2/s or less at 40 °C.

Sulphamidic acid CAS: 5329-14-6

Acute toxicity

Oral	Based on available data, the classification criteria are not met. LD_{50} = 2 065 mg/kg (rat, female, literature).
Dermal	Based on available data, the classification criteria are not met. LD_{50} > 2 000 mg/kg (rabbit, OECD 402).
Inhalation	Data for the substance are not available.

Skin corrosion/irritation

The substance is classified as skin irritant.

Mean erythema score = 0 (rabbit, EU method B.4).

Primary dermal irritation index PDII = 2.6 (max. 10, intact skin), mean erythema score ≥ 1 - ≤ 2 (moderate erythema on intact skin), mean oedema score = ca. 1 (moderate erythema on intact skin) (rabbit, 72 h, OECD 404).

Serious eye damage/irritation

The substance is classified as eye irritant.

Mean score of corneal opacity = 1 (fully reversible), iritis = 1 (fully reversible), conjunctival oedema = 1 (fully reversible) (rabbit, 72 h, OECD 405).

Respiratory or skin sensitisation

Data for the substance are not available.

Germ cell mutagenicity

Based on available data, the classification criteria are not met.

Negative (OECD 471, OECD 476, OECD 487).

Carcinogenicity

Data for the substance are not available.

Reproductive toxicity

Based on available data, the classification criteria are not met.

NOAEL> 50 mg/kg/day (rat, oral, clinical signs, mortality, body weight and weight gain, food consumption and compound intake, water consumption and compound intake, gross pathology, reproductive performance, P0 generation, EPA OPP 83-4).

NOAEL = 500 mg/kg/day (rat, oral, viability, sexual maturation, clinical signs, mortality, body weight and weight gain, food consumption and compound intake, water consumption and compound intake, organ weights and organ/body weight ratios, gross pathology, histopathology, F1 generation, EPA 83 -4).

NOAEL = 500 mg/kg/day (rat, oral, viability, sexual maturation, clinical signs, mortality, body weight and weight gain, food consumption and compound intake, water consumption and compound intake, organ weights and organ/body weight ratios, gross pathology, histopathology, F2a generation, EPA OPP 83-4).

NOAEL = 500 mg/kg/day (rat, oral, viability, sexual maturation, clinical signs, mortality, body weight and weight gain, food consumption and compound intake, water consumption and compound intake, organ weights and organ/body weight ratios, gross pathology, histopathology, F2b generation, EPA OPP 83-4).

STOT – single exposure

Data for the substance are not available.

STOT – repeated exposure

Based on available data, the classification criteria are not met.

NOAEL = 929 mg/kg/day (rat, male, oral, 90 days, OECD 408).

NOAEL = 1 004 mg/kg/day (rat, female, oral, 90 days, OECD 408).

Aspiration hazard

The substance is not a hydrocarbon or a chlorinated hydrocarbon with a kinematic viscosity of 20.5 mm^2/s or less at 40 °C.

Hydrochloric acid CAS: 7647-01-0

Acute toxicity

Oral	Data for the substance are not available.
Dermal	Data for the substance are not available.
Inhalation	Based on available data, the classification criteria are not met. LC_{50} = 40 989 ppm (HCl gas, male, 5 min.). LC_{50} = 4 701 ppm (HCl gas, male, 30 min.). LC_{50} = 45.6 ppm (aerosol, male, 5 min.). LC_{50} = 8.3 ppm (aerosol, male, 30 min.).

Skin corrosion/irritation

The substance is classified as skin corrosion in category 1B.

Not skin corrosive - tissue viability = 93.3% (10% solution, exposure: 3 minutes, human skin model, OECD 431).
Skin corrosive - tissue viability = 27.6%, 5.4% (10% solution, exposure: 60, 240 minutes, human skin model, OECD 431).

Skin corrosive - tissue viability = 30.4%, 6.5%, 6% (25% solution, exposure: 3, 60, 240 minutes, human skin model, OECD 431).

Skin corrosive - tissue viability = 9.5%, 4.1%, 6.6% (30% solution, exposure: 3, 60, 240 minutes, human skin model, OECD 431).

Not skin irritant - tissue viability = 106.8%, 99.7%, 82%, 101% (1, 3, 10, 15% solution, human skin model, OECD 439).

Positive result - tissue viability = 41.1%, 32.2%, 82%, 101% (17.5, 25% solution, human skin model, OECD 439).

Serious eye damage/irritation

The substance is classified as seriously damaging to the eyes.

Respiratory or skin sensitisation

Based on available data, the classification criteria are not met.

Not skin sensitising (guinea pig, OECD 406).

Germ cell mutagenicity

Based on available data, the classification criteria are not met.

Negative (mitotic recombination assay with Saccharomyces cerevisiae, mammalian chromosome aberration test).

Positive (mammalian cell gene mutation assay).

Carcinogenicity

Based on available data, the classification criteria are not met.

NOAEL < 10 ppm (HCl gas, rat, male).

Reproductive toxicity

Based on available data, the classification criteria are not met.

NOAEL = 853 mg/kg/day (rat, oral, generation P0, OECD 415).

STOT – single exposure

The substance may cause respiratory irritation.

STOT – repeated exposure

Based on available data, the classification criteria are not met.

NOAEL = 20 ppm (mortality, clinical signs, food consumption, body weight and organ weight, rat, inhalation, HCl gas, OECD 413).

LOAEL = 50 ppm (mortality, clinical signs, food consumption, body weight and organ weight, rat, inhalation, HCl gas, OECD 413).

Aspiration hazard

The substance is not a hydrocarbon or a chlorinated hydrocarbon with a kinematic viscosity of 20.5 mm^2/s or less at 40 °C.

11.2. Information on other hazards

Mixture does not contain substance(s) meets meeting the criteria for persistent, bioaccumulative and toxic (PBT) or very persistent and very bioaccumulative (vPvB) in accordance with Annex XIII of REACH regulation. The mixture and its substances are not mentioned on the Candidate list for possible inclusion in Annex XIV of REACH at the date of the revision of the safety data sheet and given in the list (established in accordance with Article 59(1) for having endocrine disrupting properties of REACH regulation.

Mixture does not contain the substance(s) identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605.There is no other relevant information on adverse health effects that is not required according to the classification criteria set out in CLP Regulation.

SECTION 12: Ecological information

12.1. Toxicity

Mixture

Data for the mixture are not available.

Acute aquatic toxicity

The mixture does not contain substances classified as acute aquatic toxicity or the concentration of substance(s) is lower than the limit for inclusion in Section 3.

Chronic aquatic toxicity

The mixture is not classified as chronic aquatic toxicity based on calculation according to the summation method.

category	1	2	3	4
∑	0	0	< 10	< 10

Phosphoric acid CAS: 7664-38-2

The substance is not classified as hazardous for the aquatic environment.

Fish

Mean lethal pH, 96 hrs., Leopomis macrochirus: pH = 3 - 3.25 (mortality).

Crustaceans

EC_{50}, 48 hrs., Daphnia Magna: > 100 mg/ (immobility, OECD 202).

NOEC, 48 hrs., Daphnia Magna: 56 mg/l (immobility, OECD 202).

Algae

EC_{50}, 72 hrs., Desmodesmus subspicatus: > 100 mg/l (growth rate, OECD 201).

NOEC, 72 hrs, Desmodesmus subspicatus: 100 mg/l (growth rate, OECD 201).

Sulphamidic acid CAS: 5329-14-6

The substance is classified as Aquatic Chronic 3; H412 according to harmonized classification.

Fish

LC_{50}, 96 hrs., Pimephales promelas: 70.3 mg/l (mortality, OECD 203).

NOEC, 34 d., Danio rerio: ≥ 60 mg/l (number of hatching, mortality, weight, length, OECD 210).

Crustaceans

EC_{50}, 48 hrs., Daphnia Magna: 71.6 mg/l (mobility, OECD 202).

NOEC, 21 d., Daphnia Magna: 19 mg/l (reproduction, OECD 211).

LOEC, 21 d., Daphnia Magna: 34 mg/l (reproduction, OECD 211).

Algae

EC_{50}, 72 hrs., Desmodesmus subspicatus: 48 mg/l (growth rate, OECD 201).
EC_{50}, 72 hrs., Desmodesmus subspicatus: 33.8 mg/l (biomass, OECD 201).
EC_{10}, 72 hrs., Desmodesmus subspicatus: 29.5 mg/l (growth rate, OECD 201).
EC_{10}, 72 hrs., Desmodesmus subspicatus: 13.3 mg/l (biomass, OECD 201).
NOEC, 72 hrs., Desmodesmus subspicatus: 18 mg/l (growth rate, OECD 201).
NOEC, 72 hrs., Desmodesmus subspicatus: 18 mg/l (biomass, OECD 201).

Hydrochloric acid CAS: 7647-01-0

The substance is not classified as hazardous for the aquatic environment.

Fish

LC_0, 96 hrs., Lepomis macrochirus: pH = 3.5 (mortality).
LC_{50}, 96 hrs., Lepomis macrochirus: pH = 3.25 - 3.5 (mortality).
LC_{100}, 96 hrs., Lepomis macrochirus: pH = 3 (mortality).

Crustaceans

EC_{50}, 48 hrs., Daphnia Magna: pH = 4.92 (mobility, OECD 202).
NOEC, 48 hrs., Daphnia Magna: pH = 5.5 (mobility, OECD 202).
LOEC, 48 hrs., Daphnia Magna: pH = 5 (mobility, OECD 202).

Algae

EC_{50}, 72 hrs., Chlorella vulgaris: pH = 4.7 (growth rate, OECD 201).
EC_{50}, 72 hrs., Chlorella vulgaris: pH = 4.82 (biomass, OECD 201).
NOEC, 72 hrs., Chlorella vulgaris: pH = 5 (growth rate, OECD 201).

12.2. Persistence and degradability

Mixture

Data for the mixture are not available.

Phosphoric acid CAS: 7664-38-2

Not determined, it is an inorganic substance.

Sulphamidic acid CAS: 5329-14-6

Not determined, it is an inorganic substance.

Hydrochloric acid CAS: 7647-01-0

Not determined, it is an inorganic substance.

12.3. Bioaccumulative potential

Mixture

Data for the mixture are not available.

Phosphoric acid CAS: 7664-38-2

Not determined, it is an inorganic substance.

Sulphamidic acid CAS: 5329-14-6

Not determined, it is an inorganic substance.

Hydrochloric acid CAS: 7647-01-0

Not determined, it is an inorganic substance.

12.4. Mobility in soil

Mixture

Data for the mixture are not available.

Phosphoric acid CAS: 7664-38-2

Not determined, it is an inorganic substance.

Sulphamidic acid CAS: 5329-14-6

Not determined, it is an inorganic substance.

Hydrochloric acid CAS: 7647-01-0

Not determined, it is an inorganic substance.

12.5. Results of PBT and vPvB assessment

Mixture does not contain substance(s) meeting the criteria for persistent, bioaccumulative and toxic (PBT) or very persistent and very bioaccumulative (vPvB) in accordance with Annex XIII of REACH Regulation. The mixture and its substances are not mentioned on the Candidate list for possible inclusion in Annex XIV of REACH at the date of the revision of the safety data sheet (established in accordance with Article 59(1) of REACH Regulation.

12.6. Endocrine disrupting properties

The mixture and its substances are not mentioned on the Candidate list for possible inclusion in Annex XIV of REACH at the date of the revision of the safety data sheet (established in accordance with Article 59(1) of REACH Regulation. Mixture does not contain the substance(s) identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605.

12.7. Other adverse effects

Data are not available.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Disposal methods of the substance or mixture and the contaminated packaging

Dispose according to the applicable European and local regulations (eg. in a hazardous waste incinerator). Do not empty unused product into drainage systems. Do not contaminate ponds or ditches with the product or used container. Hand over the residual amounts and solutions to a licensed disposal company.

Hand over the remaining quantities and unregenerate solutions to an authorized person (specialized company with authorization) or to the collection yard in the hazardous waste section according to the worker's instructions. Empty, cleaned packaging can be stored at a landfill of the appropriate category or handed over for recycling.

Possible waste code

07 06 01* - aqueous washing liquids and mother liquors (mixture), 15 01 10* - packaging containing residues of or contaminated by hazardous substances (contaminated packaging), 15 01 02 - plastic packaging (clear packaging).

Physical/chemical properties that may affect waste treatment options

Metal corrosion.

Special precautions recommended for waste management

Not known.

Waste legislation

Directive 2008/98/EC on waste and repealing certain Directives, as amended.

SECTION 14: Transport information

14.1. UN number or ID number

UN 3264

14.2. UN proper shipping name

CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (Phosphoric acid, Hydrochloric acid).

14.3. Transport hazard class(es)

8

14.4. Packing group

III

14.5. Environmental hazards

It is not dangerous for the environment during transport.

14.6. Special precautions for user

Not given.

14.7. Maritime transport in bulk according to IMO instruments

Not available.

14.8. Other information

Labeling according to ADR

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Additional data for ADR/RID

Classification code	C1
Labels	8
Hazard identification code	80
Tunnel restriction code	E (ADR), - (RID).
Limited quantities	5 l
Excepted quantities	Maximum net quantity per inner packaging: 30 ml. Maximum net quantity per outer packaging: 1 000 ml.
Transport category	3

Additional data for IMDG

Emergency Schedules (EmS)	F-A/S-B

SECTION 15: Regulatory information

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

Regulation No. 1907/2006/EC, concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals, as amended (REACH)

Regulation No. 1272/2008/EC, on Classification, Labelling and Packaging of substances and mixtures, as amended (CLP)

Regulation No. 648/2004/EC on detergents, as amended

15.2. Chemical safety assessment

Has not been carried out for mixture.

SECTION 16: Other information

Reason for the revision of the safety data sheet

Change of the labeling of the mixture. Change in section 13.

Key or legend to abbreviations and acronyms

Acute Tox. 4	Acute toxicity, cat. 4
Aquatic Chronic 3	Chronic aquatic hazard, cat. 3
Eye Dam. 1	Serious eye damage, cat. 1
Eye Irrit. 2	Eye irritation, cat. 2
Met. Corr. 1	Substance or mixture corrosive to metals, cat. 1
Skin Corr. 1	Skin corrosion, cat. 1
Skin Corr. 1B	Skin corrosion, cat. 1B
Skin Irrit. 2	Skin irritation, cat. 2
STOT RE 2	Specific target organ toxicity - repeated exposure, cat. 2
STOT SE 3	Specific target organ toxicity - single exposure, cat. 3
ADR	Accord Dangereuses Route
CLP	Regulation No. 1272/2008/EC, on Classification, Labelling and Packaging of substances and mixtures
DNEL	Derived No Effect Level
ICAO/IATA	International Air Transport Association
IMDG	International Maritime Dangerous Goods
PBT	Persistent, bioaccumulative, toxic substance
PNEC	Predicted No Effect Concentration
REACH	Regulation No. 1907/2006/EC, concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals
RID	Regulation concerning the International Carriage of Dangerous Goods by Rail
STOT	Specific target organ toxicity
vPvB	Very persistent and very bioaccumulative substance

Sources of key data used to compile the Safety Data Sheet

European legislation, manufacturer's safety data sheet, registration dossier of substances.

List of H- and P- phrases

H290	May be corrosive to metals.
H302	Harmful if swallowed.
H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H335	May cause respiratory irritation.
H373	May cause damage to organs through prolonged or repeated exposure.
H412	Harmful to aquatic life with long lasting effects.
P234	Keep only in original packaging.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P301+P330+P331	IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P303+P361+P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.
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.
P501	Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation. Dispose of the cleaned packaging without any residual product content in the sorted waste.

Training advice

According to SDS.

Other information

Classification according to data from the manufacturer. The mixture is classified using calculation methods according to Regulation CLP and tests. Use only for the purposes designated by the manufacturer, will prevent health and environmental risks.

The information in this SDS was obtained from sources, which we believe are reliable. However, the information is provided without any warranty, express or implied, regarding its correctness. This SDS was prepared and is to be used only for this product. If the product is used as a component in another product, this SDS information may not be applicable.

The safety data sheet is created in accordance with Regulation No. 2020/878/EC. There is no additional information in accordance with the local and national legislation of the Member State in the European Union, in the safety data sheet.

The safety data sheet was created by company LACHEPRA s.r.o.