



# ICP Standard Solution. Lead (Pb) 1000mg/l in HNO<sub>3</sub> 2% Safety Data Sheet

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

Date of issue: 2014/04/08 Revision date: 2019/02/12 Version: 1.2

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

### 1.1. Product identifier

Product form : Mixture  
Product name : ICP Standard Solution.  
Lead (Pb) 1000mg/l in HNO<sub>3</sub> 2%  
Product code : S041

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

#### 1.2.1. Relevant identified uses

Main use category : Professional use, Industrial use  
Use of the substance/mixture : Reference material  
Function or use category : Laboratory chemicals

#### 1.2.2. Uses advised against

No additional information available

### 1.3. Details of the supplier of the safety data sheet

#### Spectracer UK Ltd.

Second Floor,  
27 Gloucester Place,  
London,  
W1U 8HU,  
United Kingdom.

Tel: +44 (0) 207 193 9114

Fax: +44 (0) 203 432 4686

Email: [contact@spectracer.co.uk](mailto:contact@spectracer.co.uk)

Web: [www.spectracer.com](http://www.spectracer.com)

### 1.4. Emergency telephone number

Emergency number : Tel: +44(0)1933 445260 Option 1. Language: English only.  
For Chemical Emergencies Only  
Llewellyn (Safety Advisors) Europe Ltd

Country	Organisation/Company	Address	Emergency number	Comment
Ireland	National Poisons Information Centre Beaumont Hospital	Beaumont Hospital Beaumont Road 9 Dublin	: +353 1 8379964	
United Kingdom	National Poisons Information Service (NHS Direct)	<a href="http://www.npis.org">http://www.npis.org</a>	111 (England & Wales only) or 112 (EU) or 08454 24 24 24 (Scotland)	

## SECTION 2: Hazards identification

### 2.1. Classification of the substance or mixture

#### Classification according to Regulation (EC) No. 1272/2008 [CLP]

Not classified

#### Adverse physicochemical, human health and environmental effects

To our knowledge, this product does not present any particular risk, provided it is handled in accordance with good occupational hygiene and safety practice.

### 2.2. Label elements

#### Labelling according to Regulation (EC) No. 1272/2008 [CLP]

EUH-statements : EUH208 - Contains lead nitrate(10099-74-8). May produce an allergic reaction.  
EUH210 - Safety data sheet available on request.

### 2.3. Other hazards

No additional information available

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

##### 3.1. Substances

Not applicable

##### 3.2. Mixtures

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
nitric acid	(CAS-No.) 7697-37-2 (EC-No.) 231-714-2 (EC Index-No.) 007-004-00-1 (REACH-no) 01-2119487297-23-XXXX	1 - 5	Ox. Liq. 2, H272 Met. Corr. 1, H290 Acute Tox. 3 (Inhalation:dust,mist), H331 Skin Corr. 1A, H314 Eye Dam. 1, H318
lead nitrate substance listed as REACH Candidate (Lead dinitrate)	(CAS-No.) 10099-74-8 (EC-No.) 233-245-9 (EC Index-No.) 082-001-00-6	0,1 - 0,5	Acute Tox. 4 (Oral), H302 Acute Tox. 4 (Inhalation), H332 Eye Dam. 1, H318 Skin Sens. 1B, H317 Carc. 2, H351 Repr. 1A, H360Df STOT RE 1, H372 Aquatic Acute 1, H400 (M=10) Aquatic Chronic 1, H410

##### Specific concentration limits:

Name	Product identifier	Specific concentration limits
nitric acid	(CAS-No.) 7697-37-2 (EC-No.) 231-714-2 (EC Index-No.) 007-004-00-1 (REACH-no) 01-2119487297-23-XXXX	( 5 =<C < 20) Skin Corr. 1B, H314 ( 20 =<C < 100) Skin Corr. 1A, H314 ( 65 =<C < 99) Ox. Liq. 3, H272 ( 99 =<C < 100) Ox. Liq. 2, H272
lead nitrate	(CAS-No.) 10099-74-8 (EC-No.) 233-245-9 (EC Index-No.) 082-001-00-6	( 0,5 =<C < 100) STOT RE 2, H373 ( 2,5 =<C < 100) Repr. 2, H361f

Full text of H-statements: see section 16

#### SECTION 4: First aid measures

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

First-aid measures general	: IF exposed or concerned: Get medical advice/attention.
First-aid measures after inhalation	: Remove person to fresh air and keep comfortable for breathing.
First-aid measures after skin contact	: Take off contaminated clothing. If skin irritation occurs: Get medical advice/attention. Wash skin with plenty of water.
First-aid measures after eye contact	: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.
First-aid measures after ingestion	: Call a poison center or a doctor if you feel unwell.

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

Symptoms/effects after skin contact	: Irritation.
Symptoms/effects after eye contact	: Eye irritation.

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

Treat symptomatically.

#### SECTION 5: Firefighting measures

##### 5.1. Extinguishing media

Suitable extinguishing media : Water spray. Dry powder. Foam. Carbon dioxide.

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

Hazardous decomposition products in case of fire : Toxic fumes may be released.

##### 5.3. Advice for firefighters

Protection during firefighting : Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

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#### SECTION 6: Accidental release measures

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

###### 6.1.1. For non-emergency personnel

Emergency procedures : Only qualified personnel equipped with suitable protective equipment may intervene.

###### 6.1.2. For emergency responders

Protective equipment : Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".

##### 6.2. Environmental precautions

Avoid release to the environment. Notify authorities if product enters sewers or public waters.

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

Methods for cleaning up : Take up liquid spill into absorbent material. Notify authorities if product enters sewers or public waters.

Other information : Dispose of materials or solid residues at an authorized site.

##### 6.4. Reference to other sections

For further information refer to section 13.

#### SECTION 7: Handling and storage

##### 7.1. Precautions for safe handling

Precautions for safe handling : Ensure good ventilation of the work station. Wear personal protective equipment. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Take all necessary technical measures to avoid or minimize the release of the product on the workplace. Limit quantities of product at the minimum necessary for handling and limit the number of exposed workers. Provide local exhaust or general room ventilation. Floors, walls and other surfaces in the hazard area must be cleaned regularly. Avoid contact with skin and eyes.

Hygiene measures : Separate working clothes from town clothes. Launder separately. Wash contaminated clothing before reuse. Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

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

Storage conditions : Store locked up. Store in a well-ventilated place. Keep cool.

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

No additional information available

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

##### 8.1. Control parameters

lead nitrate (10099-74-8)		
EU	Local name	Lead and its inorganic compounds
EU	IOELV TWA (mg/m <sup>3</sup> )	100 µg/m <sup>3</sup>
EU	Notes	(Year of adoption 2002)
EU	Regulatory reference	SCOEL Recommendations
Austria	Local name	Blei und seine Verbindungen außer Bleiarsenat, Bleichromat, Bleichromatoxid und Alkylbleiverbindungen
Austria	MAK (mg/m <sup>3</sup> )	0,1 mg/m <sup>3</sup>
Austria	MAK Short time value (mg/m <sup>3</sup> )	0,4 mg/m <sup>3</sup>
Belgium	Local name	Plomb inorg. (poussières et fumées) (en Pb) # Lood, anorganisch, stof en rook, als Pb
Belgium	Limit value (mg/m <sup>3</sup> )	0,15 mg/m <sup>3</sup> (Plomb inorg. (poussières et fumées) (en Pb); Belgium; Time-weighted average exposure limit 8 h)
Bulgaria	Local name	Олово
Bulgaria	OEL TWA (mg/m <sup>3</sup> )	0,05 mg/m <sup>3</sup> и неорганични съединения
Croatia	Local name	Olovo i njegovi anorganski spojevi (kao Pb)*
Croatia	GVI (granična vrijednost izloženosti) (mg/m <sup>3</sup> )	0,15 mg/m <sup>3</sup>

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lead nitrate (10099-74-8)		
Croatia	Naznake (HR)	EU0 (naznaka da se radi o tvarima za koje su utvrđene obvezujuće granične vrijednosti izloženosti prema Direktivi 2003/18/ EC, Direktivi 99/38/EC i Direktivi 98/24/EC); T (otrovno); N (opasno za okoliš); Repr. kat. 1 (tvari za koje se zna da smanjuju plodnost kod ljudi i/ili – tvari za koje se zna da iskazuju razvojnu toksičnost kod ljudi); Repr. kat. 3 (tvari za koje se pretpostavlja da bi mogle smanjiti plodnost kod ljudi i/ili – tvari za koje se pretpostavlja da bi mogle iskazati razvojnu otrovnost kod ljudi)
Czech Republic	Local name	Olovo
Czech Republic	Expoziční limity (PEL) (mg/m <sup>3</sup> )	0,05 mg/m <sup>3</sup>
Czech Republic	Expoziční limity (NPK-P) (mg/m <sup>3</sup> )	0,2 mg/m <sup>3</sup>
Czech Republic	Remark (CZ)	P*
Denmark	Local name	Bly, pulver, støv, røg og uorganiske forbindelser
Denmark	Grænseværdie (langvarig) (mg/m <sup>3</sup> )	0,05 mg/m <sup>3</sup> beregnet som Pb
Denmark	Anmærkninger (DK)	E (betyder, at stoffet har en EF-grænseværdi)
Estonia	Local name	Plii j aanorgaanilised ühendid, (arvutatudpliile) kogutolm
Estonia	OEL TWA (mg/m <sup>3</sup> )	0,1 mg/m <sup>3</sup>
Finland	Local name	Lyijy, metalli
Finland	HTP-arvo (8h) (mg/m <sup>3</sup> )	0,1 mg/m <sup>3</sup>
Finland	Huomautus (FI)	Pb, melu, liite 3 (SITOVAT RAJA-ARVOT)
France	VME (mg/m <sup>3</sup> )	0,1 mg/m <sup>3</sup> (Plomb métallique et composés, en Pb; France; Time-weighted average exposure limit 8 h; VRC: Valeur réglementaire contraignante)
Gibraltar	Eight hours mg/m3	0,15 mg/m <sup>3</sup>
Gibraltar	Name of agent	Inorganic lead and its compounds
Gibraltar	Regulatory reference	Factories (Control of Chemical Agents at Work) Regulations 2003 (LN. 2018/181)
Hungary	Local name	ÓLOM és SZERVETLEN VEGYÜLETEI (Pb-ra számítva)
Hungary	AK-érték	0,15 mg/m <sup>3</sup>
Hungary	Megjegyzések (HU)	i; III.
Ireland	Local name	Lead and its compounds (except tetraethyl lead)
Ireland	OEL (8 hours ref) (mg/m <sup>3</sup> )	0,15 mg/m <sup>3</sup>
Ireland	Notes (IE)	Repr.1A (Substances which are known human reproductive toxicants), BOELV (Binding Occupational Exposure Limit Values)
Ireland	Regulatory reference	Code of Practice for the Chemical Agents Regulations 2018
Latvia	Local name	Svinsuntāneorganiskie savienojumi,(pēcsvina)
Latvia	OEL TWA (mg/m <sup>3</sup> )	0,005 mg/m <sup>3</sup>
Latvia	OEL STEL (mg/m <sup>3</sup> )	0,01 mg/m <sup>3</sup>
Malta	Local name	Inorganic lead and its compounds # Ċomb inorganiku ul-komponenti tiegħu
Malta	OEL TWA (mg/m <sup>3</sup> )	0,15 mg/m <sup>3</sup>
Malta	Regulatory reference	S.L.424.24 (L.N.57 of 2018)
Netherlands	Local name	Lood
Netherlands	Grenswaarde TGG 8H (mg/m <sup>3</sup> )	0,15 mg/m <sup>3</sup> (en anorganische loodverbindingen)
Netherlands	Remark (MAC)	(zie tevens artikel 4.19a Arbeidsomstandighedenregeling)
Poland	Local name	Ołów i jego związki nieorganiczne w przeliczeniu na Pb

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lead nitrate (10099-74-8)		
Poland	NDS (mg/m <sup>3</sup> )	0,05 mg/m <sup>3</sup>
Portugal	Local name	Chumbo elementar e compostos inorgânicos , expressos em Pb
Portugal	OEL TWA (mg/m <sup>3</sup> )	0,05 mg/m <sup>3</sup>
Romania	Local name	Plumb și compuși (în afară de PbS)
Romania	OEL TWA (mg/m <sup>3</sup> )	0,05 mg/m <sup>3</sup>
Romania	OEL STEL (mg/m <sup>3</sup> )	0,1 mg/m <sup>3</sup>
Slovakia	Local name	Olovo a jeho anorganické zlúčeniny (ako Pb)
Slovakia	NPHV (priemerná) (mg/m <sup>3</sup> )	0,15 mg/m <sup>3</sup> respirabilná frakcia 0,5 mg/m <sup>3</sup> inhalovateľná frakcia
Slovenia	Local name	svinec in njegove spojine (računano kot Pb) razen svinčevega arzenata, svinčevega kromata in alkilsvinčevih spojin
Slovenia	OEL TWA (mg/m <sup>3</sup> )	0,1 mg/m <sup>3</sup>
Slovenia	OEL STEL (mg/m <sup>3</sup> )	0,4 mg/m <sup>3</sup>
Spain	Local name	Plomo
Spain	VLA-ED (mg/m <sup>3</sup> )	0,15 mg/m <sup>3</sup> elemental 0,15 mg/m <sup>3</sup> Compuestos inorgánicos de plomo, como Pb
Spain	Notes	k (Véase el Real Decreto 374/2001, de 6 de abril (BOE nº 104 de 1 de mayo de 2001), sobre la protección de la salud y seguridad de los trabajadores contra los riesgos relacionados con los agentes químicos durante el trabajo), VLB® (Agente químico que tiene Valor Límite Biológico específico en este documento), TR1A (Cuando las pruebas utilizadas para la clasificación procedan principalmente de datos en humanos).
Sweden	Local name	Bly, och oorg. föreningar (som Pb)
Sweden	nivågränsvärde (NVG) (mg/m <sup>3</sup> )	0,05 mg/m <sup>3</sup> respirabelt damm 0,1 mg/m <sup>3</sup> inhalerbart damm
Sweden	Anmärkning (SE)	B (Ämnet kan orsaka hörselskada Exponering för ämnet nära det befintliga yrkeshygieniska gränsvärdet och vid samtidig exponering för buller nära insatsvärdet 80 dB kan orsaka hörselskada); M (Medicinska kontroller kan krävas för hantering av ämnet. Se vidare föreskrifterna om medicinska kontroller i arbetslivet. För vissa ämnen ska arbetsgivaren erbjuda läkarundersökning och för andra ämnen gäller krav på periodisk läkarundersökning och tjänstbarhetsbedömning. Se föreskrifterna om kemiska arbetsmiljörisiker); R (Ämnet är reproduktionsstörande Med reproduktionsstörande ämnen avses ämnen som kan medföra skadliga effekter på fortplantningsförmågan eller avkommans utveckling. Se även föreskrifterna om kemiska arbetsmiljörisiker och om gravida och ammande arbetstagare); 2 (Med respirabelt damm menas den dammfraktion som definieras i svensk standard SS-EN 481, Arbetsplatsluft – Partikelstorleksfraktioner för mätning av luftburna partiklar, Utgåva 1, 1993, punkt 2.11 och som har en provtagningskaraktäristik enligt punkt 5.3); 14 (För bly och kadmium finns biologiska gränsvärden, se föreskrifterna om medicinska kontroller i arbetslivet)
United Kingdom	WEL TWA (mg/m <sup>3</sup> )	15 mg/cm <sup>3</sup> Lead other than lead alkyls; United Kingdom; Time-weighted average exposure limit 8 h; Occupational exposure limit (Control of lead at work)
Iceland	Local name	Blý, duft, ryk, reykur, ólífræn sambönd, sem Pb
Iceland	OEL (8 hours ref) (mg/m <sup>3</sup> )	0,05 mg/m <sup>3</sup>
Switzerland	Local name	Blei und seine Verbindungen, außer Alkylverbindungen (als Pb berechnet)

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lead nitrate (10099-74-8)		
Switzerland	MAK (mg/m <sup>3</sup> )	0,1 mg/m <sup>3</sup>
Switzerland	KZGW (mg/m <sup>3</sup> )	0,8 mg/m <sup>3</sup>
Switzerland	Remark	e(mg/m <sup>3</sup> ) - B C2 R2 <sub>F</sub> R1 <sub>AD</sub> SS <sub>B</sub> - NS, Blut - HSE, NIOSH
Australia	Local name	Lead, inorganic dusts & fumes (as Pb)
Australia	TWA (mg/m <sup>3</sup> )	0,05 mg/m <sup>3</sup>
USA - ACGIH	Local name	LEAD
USA - ACGIH	ACGIH TWA (mg/m <sup>3</sup> )	0,05 mg/m <sup>3</sup>
USA - ACGIH	Remark (ACGIH)	TLV® Basis: CNS & PNS impair; hematologic eff. Notations: A3 (Confirmed Animal Carcinogen with Unknown Relevance to Humans); BEI
USA - ACGIH	Biological Exposure Indices (BEI)	200 µg/l Parameter: Lead - Medium: blood - Sampling time: Not critical
USA - ACGIH	Regulatory reference	ACGIH 2018
nitric acid (7697-37-2)		
EU	Local name	Nitric acid
EU	IOELV STEL (mg/m <sup>3</sup> )	2,6 mg/m <sup>3</sup> (Nitric acid; EU; Short time value; Indicative occupational exposure limit value)
EU	IOELV STEL (ppm)	1 ppm (Nitric acid; EU; Short time value; Indicative occupational exposure limit value)
EU	Regulatory reference	COMMISSION DIRECTIVE 2006/15/EC
Austria	Local name	Salpetersäure
Austria	MAK Short time value (mg/m <sup>3</sup> )	2,6 mg/m <sup>3</sup>
Austria	MAK Short time value (ppm)	1 ppm
Austria	Regulatory reference	BGBI. II Nr. 186/2015
Belgium	Local name	Acide nitrique # Salpeterzuur
Belgium	Short time value (mg/m <sup>3</sup> )	2,6 mg/m <sup>3</sup>
Belgium	Short time value (ppm)	1 ppm
Belgium	Regulatory reference	Koninklijk besluit/Arrêté royal 02/09/2018
Bulgaria	Local name	Азотна киселина
Bulgaria	OEL STEL (mg/m <sup>3</sup> )	2,6 mg/m <sup>3</sup>
Bulgaria	OEL STEL (ppm)	1 ppm
Bulgaria	Notes	• (Химични агенти, за които са определени гранични стойности във въздуха на работната среда за Европейската общност)
Bulgaria	Regulatory reference	Наредба № 13 от 30.12.2003 г. за защита на работещите от рискове, свързани с експозиция на химични агенти при работа (изм. и доп. ДВ. бр.73 от 4 септември 2018 г.)
Croatia	Local name	Dušična kiselina
Croatia	KGVI (kratkotrajna гранична vrijednost izloženosti) (mg/m <sup>3</sup> )	2,6 mg/m <sup>3</sup>
Croatia	KGVI (kratkotrajna гранична vrijednost izloženosti) (ppm)	1 ppm
Croatia	Naznake (HR)	EU** (naznaka da se radi o tvarima za koje su utvrđene indikativne граничне vrijednosti izloženosti prema Direktivi 2006/15/ EC (druga lista); O (oksidirajuće); C (nagrizajuće)
Croatia	Regulatory reference	Pravilnik o izmjenama i dopunama Pravilnika o граничним vrijednostima izloženosti opasnim tvarima pri radu i o biološkim граничним vrijednostima (NN, br. 75/13)
Czech Republic	Local name	Kyselina dusičná
Czech Republic	Expoziční limity (PEL) (mg/m <sup>3</sup> )	1 mg/m <sup>3</sup>
Czech Republic	Expoziční limity (PEL) (ppm)	0,39 ppm
Czech Republic	Expoziční limity (NPK-P) (mg/m <sup>3</sup> )	2,5 mg/m <sup>3</sup>
Czech Republic	Expoziční limity (NPK-P) (ppm)	1 ppm

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nitric acid (7697-37-2)		
Czech Republic	Remark (CZ)	I (dráždí sliznice (oči, dýchací cesty) resp. kůži)
Czech Republic	Regulatory reference	Nařízení vlády č. 361/2007 Sb. (zpracovány změny č. 246/2018 Sb.)
Denmark	Local name	Salpetersyre
Denmark	Grænseværdie (kortvarig) (mg/m <sup>3</sup> )	2,6 mg/m <sup>3</sup>
Denmark	Grænseværdie (kortvarig) (ppm)	1 ppm
Denmark	Anmærkninger (DK)	E (betyder, at stoffet har en EF-grænseværdi); S (betyder, at grænseværdien ikke bør overskrides. Værdien gælder for en eksponeringsperiode på 15 minutter)
Denmark	Regulatory reference	BEK nr 655 af 31/05/2018
Estonia	Local name	Lämmastikhape
Estonia	OEL STEL (mg/m <sup>3</sup> )	2,6 mg/m <sup>3</sup>
Estonia	OEL STEL (ppm)	1 ppm
Estonia	Regulatory reference	Vabariigi Valitsuse 18. septembri 2001. a määruse nr 293 (RT I, 30.11.2011, 5)
Finland	Local name	Typpihappo
Finland	HTP-arvo (8h) (mg/m <sup>3</sup> )	1,3 mg/m <sup>3</sup>
Finland	HTP-arvo (8h) (ppm)	0,5 ppm
Finland	HTP-arvo (15 min)	2,6 mg/m <sup>3</sup>
Finland	HTP-arvo (15 min) (ppm)	1 ppm
Finland	Regulatory reference	HTP-ARVOT 2018 (Sosiaali- ja terveysministeriö)
France	Local name	Acide nitrique
France	VLE (mg/m <sup>3</sup> )	2,6 mg/m <sup>3</sup>
France	VLE (ppm)	1 ppm
France	Note (FR)	Valeurs réglementaires indicatives
France	Regulatory reference	Arrêté du 30 juin 2004 modifié (réf.: INRS ED 984, 2016)
Germany	TRGS 900 Local name	Salpetersäure
Germany	TRGS 900 Occupational exposure limit value (mg/m <sup>3</sup> )	2,6 mg/m <sup>3</sup>
Germany	TRGS 900 Occupational exposure limit value (ppm)	1 ppm
Germany	TRGS 900 Remark	EU;13;16
Germany	TRGS 900 Regulatory reference	TRGS900
Gibraltar	Short-term mg/m <sup>3</sup>	2,6 mg/m <sup>3</sup>
Gibraltar	Short-term ppm	1 ppm
Gibraltar	Name of agent	Nitric acid
Gibraltar	Regulatory reference	Factories (Control of Chemical Agents at Work) Regulations 2003 (LN. 2018/181)
Greece	Local name	Νιτρικό οξύ
Greece	OEL STEL (mg/m <sup>3</sup> )	2,6 mg/m <sup>3</sup>
Greece	OEL STEL (ppm)	1 ppm
Greece	Regulatory reference	Π.Δ. 162/2007
Hungary	Local name	SALÉTRÓMSAV
Hungary	CK-érték	2,6 mg/m <sup>3</sup>
Hungary	Megjegyzések (HU)	i (ingerlő anyag, amely izgatja a bőrt, nyálkahártyát, szemet vagy mindháromat), m (maró hatású anyag, amely felmarja a bőrt, nyálkahártyát, szemet vagy mindháromat); EU2 (2006/15/EK irányelvben közölt érték)
Hungary	Regulatory reference	25/2000. (IX. 30.) EüM–SZCSM együttes rendelet a munkahelyek kémiai biztonságáról
Ireland	Local name	Nitric acid
Ireland	OEL (15 min ref) (mg/m <sup>3</sup> )	2,6 mg/m <sup>3</sup>



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nitric acid (7697-37-2)		
Ireland	OEL (15 min ref) (ppm)	1 ppm
Ireland	Notes (IE)	IOELV (Indicative Occupational Exposure Limit Values)
Ireland	Regulatory reference	Code of Practice for the Chemical Agents Regulations 2018
Italy	Local name	Acido nitrico
Italy	OEL STEL (mg/m <sup>3</sup> )	2,6 mg/m <sup>3</sup>
Italy	OEL STEL (ppm)	1 ppm
Italy	Regulatory reference	Allegato XXXVIII del D.Lgs. 9 aprile 2008, n. 81 e s.m.i.
Latvia	Local name	Slāpekļskābe
Latvia	OEL TWA (mg/m <sup>3</sup> )	2 mg/m <sup>3</sup>
Latvia	OEL TWA (ppm)	0,78 ppm
Latvia	OEL STEL (mg/m <sup>3</sup> )	2,6 mg/m <sup>3</sup>
Latvia	OEL STEL (ppm)	1 ppm
Latvia	Regulatory reference	Ministru kabineta 2007.gada 15.maija noteikumiem Nr.325
Lithuania	Local name	Nitrato rūgštis (azoto rūgštis)
Lithuania	TPRV (mg/m <sup>3</sup> )	2,6 mg/m <sup>3</sup>
Lithuania	TPRV (ppm)	1 ppm
Lithuania	Regulatory reference	LIETUVOS HIGIENOS NORMA HN 23:2011 (Nr. V-695/A1-272, 2018-06-12)
Luxembourg	Local name	Acide nitrique
Luxembourg	OEL STEL (mg/m <sup>3</sup> )	2,6 mg/m <sup>3</sup>
Luxembourg	OEL STEL (ppm)	1 ppm
Luxembourg	Regulatory reference	Mémorial A N° 684 de 2018
Malta	Local name	Nitric acid
Malta	OEL STEL (mg/m <sup>3</sup> )	2,6 mg/m <sup>3</sup>
Malta	OEL STEL (ppm)	1 ppm
Malta	Regulatory reference	S.L.424.24 (L.N.57 of 2018)
Netherlands	Local name	Salpeterzuur
Netherlands	Grenswaarde TGG 15MIN (mg/m <sup>3</sup> )	1,3 mg/m <sup>3</sup>
Netherlands	Grenswaarde TGG 15MIN (ppm)	0,5 ppm (Salpeterzuur; Netherlands; Short time value; Public occupational exposure limit value)
Netherlands	Regulatory reference	Arbeidsomstandighedenregeling 2018
Portugal	Local name	Ácido nítrico
Portugal	OEL TWA (ppm)	2 ppm
Portugal	OEL STEL (ppm)	4 ppm
Portugal	Regulatory reference	Norma Portuguesa NP 1796:2014
Slovakia	Local name	Kyselina dusičná
Slovakia	OEL STEL (mg/m <sup>3</sup> )	2,6 mg/m <sup>3</sup>
Slovakia	OEL STEL (ppm)	1 ppm
Slovakia	Regulatory reference	Nariadenie vlády č. 33/2018 Z.z.
Slovenia	Local name	dušikova kislina
Slovenia	OEL TWA (mg/m <sup>3</sup> )	2,6 mg/m <sup>3</sup>
Slovenia	OEL TWA (ppm)	1 ppm
Slovenia	OEL STEL (mg/m <sup>3</sup> )	2,6 mg/m <sup>3</sup>
Slovenia	OEL STEL (ppm)	1 ppm
Slovenia	KTV factor SL	1



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nitric acid (7697-37-2)		
Slovenia	Regulatory reference	Uradni list RS, št. 38/2015 z dne 4.6.2015
Spain	Local name	Ácido nítrico
Spain	VLA-EC (mg/m <sup>3</sup> )	2,6 mg/m <sup>3</sup>
Spain	VLA-EC (ppm)	1 ppm
Spain	Notes	VLI (Agente químico para el que la U.E. estableció en su día un valor Límite indicativo).
Spain	Regulatory reference	Límites de Exposición Profesional para Agentes Químicos en España 2018. INSHT
Sweden	Local name	Salpetersyra
Sweden	nivågränsvärde (NVG) (mg/m <sup>3</sup> )	1,3 mg/m <sup>3</sup>
Sweden	nivågränsvärde (NVG) (ppm)	0,5 ppm
Sweden	kortidsvärde (KTV) (mg/m <sup>3</sup> )	2,6 mg/m <sup>3</sup>
Sweden	kortidsvärde (KTV) (ppm)	1 ppm
Sweden	Regulatory reference	Hygieniska gränsvärden (AFS 2018:1)
United Kingdom	Local name	Nitric acid
United Kingdom	WEL STEL (mg/m <sup>3</sup> )	2,6 mg/m <sup>3</sup>
United Kingdom	WEL STEL (ppm)	1 ppm
United Kingdom	Regulatory reference	EH40/2005 (Third edition, 2018). HSE
Iceland	Local name	Saltpéturssýra
Iceland	OEL (15 min ref) (mg/m <sup>3</sup> )	2,6 mg/m <sup>3</sup>
Iceland	OEL (15 min ref) (ppm)	1 ppm
Iceland	Regulatory reference	Reglugerð um mengunarmörk og aðgerðir til að draga úr mengun á vinnustöðum (Nr. 390/2009)
Norway	Local name	Salpetersyre
Norway	Grenseverdier (AN) (mg/m <sup>3</sup> )	5 mg/m <sup>3</sup>
Norway	Grenseverdier (AN) (ppm)	2 ppm
Norway	Merknader (NO)	E (EU har en veiledende grenseverdi for stoffet)
Norway	Regulatory reference	FOR-2018-08-21-1255
Turkey	Local name	Nitrik asit
Turkey	OEL STEL (mg/m <sup>3</sup> )	2,6 mg/m <sup>3</sup>
Turkey	OEL STEL (ppm)	1 ppm
Turkey	Regulatory reference	12 Ağustos 2013 Tarihli ve 28733 Sayılı Resmî Gazete
Australia	Local name	Nitric acid
Australia	TWA (mg/m <sup>3</sup> )	5,2 mg/m <sup>3</sup>
Australia	TWA (ppm)	2 ppm
Australia	STEL (mg/m <sup>3</sup> )	10 mg/m <sup>3</sup>
Australia	STEL (ppm)	4 ppm
USA - ACGIH	Local name	Nitric acid
USA - ACGIH	ACGIH TWA (ppm)	2 ppm
USA - ACGIH	ACGIH STEL (ppm)	4 ppm
USA - ACGIH	Remark (ACGIH)	TLV® Basis: URT & eye irr; dental erosion
USA - ACGIH	Regulatory reference	ACGIH 2018
USA - OSHA	Local name	Nitric acid
USA - OSHA	OSHA PEL (TWA) (mg/m <sup>3</sup> )	5 mg/m <sup>3</sup>
USA - OSHA	OSHA PEL (TWA) (ppm)	2 ppm

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#### 8.2. Exposure controls

##### Appropriate engineering controls:

Provide adequate general and local exhaust ventilation. Ensure good ventilation of the work station.

##### Personal protective equipment:

Protective clothing. Protective goggles. Gloves.

##### Hand protection:

Protective gloves

##### Eye protection:

Safety glasses

##### Skin and body protection:

Wear suitable protective clothing

##### Respiratory protection:

Where exposure through inhalation may occur from use, respiratory protection equipment is recommended. [In case of inadequate ventilation] wear respiratory protection.

##### Personal protective equipment symbol(s):



##### Environmental exposure controls:

Avoid release to the environment.

## SECTION 9: Physical and chemical properties

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

Physical state	: Liquid
Colour	: No data available
Odour	: No data available
Odour threshold	: No data available
pH	: < 2
Relative evaporation rate (butylacetate=1)	: No data available
Melting point	: Not applicable
Freezing point	: No data available
Boiling point	: No data available
Flash point	: No data available
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Flammability (solid, gas)	: Not applicable
Vapour pressure	: No data available
Relative vapour density at 20 °C	: No data available
Relative density	: 1,01
Solubility	: Miscible with water.
Log Pow	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosive properties	: No data available
Oxidising properties	: No data available
Explosive limits	: No data available

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#### 9.2. Other information

No additional information available

### SECTION 10: Stability and reactivity

#### 10.1. Reactivity

The product is non-reactive under normal conditions of use, storage and transport.

#### 10.2. Chemical stability

Stable under normal conditions.

#### 10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

#### 10.4. Conditions to avoid

None under recommended storage and handling conditions (see section 7).

#### 10.5. Incompatible materials

No additional information available

#### 10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

### SECTION 11: Toxicological information

#### 11.1. Information on toxicological effects

Acute toxicity (oral) : Not classified

Acute toxicity (dermal) : Not classified

Acute toxicity (inhalation) : Not classified

lead nitrate (10099-74-8)	
LD50 oral rat	4665 mg/kg bodyweight
LD50 dermal rat	> 2000 mg/kg

nitric acid (7697-37-2)	
LC50 inhalation rat (mg/l)	> 2,65 mg/l

Skin corrosion/irritation : Not classified  
pH: < 2

Serious eye damage/irritation : Not classified  
pH: < 2

Respiratory or skin sensitisation : Not classified

Germ cell mutagenicity : Not classified

Carcinogenicity : Not classified

Reproductive toxicity : Not classified

STOT-single exposure : Not classified

STOT-repeated exposure : Not classified

Aspiration hazard : Not classified

### SECTION 12: Ecological information

#### 12.1. Toxicity

Ecology - general : The product is not considered harmful to aquatic organisms nor to cause long-term adverse effects in the environment.

Acute aquatic toxicity : Not classified

Chronic aquatic toxicity : Not classified

lead nitrate (10099-74-8)	
LC50 fish 1	40,8 - 3597,9 µg/l (µg Pb/L) Pimephales promelas (Fathead minnow)
EC50 Daphnia 1	26,4 µg/l (µg Pb/L) Ceriodaphnia dubia

nitric acid (7697-37-2)	
LC50 fish 1	72 mg/l

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nitric acid (7697-37-2)	
EC50 Daphnia 1	180 mg/l
Threshold limit algae 1	> 19 mg/l

#### 12.2. Persistence and degradability

No additional information available

#### 12.3. Bioaccumulative potential

lead nitrate (10099-74-8)	
Bioaccumulative potential	bioaccumulable.

nitric acid (7697-37-2)	
BCF fish 1	<= 1
Log Pow	-2,3

#### 12.4. Mobility in soil

No additional information available

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

Component	
lead nitrate (10099-74-8)	This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII

#### 12.6. Other adverse effects

No additional information available

### SECTION 13: Disposal considerations

#### 13.1. Waste treatment methods

Waste treatment methods	: Dispose of contents/container in accordance with licensed collector's sorting instructions.
Product/Packaging disposal recommendations	: Dispose in a safe manner in accordance with local/national regulations.
Ecology - waste materials	: Avoid release to the environment.
European List of Waste (LoW) code	: 16 05 06* - laboratory chemicals consisting of or containing dangerous substances including mixtures of laboratory chemicals

### SECTION 14: Transport information

In accordance with ADR / RID / IMDG / IATA / ADN

ADR	IMDG	IATA	ADN	RID
<b>14.1. UN number</b>				
Not regulated	Not regulated	Not regulated	Not regulated	Not regulated
<b>14.2. UN proper shipping name</b>				
Not regulated	Not regulated	Not regulated	Not regulated	Not regulated
<b>14.3. Transport hazard class(es)</b>				
Not regulated	Not regulated	Not regulated	Not regulated	Not regulated
<b>14.4. Packing group</b>				
Not regulated	Not regulated	Not regulated	Not regulated	Not regulated
<b>14.5. Environmental hazards</b>				
Not regulated	Not regulated	Not regulated	Not regulated	Not regulated
No supplementary information available				

#### 14.6. Special precautions for user

##### - Overland transport

Not regulated

##### - Transport by sea

Not regulated

##### - Air transport

Not regulated

##### - Inland waterway transport

Not regulated

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#### - Rail transport

Not regulated

#### 14.7. Transport in bulk according to Annex II of Marpol and the IBC Code

Not applicable

## SECTION 15: Regulatory information

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

#### 15.1.1. EU-Regulations

The following restrictions are applicable according to Annex XVII of the REACH Regulation (EC) No 1907/2006:

3. Liquid substances or mixtures which are regarded as dangerous in accordance with Directive 1999/45/EC or are fulfilling the criteria for any of the following hazard classes or categories set out in Annex I to Regulation (EC) No 1272/2008	nitric acid
3(a) Substances or mixtures fulfilling the criteria for any of the following hazard classes or categories set out in Annex I to Regulation (EC) No 1272/2008: Hazard classes 2.1 to 2.4, 2.6 and 2.7, 2.8 types A and B, 2.9, 2.10, 2.12, 2.13 categories 1 and 2, 2.14 categories 1 and 2, 2.15 types A to F	nitric acid
3(b) Substances or mixtures fulfilling the criteria for any of the following hazard classes or categories set out in Annex I to Regulation (EC) No 1272/2008: Hazard classes 3.1 to 3.6, 3.7 adverse effects on sexual function and fertility or on development, 3.8 effects other than narcotic effects, 3.9 and 3.10	nitric acid

Contains a substance on the REACH candidate list in concentration  $\geq 0.1\%$  or with a lower specific limit: Lead dinitrate (EC 233-245-9, CAS 10099-74-8)

Contains no REACH Annex XIV substances

#### 15.1.2. National regulations

##### Germany

Reference to AwSV : Water hazard class (WGK) 2, Significantly hazardous to water (Classification according to AwSV, Annex 1)

Storage class (LGK) : LGK 12 - Non-combustible liquids

12th Ordinance Implementing the Federal Immission Control Act - 12.BImSchV : Is not subject of the 12. BImSchV (Hazardous Incident Ordinance)

##### Netherlands

SZW-lijst van kankerverwekkende stoffen : None of the components are listed

SZW-lijst van mutagene stoffen : None of the components are listed

NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Borstvoeding : None of the components are listed

NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Vruchtbaarheid : None of the components are listed

NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Ontwikkeling : None of the components are listed

##### Denmark

Danish National Regulations : Young people below the age of 18 years are not allowed to use the product  
Pregnant/breastfeeding women working with the product must not be in direct contact with the product  
The requirements from the Danish Working Environment Authorities regarding work with carcinogens must be followed during use and disposal

### 15.2. Chemical safety assessment

No chemical safety assessment has been carried out

## SECTION 16: Other information

Full text of H- and EUH-statements:

Acute Tox. 3 (Inhalation:dust,mist) Acute toxicity (inhalation:dust,mist) Category 3

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Acute Tox. 4 (Inhalation)	Acute toxicity (inhal.), Category 4
Acute Tox. 4 (Oral)	Acute toxicity (oral), Category 4
Aquatic Acute 1	Hazardous to the aquatic environment — Acute Hazard, Category 1
Aquatic Chronic 1	Hazardous to the aquatic environment — Chronic Hazard, Category 1
Carc. 2	Carcinogenicity, Category 2
Eye Dam. 1	Serious eye damage/eye irritation, Category 1
Met. Corr. 1	Corrosive to metals, Category 1
Ox. Liq. 2	Oxidising Liquids, Category 2
Ox. Liq. 3	Oxidising Liquids, Category 3
Repr. 1A	Reproductive toxicity, Category 1A
Repr. 2	Reproductive toxicity, Category 2
Skin Corr. 1A	Skin corrosion/irritation, Category 1A
Skin Corr. 1B	Skin corrosion/irritation, Category 1B
Skin Sens. 1B	Skin sensitisation, category 1B
STOT RE 1	Specific target organ toxicity — Repeated exposure, Category 1
STOT RE 2	Specific target organ toxicity — Repeated exposure, Category 2
H272	May intensify fire; oxidiser.
H290	May be corrosive to metals.
H302	Harmful if swallowed.
H314	Causes severe skin burns and eye damage.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H331	Toxic if inhaled.
H332	Harmful if inhaled.
H351	Suspected of causing cancer.
H360Df	May damage the unborn child. Suspected of damaging fertility.
H361f	Suspected of damaging fertility.
H372	Causes damage to organs through prolonged or repeated exposure.
H373	May cause damage to organs through prolonged or repeated exposure.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.
EUH208	Contains lead nitrate(10099-74-8). May produce an allergic reaction.
EUH210	Safety data sheet available on request.

SDS EU Mod H F (REACH ANNEX II)

*This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.*