

## SAFETY DATA SHEET

according to Regulation (EC) No 1907/2006 (REACH) as amended

### Lepro 4

Creation date	12th August 2019	Version	3.0
Revision date	22nd May 2023		

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

- 1.1. Product identifier**  
 Substance / mixture Lepro 4  
 UFI mixture  
 9PKP-R317-S00N-6US0
- 1.2. Relevant identified uses of the substance or mixture and uses advised against**  
**Mixture's intended use**  
 Chemical production, analytical chemistry, laboratory synthesis, industrial applications.  
**Mixture uses advised against**  
 The product should not be used in ways other than those referred in Section 1.
- 1.3. Details of the supplier of the safety data sheet**  
**Supplier**  
 Name or trade name Ing. Petr Švec - PENTA s.r.o.  
 Address Radiová 1122/1, Praha 10, 102 00  
 Czech Republic  
 Identification number (CRN) 02096013  
 VAT Reg No CZ02096013  
 Phone +420 226 060 681  
 E-mail info@pentachemicals.eu  
 Web address www.pentachemicals.eu
- Competent person responsible for the safety data sheet**  
 Name Ing. Petr Švec - PENTA s.r.o.  
 E-mail info@pentachemicals.eu
- 1.4. Emergency telephone number**  
 European emergency number: 112 112

#### SECTION 2: Hazards identification

- 2.1. Classification of the substance or mixture**  
**Classification of the mixture in accordance with Regulation (EC) No 1272/2008**

The mixture is classified as dangerous.

Flam. Liq. 2, H225  
 Skin Irrit. 2, H315  
 Eye Dam. 1, H318

Full text of all classifications and hazard statements is given in the section 16.

##### Most serious adverse physico-chemical effects

Highly flammable liquid and vapour.

##### Most serious adverse effects on human health and the environment

Causes skin irritation. Causes serious eye damage.

- 2.2. Label elements**

##### Hazard pictogram



##### Signal word

Danger

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#### Hazardous substances

ethanol  
nitric acid ...%

#### Hazard statements

H225 Highly flammable liquid and vapour.  
H315 Causes skin irritation.  
H318 Causes serious eye damage.

#### Precautionary statements

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.  
P233 Keep container tightly closed.  
P280 Wear protective gloves/protective clothing/eye protection/face 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.

#### 2.3. Other hazards

The mixture does not contain substances with endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605. Mixture does not contain any substance meet the criteria for PBT or vPvB in accordance with Annex XIII of Regulation (EC) No. 1907/2006 (REACH) as amended.

### SECTION 3: Composition/information on ingredients

#### 3.2. Mixtures

**Mixture contains these hazardous substances and substances with the highest permissible concentration in the working environment**

Identification numbers	Substance name	Content in % weight	Classification according to Regulation (EC) No 1272/2008	Note
Index: 603-002-00-5 CAS: 64-17-5 EC: 200-578-6 Registration number: 01-2119457-610-43-xxxx	ethanol	90-95	Flam. Liq. 2, H225 Eye Irrit. 2, H319 Specific concentration limit: Eye Irrit. 2, H319: C ≥ 50 %	
Index: 007-030-00-3 CAS: 7697-37-2 EC: 231-714-2 Registration number: 01-2119487297-23-0039	nitric acid ...%	3-5	Ox. Liq. 3, H272 Skin Corr. 1A, H314 Acute Tox. 3, H331 EUH071 Specific concentration limit: Ox. Liq. 3, H272: C ≥ 65 % ATE Inhalation (vapor) = 2,65 mg/l Skin Corr. 1A, H314: C ≥ 20 % Skin Corr. 1B, H314: 5 % ≤ C < 20 %	1, 2

#### Notes

- Note B: Some substances (acids, bases, etc.) are placed on the market in aqueous solutions at various concentrations and, therefore, these solutions require different classification and labelling since the hazards vary at different concentrations. In Part 3 entries with Note B have a general designation of the following type: 'nitric acid ... %'. In this case the supplier must state the percentage concentration of the solution on the label. Unless otherwise stated, it is assumed that the percentage concentration is calculated on a weight/weight basis.
- A substance for which exposure limits are set.

Full text of all classifications and hazard statements is given in the section 16.

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#### SECTION 4: First aid measures

##### 4.1. Description of first aid measures

Take care of your own safety. If any health problems are manifested or if in doubt, inform a doctor and show him information from this safety data sheet. If unconscious, put the person in the stabilized (recovery) position on his side with his head slightly bent backwards and make sure that airways are free; never induce vomiting. If the person vomits by himself, make sure that the vomit is not inhaled. In life threatening conditions first of all provide resuscitation of the affected person and ensure medical assistance. Respiratory arrest - provide artificial respiration immediately. Cardiac arrest - provide indirect cardiac massage immediately.

##### If inhaled

Terminate the exposure immediately; move the affected person to fresh air. Protect the person against growing cold. Provide medical treatment if irritation, dyspnoea or other symptoms persist.

##### If on skin

Remove contaminated clothes. Wash the affected area with plenty of water, lukewarm if possible. Soap, soap solution or shampoo should be used if there is no skin injury. Provide medical treatment if skin irritation persists. Rinse skin with water or shower.

##### If in eyes

Rinse eyes immediately with a flow of running water, open the eyelids (also using force if needed); remove contact lenses immediately if worn by the affected person. No neutralization should be performed in any case! Rinsing should be continued for 10-30 minutes from the inner to the outer eye corner to make sure that the other eye is not involved. Depending on the situation, call medical rescue service or ensure medical treatment as promptly as possible. Everyone must be referred for treatment even if affected only a little.

##### If swallowed

Rinse out the mouth with water and provide 2-5 dL of water. Provide medical treatment if the person has any health problems.

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

##### If inhaled

Inhaling vapours can cause corrosion of the breathing system.

##### If on skin

Causes skin irritation.

##### If in eyes

Causes serious eye damage.

##### If swallowed

Corrosion of the digestion system can occur.

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

Symptomatic treatment.

#### SECTION 5: Firefighting measures

##### 5.1. Extinguishing media

##### Suitable extinguishing media

Alcohol-resistant foam, carbon dioxide, powder, water spray jet, water mist.

##### Unsuitable extinguishing media

Water - full jet.

##### 5.2. Special hazards arising from the substance or mixture

In the event of fire, carbon monoxide, carbon dioxide and other toxic gases may arise. Inhalation of hazardous degradation (pyrolysis) products may cause serious health damage.

##### 5.3. Advice for firefighters

Self-Contained Breathing Apparatus (SCBA) with a chemical protection suit only where personal (close) contact is likely. Use a self-contained breathing apparatus and full-body protective clothing. Closed containers with the product near the fire should be cooled with water. Do not allow run-off of contaminated fire extinguishing material to enter drains or surface and ground water.

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#### SECTION 6: Accidental release measures

##### 6.1. Personal precautions, protective equipment and emergency procedures

Provide sufficient ventilation. Highly flammable liquid and vapour. Remove all ignition sources. Use personal protective equipment for work. Follow the instructions in the Sections 7 and 8. Prevent contact with skin and eyes.

##### 6.2. Environmental precautions

Prevent contamination of the soil and entering surface or ground water.

##### 6.3. Methods and material for containment and cleaning up

Spilled product should be covered with suitable (non-flammable) absorbing material (sand, diatomaceous earth, earth and other suitable absorption materials); to be contained in well closed containers and removed as per the Section 13. In the event of leakage of the substantial amount of the product, inform fire brigade and other competent bodies. After removal of the product, wash the contaminated site with plenty of water. Do not use solvents.

##### 6.4. Reference to other sections

See the Section 7, 8 and 13.

#### SECTION 7: Handling and storage

##### 7.1. Precautions for safe handling

Prevent formation of gases and vapours in flammable or explosive concentrations and concentrations exceeding the occupational exposure limits. The product should be used only in the areas where it is not in contact with open fire and other ignition sources. Use non-sparking tools. Use of antistatic clothes and footwear is recommended. Prevent contact with skin and eyes. No smoking. Wash hands and exposed parts of the body thoroughly after handling. Use personal protective equipment as per Section 8. Observe valid legal regulations on safety and health protection. Ground and bond container and receiving equipment. Use explosion-proof electrical/ventilating/lighting equipment. Take action to prevent static discharges.

##### 7.2. Conditions for safe storage, including any incompatibilities

Store in tightly closed containers in cold, dry and well ventilated areas designated for this purpose. Do not expose to sunlight. Keep container tightly closed. Keep cool. Store below 4 ° C.

##### The specific requirements or rules relating to the substance/mixture

Solvent vapours are heavier than air and accumulate especially near the floor where they may form an explosive mixture with the air.

##### 7.3. Specific end use(s)

not available

#### SECTION 8: Exposure controls/personal protection

##### 8.1. Control parameters

The mixture contains substances for which occupational exposure limits are set.

##### European Union

##### Commission Directive 2006/15/EC

Substance name (component)	Type	Value
nitric acid ...% (CAS: 7697-37-2)	OEL 15 minutes	2,6 mg/m <sup>3</sup>
	OEL 15 minutes	1 ppm

##### 8.2. Exposure controls

Follow the usual measures intended for health protection at work and especially for good ventilation. This can be achieved only by local suction or efficient general ventilation. Do not eat, drink and smoke during work. Wash your hands thoroughly with water and soap after work and before breaks for a meal and rest.

##### Eye/face protection

Protective goggles or face shield (based on the nature of the work performed).

##### Skin protection

Hand protection: Protective gloves resistant to the product (nitrile rubber). When choosing appropriate thickness, material and permeability of the gloves, observe recommendations of their particular manufacturer. Observe other recommendations of the manufacturer. Other protection: protective workwear. Contaminated skin should be washed thoroughly.

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#### Respiratory protection

Halfmask with a filter against organic vapours or a self-contained breathing apparatus as appropriate if exposure limit values of substances are exceeded or in a poorly ventilated environment.

#### Thermal hazard

Not available.

#### Environmental exposure controls

Observe usual measures for protection of the environment, see Section 6.2.

## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

Physical state	liquid
Colour	colorless to yellowish
Odour	characteristic
Melting point/freezing point	data not available
Boiling point or initial boiling point and boiling range	data not available
Flammability	data not available
Lower and upper explosion limit	data not available
Flash point	data not available
Auto-ignition temperature	data not available
Decomposition temperature	data not available
pH	data not available
Kinematic viscosity	data not available
Solubility in water	data not available
Partition coefficient n-octanol/water (log value)	data not available
Vapour pressure	data not available
Density and/or relative density	
Density	0,820-0,835 g/cm <sup>3</sup>
Relative vapour density	data not available
Particle characteristics	data not available
Form	liquid

### 9.2. Other information

not available

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

not available

### 10.2. Chemical stability

The product is stable under normal conditions.

### 10.3. Possibility of hazardous reactions

Unknown.

### 10.4. Conditions to avoid

The product is stable and no degradation occurs under normal use. Protect against flames, sparks, overheating and against frost.

### 10.5. Incompatible materials

Protect against strong acids, bases and oxidizing agents.

### 10.6. Hazardous decomposition products

Not developed under normal uses. Dangerous outcomes such as carbon monoxide and carbon dioxide are formed at high temperature and in fire.

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#### SECTION 11: Toxicological information

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

Inhalation of solvent vapors above values exceeding exposure limits for working environment may result in acute inhalation poisoning, depending on the level of concentration and exposure time. No toxicological data is available for the mixture.

##### Acute toxicity

Based on available data the classification criteria are not met.

ethanol

Route of exposure	Parameter	Value	Exposure time	Species	Sex
Oral	LD <sub>50</sub>	13300 mg/kg		Rat (Rattus norvegicus)	
Dermal	LD <sub>50</sub>	>15800 mg/kg		Rabbit	
Inhalation (vapor)	LC <sub>50</sub>	124.7 mg/l	4 hours	Rat (Rattus norvegicus)	

nitric acid ...%

Route of exposure	Parameter	Value	Exposure time	Species	Sex
Inhalation (vapor)	ATE	2.65 mg/l			

##### Corrosivity

ethanol

Route of exposure	Result	Exposure time	Species
	No effect		Rabbit

##### Skin corrosion/irritation

Causes skin irritation.

##### Serious eye damage/irritation

Causes serious eye damage.

ethanol

Route of exposure	Result	Exposure time	Species
	Irritating		Rabbit

##### Respiratory or skin sensitisation

Based on available data the classification criteria are not met.

ethanol

Route of exposure	Result	Exposure time	Species	Sex
	Indeterminate		Human	

##### Mutagenicity

ethanol

Result	Exposure time	Specific target organ	Species	Sex
Indeterminate				

##### Germ cell mutagenicity

Based on available data the classification criteria are not met.

##### Carcinogenicity

Based on available data the classification criteria are not met.

ethanol

Route of exposure	Parameter	Value	Result	Species	Sex
Oral			Indeterminate	Rat (Rattus norvegicus)	

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**Reproductive toxicity**

Based on available data the classification criteria are not met.

ethanol

Effect	Parameter	Value	Exposure time	Result	Species	Sex
Developmental toxicity	NOAEL	38 mg/l		Negative	Rat (Rattus norvegicus)	
	NOAEL	5200 mg/kg	24 hours	Indeterminate	Rat (Rattus norvegicus)	

**Toxicity for specific target organ - single exposure**

Based on available data the classification criteria are not met.

ethanol

Route of exposure	Parameter	Value	Exposure time	Specific target organ	Result	Species	Sex
Inhalation	LOAEL	2.6 mg/l	30 minutes	Nervous system	Drowsiness, Dizziness	Human	
Inhalation	LOAEL	9.4 mg/l		Lungs	Indeterminate	Human	

**Toxicity for specific target organ - repeated exposure**

Based on available data the classification criteria are not met.

**Aspiration hazard**

Based on available data the classification criteria are not met.

**11.2. Information on other hazards**

The mixture does not contain substances with endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605.

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

ethanol

Parameter	Value	Exposure time	Species	Environment	Value determination
EC <sub>50</sub>	42 mg/l	96 hours	Fish		Experimentally
EC <sub>50</sub>	5012 mg/l	48 hours	Daphnia		Experimentally
NOEC	<500 mg/l	96 hours	Algae		Experimentally

**12.2. Persistence and degradability**

not available

**12.3. Bioaccumulative potential**

Not available.

**12.4. Mobility in soil**

Not available.

**12.5. Results of PBT and vPvB assessment**

Product does not contain any substance meeting the criteria for PBT or vPvB in accordance with the Annex XIII of Regulation (EC) No 1907/2006 (REACH) as amended.

**12.6. Endocrine disrupting properties**

The mixture does not contain substances with 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**

Not available.

**SECTION 13: Disposal considerations**

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#### 13.1. Waste treatment methods

Hazard of environmental contamination; dispose of the waste in accordance with the local and/or national regulations. Proceed in accordance with valid regulations on waste disposal. Any unused product and contaminated packaging should be put in labelled containers for waste collection and submitted for disposal to a person authorised for waste removal (a specialized company) that is entitled for such activity. Do not empty unused product in drainage systems. The product must not be disposed of with municipal waste. Empty containers may be used at waste incinerators to produce energy or deposited in a dump with appropriate classification. Perfectly cleaned containers can be submitted for recycling.

#### Waste management legislation

Directive 2008/98/EC of the European Parliament and of the Council of 19 November 2008 on waste, as amended. Decision 2000/532/EC establishing a list of wastes, as amended.

### SECTION 14: Transport information

#### 14.1. UN number or ID number

UN 1993

#### 14.2. UN proper shipping name

FLAMMABLE LIQUID, N.O.S. (Lepro 4 (contains ethanol and nitric acid))

#### 14.3. Transport hazard class(es)

3 Flammable liquids

#### 14.4. Packing group

II - substances presenting medium danger

#### 14.5. Environmental hazards

not relevant

#### 14.6. Special precautions for user

Reference in the Sections 4 to 8.

#### 14.7. Maritime transport in bulk according to IMO instruments

not relevant

#### Additional information

Hazard identification No.

33

UN number

1993

Classification code

F1

Safety signs

3



#### Air transport - ICAO/IATA

Packaging instructions passenger

353

Cargo packaging instructions

364

#### Marine transport - IMDG

EmS (emergency plan)

F-E, S-E

MFAG

310



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#### SECTION 15: Regulatory information

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

Regulation (EC) No. 1907/2006 of the European Parliament and of the Council of 18th December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), establishing the European Chemicals Agency, amending Directive 1999/45/EC and repealing Council Regulation (EEC) No. 793/93 and Commission Regulation (EC) No. 1488/94 as well as Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC, as amended. REGULATION (EC) No. 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL as amended. Product contains restricted explosives precursors: Making available, introduction, possession and use according to Regulation (EU) 2019/1148, Article 5. Commission Regulation (EU) 2020/878 of 18 June 2020 amending Annex II to Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH).

##### 15.2. Chemical safety assessment

A chemical safety assessment has not been carried out (mixture).

##### More information

Restricted explosives precursors shall not be made available to, or introduced, possessed or used by members of the general public (according to the Annex I to the Regulation (EU) 2019/1148 as amended). The supplier is obliged to report suspicious transactions, disappearances and thefts to the relevant state authority.

#### SECTION 16: Other information

##### A list of standard risk phrases used in the safety data sheet

H225	Highly flammable liquid and vapour.
H272	May intensify fire; oxidiser.
H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H331	Toxic if inhaled.

##### Guidelines for safe handling used in the safety data sheet

P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P233	Keep container tightly closed.
P280	Wear protective gloves/protective clothing/eye protection/face 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.

##### A list of additional standard phrases used in the safety data sheet

EUH071	Corrosive to the respiratory tract.
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##### Other important information about human health protection

The product must not be - unless specifically approved by the manufacturer/importer - used for purposes other than as per the Section 1. The user is responsible for adherence to all related health protection regulations.

##### Key to abbreviations and acronyms used in the safety data sheet

ADR	European agreement concerning the international carriage of dangerous goods by road
BCF	Bioconcentration Factor
CAS	Chemical Abstracts Service
CLP	Regulation (EC) No 1272/2008 on classification, labelling and packaging of substance and mixtures
EC	Identification code for each substance listed in EINECS
EC <sub>50</sub>	Concentration of a substance when it is affected 50% of the population
EINECS	European Inventory of Existing Commercial Chemical Substances
EmS	Emergency plan
EU	European Union
EuPCS	European Product Categorisation System

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IATA	International Air Transport Association
IBC	International Code For The Construction And Equipment of Ships Carrying Dangerous Chemicals
ICAO	International Civil Aviation Organization
IMDG	International Maritime Dangerous Goods
IMO	International Maritime Organization
INCI	International Nomenclature of Cosmetic Ingredients
ISO	International Organization for Standardization
IUPAC	International Union of Pure and Applied Chemistry
LC <sub>50</sub>	Lethal concentration of a substance in which it can be expected death of 50% of the population
LD <sub>50</sub>	Lethal dose of a substance in which it can be expected death of 50% of the population
LOAEL	Lowest observed adverse effect level
log K <sub>ow</sub>	Octanol-water partition coefficient
NOAEL	No observed adverse effect level
NOEC	No observed effect concentration
OEL	Occupational Exposure Limits
PBT	Persistent, Bioaccumulative and Toxic
ppm	Parts per million
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals
RID	Agreement on the transport of dangerous goods by rail
UN	Four-figure identification number of the substance or article taken from the UN Model Regulations
UVCB	Substances of unknown or variable composition, complex reaction products or biological materials
VOC	Volatile organic compounds
vPvB	Very Persistent and very Bioaccumulative
Acute Tox.	Acute toxicity
Eye Dam.	Serious eye damage
Flam. Liq.	Flammable liquid
Ox. Liq.	Oxidising liquid
Skin Corr.	Skin corrosion

#### Training guidelines

Inform the personnel about the recommended ways of use, mandatory protective equipment, first aid and prohibited ways of handling the product.

#### Recommended restrictions of use

not available

#### Information about data sources used to compile the Safety Data Sheet

REGULATION (EC) No. 1907/2006 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL (REACH) as amended.  
REGULATION (EC) No. 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL as amended. Data from the manufacturer of the substance / mixture, if available - information from registration dossiers.

#### The changes (which information has been added, deleted or modified)

The version 3.0 replaces the SDS version from 11 April 2022. Changes were made in sections 2, 11, 15 and 16.

#### More information

Classification procedure - calculation method.

#### Statement

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The safety data sheet provides information aimed at ensuring safety and health protection at work and environmental protection. The provided information corresponds to the current status of knowledge and experience and complies with valid legal regulations. The information should not be understood as guaranteeing the suitability and usability of the product for a particular application.