

**Total Nitrogen LR/HR Vial**

Version number: GHS 1.0

Date of compilation: 2026-06-09

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

**1.1 Product identifier**

Trade name	<b>Total Nitrogen LR/HR Vial</b>
Article number	PL151152-Kuv
UFI	7RTF-POUA-100M-AFVO

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

Relevant identified uses	Reagent for water analysis
Uses advised against	Other. Do not use for squirting or spraying. Do not use for private purposes (household).

**1.3 Details of the supplier of the safety data sheet**

Water-i.d. GmbH  
Daimlerstrasse 20  
76344 Eggenstein  
Germany

Telephone: +49 (0) 721-78 20 29-0  
e-mail: lab@water-id.com  
Website: <https://www.water-id.com>

e-mail (competent person) lab@water-id.com

**1.4 Emergency telephone number**

Poison centre	
Name	Telephone
National Chemical Emergency Centre (NCEC) Europe	+44 1235 239670

**SECTION 2: Hazards identification**

**2.1 Classification of the substance or mixture**

Classification (acc. to GB CLP)

Section	Hazard class	Category	Hazard class and category	Hazard statement
2.16	substance or mixture corrosive to metals	1	Met. Corr. 1	H290
3.2	skin corrosion/irritation	1A	Skin Corr. 1A	H314
3.3	serious eye damage/eye irritation	1	Eye Dam. 1	H318

For full text of abbreviations: see SECTION 16.

The most important adverse physicochemical, human health and environmental effects

Skin corrosion produces an irreversible damage to the skin; namely, visible necrosis through the epidermis and into the dermis.

**2.2 Label elements**

Labelling (acc. to GB CLP)

- Signal word danger

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- Pictograms

GHS05



- Hazard statements

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

- Precautionary statements

P260 Do not breathe dust/fume/gas/mist/vapours/spray.  
P280 Wear protective gloves/protective clothing/eye protection/face protection/hearing 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 industrial combustion plant.

- Hazardous ingredients for labelling sulfuric acid

**2.3 Other hazards**

Results of PBT and vPvB assessment

Does not contain a PBT-/vPvB-substance at a concentration of  $\geq 0,1\%$ .

Endocrine disrupting properties

Does not contain an endocrine disruptor (ED) at a concentration of  $\geq 0,1\%$ .

**SECTION 3: Composition/information on ingredients**

**3.1 Substances**

Not relevant (mixture)

**3.2 Mixtures**

Description of the mixture

Name of substance	Identifier	Wt%	Classification acc. to GHS
sulfuric acid	CAS No 7664-93-9  EC No 231-639-5  Index No 016-020-00-8	75 - < 90	Met. Corr. 1 / H290 Skin Corr. 1A / H314 Eye Dam. 1 / H318

Name of substance	Specific Conc. Limits	M-Factors	ATE	Exposure route
sulfuric acid	Skin Corr. 1A; H314: $C \geq 15\%$ Skin Irrit. 2; H315: $5\% \leq C < 15\%$ Eye Dam. 1; H318: $C \geq 15\%$ Eye Irrit. 2; H319: $5\% \leq C < 15\%$	-	-	

**Remarks**

For full text of abbreviations: see SECTION 16

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**SECTION 4: First aid measures**

**4.1 Description of first aid measures**

General notes

Do not leave affected person unattended. Remove victim out of the danger area. Keep affected person warm, still and covered. Take off immediately all contaminated clothing. In all cases of doubt, or when symptoms persist, seek medical advice. In case of unconsciousness place person in the recovery position. Never give anything by mouth.

Following inhalation

If breathing is irregular or stopped, immediately seek medical assistance and start first aid actions. In case of respiratory tract irritation, consult a physician. Provide fresh air.

Following skin contact

Wash with plenty of soap and water.

Following eye contact

Remove contact lenses, if present and easy to do. Continue rinsing. Irrigate copiously with clean, fresh water for at least 10 minutes, holding the eyelids apart.

Following ingestion

Rinse mouth with water (only if the person is conscious). Do NOT induce vomiting.

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

Symptoms and effects are not known to date.

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

none

**SECTION 5: Firefighting measures**

**5.1 Extinguishing media**

Suitable extinguishing media

Water spray, BC-powder, Carbon dioxide (CO<sub>2</sub>)

Unsuitable extinguishing media

Water jet

**5.2 Special hazards arising from the substance or mixture**

Substance or mixture corrosive to metals.

Hazardous combustion products

Sulphur oxides (SO<sub>x</sub>)

**5.3 Advice for firefighters**

In case of fire and/or explosion do not breathe fumes. Co-ordinate firefighting measures to the fire surroundings. Do not allow firefighting water to enter drains or water courses. Collect contaminated firefighting water separately. Fight fire with normal precautions from a reasonable distance.

**SECTION 6: Accidental release measures**

**6.1 Personal precautions, protective equipment and emergency procedures**

For non-emergency personnel

Remove persons to safety.

For emergency responders

Wear breathing apparatus if exposed to vapours/dust/spray/gases.

**6.2 Environmental precautions**

Keep away from drains, surface and ground water. Retain contaminated washing water and dispose of it.

**6.3 Methods and material for containment and cleaning up**

Advice on how to contain a spill

Covering of drains

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**Advice on how to clean up a spill**

Wipe up with absorbent material (e.g. cloth, fleece). Collect spillage: sawdust, kieselgur (diatomite), sand, universal binder

**Appropriate containment techniques**

Use of adsorbent materials.

**Other information relating to spills and releases**

Place in appropriate containers for disposal. Ventilate affected area.

**6.4 Reference to other sections**

Hazardous combustion products: see section 5. Personal protective equipment: see section 8. Incompatible materials: see section 10. Disposal considerations: see section 13.

**SECTION 7: Handling and storage**

**7.1 Precautions for safe handling**

**Recommendations**

- Measures to prevent fire as well as aerosol and dust generation  
Use local and general ventilation. Use only in well-ventilated areas. Never add water to this product.
- Handling of incompatible substances or mixtures  
Do not mix with alkali.
- Keep away from  
Caustic solutions

**Advice on general occupational hygiene**

Wash hands after use. Do not eat, drink and smoke in work areas. Remove contaminated clothing and protective equipment before entering eating areas. Never keep food or drink in the vicinity of chemicals. Never place chemicals in containers that are normally used for food or drink. Keep away from food, drink and animal feedingstuffs.

**7.2 Conditions for safe storage, including any incompatibilities**

**Managing of associated risks**

- Corrosive conditions  
Store in corrosive resistant container with a resistant inner liner.

**Control of effects**

Protect against external exposure, such as frost

- Packaging compatibilities  
Only packagings which are approved (e.g. acc. to ADR) may be used.

**7.3 Specific end use(s)**

See section 16 for a general overview.

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

**8.1 Control parameters**

Occupational exposure limit values (Workplace Exposure Limits)											
Country	Name of agent	CAS No	Identifier	TWA [ppm]	TWA [mg/m <sup>3</sup> ]	STEL [ppm]	STEL [mg/m <sup>3</sup> ]	Ceiling-C [ppm]	Ceiling-C [mg/m <sup>3</sup> ]	Notation	Source
GB	sulfuric acid	7664-93-9	WEL		0.05					t, mist	EH40/2005

**Notation**

- Ceiling-C ceiling value is a limit value above which exposure should not occur
- mist as mists
- STEL short-term exposure limit: a limit value above which exposure should not occur and which is related to a 15-minute period

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Notation

- od (unless otherwise specified)
- t thoracic fraction
- TWA time-weighted average (long-term exposure limit); measured or calculated in relation to a reference period of 8 hours
- time-weighted average (unless otherwise specified)

Relevant DNELs of components						
Name of substance	CAS No	Endpoint	Threshold level	Protection goal, route of exposure	Used in	Exposure time
sulfuric acid	7664-93-9	DNEL	0.05 mg/m <sup>3</sup>	human, inhalatory	worker (industry)	chronic - local effects
sulfuric acid	7664-93-9	DNEL	0.1 mg/m <sup>3</sup>	human, inhalatory	worker (industry)	acute - local effects

**8.2 Exposure controls**

Appropriate engineering controls

General ventilation.

Individual protection measures (personal protective equipment)

Eye/face protection

Wear eye/face protection.

Skin protection

- Hand protection

Chemical protection gloves are suitable, which are tested according to EN 374. >480 minutes (permeation: level 6).

- Other protection measures

Preventive skin protection (barrier creams/ointments) is recommended. Wash hands thoroughly after handling. Protective clothing against liquid chemicals.

Respiratory protection

In case of inadequate ventilation wear respiratory protection.

Environmental exposure controls

Use appropriate container to avoid environmental contamination. Keep away from drains, surface and ground water.

**SECTION 9: Physical and chemical properties**

**9.1 Information on basic physical and chemical properties**

Physical state	liquid
Colour	colourless - transparent
Odour	odourless
Melting point/freezing point	not determined
Boiling point or initial boiling point and boiling range	210 °C at 1.013 mPa
Flammability	non-combustible
Lower and upper explosion limit	not determined
Flash point	not determined
Auto-ignition temperature	not determined
Decomposition temperature	not relevant

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pH (value)	<1 (acid)
Kinematic viscosity	not determined
Solubility(ies)	not determined

Partition coefficient

Partition coefficient n-octanol/water (log value)	this information is not available
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Vapour pressure	0.2 hPa at 25 °C
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Density and/or relative density

Density	1.652 g/ml
Relative vapour density	information on this property is not available

Particle characteristics	not relevant (liquid)
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**9.2 Other information**

Information with regard to physical hazard classes	there is no additional information
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Other safety characteristics

Liquid content	100 %
Solid content	0 %

**SECTION 10: Stability and reactivity**

**10.1 Reactivity**

Concerning incompatibility: see below "Conditions to avoid" and "Incompatible materials". Substance or mixture corrosive to metals.

**10.2 Chemical stability**

See below "Conditions to avoid".

**10.3 Possibility of hazardous reactions**

No known hazardous reactions.

**10.4 Conditions to avoid**

There are no specific conditions known which have to be avoided.

**10.5 Incompatible materials**

There is no additional information.

Release of flammable materials with:

Light metals (due to the release of hydrogen in an acid/alkaline medium)

**10.6 Hazardous decomposition products**

Reasonably anticipated hazardous decomposition products produced as a result of use, storage, spill and heating are not known. Hazardous combustion products: see section 5.

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### SECTION 11: Toxicological information

#### 11.1 Information on toxicological effects

Test data are not available for the complete mixture.

##### Classification procedure

The method for classification of the mixture is based on ingredients of the mixture (additivity formula).

##### Classification acc. to GHS

##### Acute toxicity

Shall not be classified as acutely toxic.

##### Skin corrosion/irritation

Causes severe skin burns and eye damage.

##### Serious eye damage/eye irritation

Causes serious eye damage.

##### Respiratory or skin sensitisation

Shall not be classified as a respiratory or skin sensitiser.

##### Germ cell mutagenicity

Shall not be classified as germ cell mutagenic.

##### Carcinogenicity

Shall not be classified as carcinogenic.

##### Reproductive toxicity

Shall not be classified as a reproductive toxicant.

##### Specific target organ toxicity - single exposure

Shall not be classified as a specific target organ toxicant (single exposure).

##### Specific target organ toxicity - repeated exposure

Shall not be classified as a specific target organ toxicant (repeated exposure).

##### Aspiration hazard

Shall not be classified as presenting an aspiration hazard.

### SECTION 12: Ecological information

#### 12.1 Toxicity

Shall not be classified as hazardous to the aquatic environment.

#### 12.2 Persistence and degradability

Data are not available.

#### 12.3 Bioaccumulative potential

Data are not available.

#### 12.4 Mobility in soil

Data are not available.

#### 12.5 Results of PBT and vPvB assessment

Does not contain a PBT-/vPvB-substance at a concentration of  $\geq 0,1\%$ .

#### 12.6 Endocrine disrupting properties

Does not contain an endocrine disruptor (ED) at a concentration of  $\geq 0,1\%$ .

#### 12.7 Other adverse effects

Data are not available.

### SECTION 13: Disposal considerations

#### 13.1 Waste treatment methods

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**Sewage disposal-relevant information**

Do not empty into drains. Avoid release to the environment. Refer to special instructions/safety data sheets.

**Waste treatment of containers/packagings**

It is a dangerous waste; only packagings which are approved (e.g. acc. to ADR) may be used. Completely emptied packages can be recycled. Handle contaminated packages in the same way as the substance itself.

**Remarks**

Please consider the relevant national or regional provisions. Waste shall be separated into the categories that can be handled separately by the local or national waste management facilities.

**SECTION 14: Transport information**

**14.1 UN number**

ADR/RID	UN 1830
IMDG-Code	UN 1830
ICAO-TI	UN 1830

**14.2 UN proper shipping name**

ADR/RID	SULPHURIC ACID
IMDG-Code	SULPHURIC ACID
ICAO-TI	Sulphuric acid

**14.3 Transport hazard class(es)**

ADR/RID	8
IMDG-Code	8
ICAO-TI	8

**14.4 Packing group**

ADR/RID	II
IMDG-Code	II
ICAO-TI	II

**14.5 Environmental hazards**

non-environmentally hazardous acc. to the dangerous goods regulations

**14.6 Special precautions for user**

Provisions for dangerous goods (ADR) should be complied within the premises.

**14.7 Maritime transport in bulk according to IMO instruments**

The cargo is not intended to be carried in bulk.

**Information for each of the UN Model Regulations**

**Agreement concerning the International Carriage of Dangerous Goods by Road (ADR) - Additional information**

Classification code	C1
Danger label(s)	8



Excepted quantities (EQ)	E2
Limited quantities (LQ)	1 L
Transport category (TC)	2

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Tunnel restriction code (TRC)	E
Hazard identification No	80
Emergency Action Code	2P

**Regulations concerning the International Carriage of Dangerous Goods by Rail (RID) - Additional information**

Classification code	C1
Danger label(s)	8



Excepted quantities (EQ)	E2
Limited quantities (LQ)	1 L
Transport category (TC)	2
Hazard identification No	80

**International Maritime Dangerous Goods Code (IMDG) - Additional information**

Marine pollutant	-
Danger label(s)	8



Excepted quantities (EQ)	E2
Limited quantities (LQ)	1 L
EmS	F-A, S-B
Stowage category	C
Segregation group	1 - Acids

**International Civil Aviation Organization (ICAO-IATA/DGR) - Additional information**

Danger label(s)	8
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Excepted quantities (EQ)	E2
Limited quantities (LQ)	0,5 L

**SECTION 15: Regulatory information**

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

**Relevant provisions of the European Union (EU)**

**Deco-Paint Directive**

VOC content	0 %
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**Industrial Emissions Directive (IED)**

VOC content	0 %
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**Directive on the restriction of the use of certain hazardous substances in electrical and**

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**electronic equipment (RoHS)**

none of the ingredients are listed

**Regulation concerning the establishment of a European Pollutant Release and Transfer Register (PRTR)**

none of the ingredients are listed

**Water Framework Directive (WFD)**

List of pollutants (WFD)			
Name of substance	CAS No	Listed in	Remarks
sulfuric acid		a)	

Legend

a) Indicative list of the main pollutants

**Regulation on persistent organic pollutants (POP)**

none of the ingredients are listed

**Restrictions of occupation**

Directive 94/33/EC on the protection of young people at work / Observe national regulations on protection of young people at work.

**National regulations (GB)**

**List of substances subject to authorisation (GB REACH, Annex 14) / SVHC - candidate list**

none of the ingredients are listed

**Restrictions according to GB REACH, Annex 17**

Dangerous substances with restrictions (GB REACH, Annex 17)			
Name of substance	Name acc. to inventory	CAS No	No
Total Nitrogen LR/HR Vial	this product meets the criteria for classification in accordance with Regulation No 1272/2008/EC		3

**National inventories**

Country	Inventory	Status
AU	AIIC	all ingredients are listed
CN	IECSC	all ingredients are listed
EU	ECSI	all ingredients are listed
EU	REACH Reg.	not all ingredients are listed
US	TSCA	all ingredients are listed (ACTIVE)

Legend

AIIC Australian Inventory of Industrial Chemicals  
 ECSI EC Substance Inventory (EINECS, ELINCS, NLP)  
 IECSC Inventory of Existing Chemical Substances Produced or Imported in China  
 REACH Reg. REACH registered substances  
 TSCA Toxic Substances Control Act

**15.2 Chemical Safety Assessment**

Chemical safety assessments for substances in this mixture were not carried out.

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**SECTION 16: Other information**

**Abbreviations and acronyms**

Abbr.	Descriptions of used abbreviations
ADR	Accord relatif au transport international des marchandises dangereuses par route (Agreement concerning the International Carriage of Dangerous Goods by Road)
ATE	Acute Toxicity Estimate
CAS	Chemical Abstracts Service (service that maintains the most comprehensive list of chemical substances)
Ceiling-C	Ceiling value
DGR	Dangerous Goods Regulations (see IATA/DGR)
DNEL	Derived No-Effect Level
EC No	The EC Inventory (EINECS, ELINCS and the NLP-list) is the source for the seven-digit EC number, an identifier of substances commercially available within the EU (European Union)
ED	Endocrine disruptor
EH40/2005	EH40/2005 Workplace exposure limits ( <a href="http://www.nationalarchives.gov.uk/doc/open-government-licence/">http://www.nationalarchives.gov.uk/doc/open-government-licence/</a> )
EINECS	European Inventory of Existing Commercial Chemical Substances
ELINCS	European List of Notified Chemical Substances
EmS	Emergency Schedule
Eye Dam.	Seriously damaging to the eye
Eye Irrit.	Irritant to the eye
GB CLP	The Chemicals (Health and Safety) and Genetically Modified Organisms (Contained Use) (Amendment etc.) (EU Exit) Regulations 2019, SI 2019/720 (as amended)
GB REACH	The REACH etc. (Amendment etc.) (EU Exit) Regulations 2019, SI 2019/758 (as amended)
GHS	"Globally Harmonized System of Classification and Labelling of Chemicals" developed by the United Nations
IATA	International Air Transport Association
IATA/DGR	Dangerous Goods Regulations (DGR) for the air transport (IATA)
ICAO	International Civil Aviation Organization
ICAO-TI	Technical instructions for the safe transport of dangerous goods by air
IMDG	International Maritime Dangerous Goods Code
IMDG-Code	International Maritime Dangerous Goods Code
index No	The Index number is the identification code given to the substance in Part 3 of Annex VI to Regulation (EC) No 1272/2008
Met. Corr.	Substance or mixture corrosive to metals
NLP	No-Longer Polymer
PBT	Persistent, Bioaccumulative and Toxic
ppm	Parts per million
RID	Règlement concernant le transport International ferroviaire des marchandises Dangereuses (Regulations concerning the International carriage of Dangerous goods by Rail)
Skin Corr.	Corrosive to skin
Skin Irrit.	Irritant to skin
STEL	Short-term exposure limit
TWA	Time-weighted average

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Abbr.	Descriptions of used abbreviations
UFI	Unique formula identifier
VOC	Volatile Organic Compounds
vPvB	Very Persistent and very Bioaccumulative
WEL	Workplace exposure limit

**Key literature references and sources for data**

The REACH etc. (Amendment etc.) (EU Exit) Regulations 2019, SI 2019/758 (as amended). The Chemicals (Health and Safety) and Genetically Modified Organisms (Contained Use) (Amendment etc.) (EU Exit) Regulations 2019, SI 2019/720 (as amended). GB mandatory classification and labelling.

Agreement concerning the International Carriage of Dangerous Goods by Road (ADR). Regulations concerning the International Carriage of Dangerous Goods by Rail (RID). International Maritime Dangerous Goods Code (IMDG). Dangerous Goods Regulations (DGR) for the air transport (IATA).

**Classification procedure**

Physical and chemical properties: The classification is based on tested mixture.

Health hazards, Environmental hazards: The method for classification of the mixture is based on ingredients of the mixture (additivity formula).

**List of relevant phrases (code and full text as stated in section 2 and 3)**

Code	Text
H290	May be corrosive to metals.
H314	Causes severe skin burns and eye damage.
H318	Causes serious eye damage.

**Disclaimer**

This information is based upon the present state of our knowledge. This SDS has been compiled and is solely intended for this product.