

Multi-element calibration standard-3: 10 components; 10ug/ml each of Sb ; Au ; Hf ; Ir ; Pd ; Pt ; Rh ; Ru ; Te ; Sn in HCl 10 % / HNO3 1% Equivalent to Agilent Ref: 8500-6948

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

Reference number: EQ0031

Issue date: 07.09.2016 Revision date: 21.08.2023 Supersedes version of: 11.09.2017 Version: 1.2

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

1.1. Product identifier

Product form : Mixture
Product name : Multi-element calibration standard-3: 10 components; 10ug/ml each of Sb ; Au ; Hf ; Ir ; Pd ; Pt ; Rh ; Ru ; Te ; Sn in HCl 10 % / HNO3 1% Equivalent to Agilent Ref: 8500-6948
Product code : EQ0031

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

1.2.1. Relevant identified uses

Main use category : Industrial use, Professional use
Use of the substance/mixture : Certified reference material for laboratory use
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.

Third Floor,
55 Blandford Street,
London,
W1U 7HW,
United Kingdom.

Tel: +44 (0) 207 193 9114

Fax: +44 (0) 203 432 4686

Email: contact@spectracer.co.uk

Web: www.spectracer.com

1.4. Emergency telephone number

Country	Organisation/Company	Address	Emergency number	Comment
Ireland	National Poisons Information Centre Beaumont Hospital	Beaumont Hospital Beaumont Road 9 Dublin	+353 1 8379964	
Malta	Medicines & Poisons Info Office	Mater Dei Hospital Msida MSD 2090 Msida	+356 2545 6508	
United Kingdom	National Poisons Information Service (NHS Direct)	http://www.npis.org	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]

Corrosive to metals, Category 1

H290

Multi-element calibration standard-3: 10 components; 10ug/ml each of Sb ; Au ; Hf ; Ir ; Pd ; Pt ; Rh ; Ru ; Te ; Sn in HCl 10 % / HNO3 1% Equivalent to Agilent Ref: 8500-6948

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Skin corrosion/irritation, Category 2 H315
 Serious eye damage/eye irritation, Category 2 H319
 Specific target organ toxicity – Single exposure, Category 3, H335
 Respiratory tract irritation
 Full text of H- and EUH-statements: see section 16

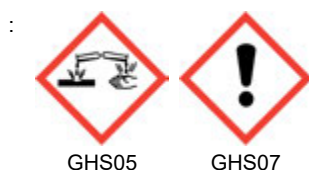
Adverse physicochemical, human health and environmental effects

May be corrosive to metals. May cause respiratory irritation. Causes skin irritation. Causes serious eye irritation.

2.2. Label elements

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

Hazard pictograms (CLP)



Signal word (CLP)

: Warning

Contains

: nitric acid; hydrochloric acid; hexafluoroantimonic acid; tetrachloroauric acid; hafnium dioxide; iridium trichloride; palladium dinitrate; chloroplatinic acid, hexahydrate; rhodium trichloride; ruthenium trichloride; telluric acid; tetrafluorostannane

Hazard statements (CLP)

: H290 - May be corrosive to metals.
 H315 - Causes skin irritation.
 H319 - Causes serious eye irritation.
 H335 - May cause respiratory irritation.

Precautionary statements (CLP)

: P261 - Avoid breathing dust/fume/gas/mist/vapours/spray.
 P264 - Wash hands, forearms and face thoroughly after handling.
 P280 - Wear protective gloves/protective clothing/eye protection/face protection.
 P312 - Call a POISON CENTRE or doctor if you feel unwell.
 P337+P313 - If eye irritation persists: Get medical advice/attention.
 P390 - Absorb spillage to prevent material damage.

2.3. Other hazards

Contains no PBT/vPvB substances $\geq 0.1\%$ assessed in accordance with REACH Annex XIII

Component	
nitric acid (7697-37-2)	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
hydrochloric acid (7647-01-0)	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
hexafluoroantimonic acid (16950-06-4)	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
hafnium dioxide (12055-23-1)	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
iridium trichloride (10025-83-9)	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
palladium dinitrate (10102-05-3)	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
chloroplatinic acid, hexahydrate (18497-13-7)	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
rhodium trichloride (10049-07-7)	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

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Component	
telluric acid (7803-68-1)	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
tetrafluorostannane (7783-62-2)	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

The mixture does not contain substance(s) included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or is not 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 at a concentration equal to or greater than 0,1 %

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]
hydrochloric acid substance with national workplace exposure limit(s) (BE, BG, CZ, DE, DK, EE, ES, FI, FR, GB, GI, GR, HR, HU, IE, IT, LT, LU, LV, MT, NL, PL, PT, RO, SE, SI, SK, IS, NO, RS, CH, TR); substance with a Community workplace exposure limit	CAS-No.: 7647-01-0 EC-No.: 231-595-7 EC Index-No.: 017-002-01-X REACH-no: 01-2119484862-27-XXXX	10 – 15	Met. Corr. 1, H290 Skin Corr. 1B, H314 Eye Dam. 1, H318 STOT SE 3, H335
nitric acid substance with national workplace exposure limit(s) (AT, BE, BG, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GI, GR, HR, HU, IE, IT, LT, LU, LV, MT, NL, PL, PT, RO, SE, SI, SK, AL, IS, NO, MK, RS, CH, TR); substance with a Community workplace exposure limit	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. 1 (Inhalation), H330 Skin Corr. 1A, H314 Eye Dam. 1, H318
tetrafluorostannane substance with national workplace exposure limit(s) (AT, BE, BG, CY, CZ, DK, EE, ES, FI, FR, GB, GI, GR, HR, HU, IE, LU, MT, NL, PL, PT, RO, SE, SI, SK, IS, NO, MK, CH); substance with a Community workplace exposure limit	CAS-No.: 7783-62-2 EC-No.: 232-016-0	< 0,05	Acute Tox. 4 (Oral), H302 Acute Tox. 4 (Dermal), H312 Acute Tox. 4 (Inhalation), H332 Skin Corr. 1B, H314
telluric acid substance with national workplace exposure limit(s) (AT, BE, BG, CZ, DK, EE, ES, FI, FR, GB, GR, IE, LV, PL, PT, RO, SE, SK, IS, NO, MK, CH)	CAS-No.: 7803-68-1 EC-No.: 232-267-6	< 0,05	Acute Tox. 4 (Inhalation), H332
rhodium trichloride substance with national workplace exposure limit(s) (BE, DK, ES, FI, FR, GB, GR, HR, IE, PT, IS, NO, CH)	CAS-No.: 10049-07-7 EC-No.: 233-165-4	< 0,05	Acute Tox. 4 (Oral), H302 Aquatic Chronic 4, H413

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Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
hexafluoroantimonic acid substance with national workplace exposure limit(s) (AT, BE, BG, CZ, DK, EE, ES, FR, GB, GR, HR, HU, IE, LV, NL, PL, PT, RO, SE, SI, SK, IS, NO, MK, CH); substance with a Community workplace exposure limit	CAS-No.: 16950-06-4 EC-No.: 241-023-8 EC Index-No.: 051-003-00-9	< 0,05	Met. Corr. 1, H290 Acute Tox. 2 (Oral), H300 Acute Tox. 1 (Dermal), H310 Acute Tox. 2 (Inhalation), H330 Skin Corr. 1A, H314 Eye Dam. 1, H318 Aquatic Chronic 2, H411
palladium dinitrate substance with national workplace exposure limit(s) (FI)	CAS-No.: 10102-05-3 EC-No.: 233-265-8 REACH-no: 01-2120279900-51-XXXX	< 0,05	Ox. Sol. 1, H271 Met. Corr. 1, H290 Acute Tox. 4 (Oral), H302 Skin Corr. 1B, H314 Eye Dam. 1, H318 Aquatic Acute 1, H400 (M=10) Aquatic Chronic 1, H410
iridium trichloride substance with national workplace exposure limit(s) (AT, BE, DE, DK, FI, GB, IE, SE, NO, CH)	CAS-No.: 10025-83-9 EC-No.: 233-044-6	< 0,05	Acute Tox. 4 (Oral), H302 Aquatic Chronic 2, H411
chloroplatinic acid, hexahydrate substance with national workplace exposure limit(s) (AT, BE, CZ, DK, EE, FI, GB, GI, HR, HU, IE, LT, MT, PT, RO, SE, SK, NO, CH, TR); substance with a Community workplace exposure limit	CAS-No.: 18497-13-7 EC-No.: 241-010-7 EC Index-No.: 078-009-00-4	< 0,05	Acute Tox. 3 (Oral), H301 Skin Corr. 1B, H314 Resp. Sens. 1, H334 Skin Sens. 1, H317 STOT RE Not classified
hafnium dioxide substance with national workplace exposure limit(s) (AT, BE, DK, ES, FI, FR, GR, IE, PL, PT, RO, SI, IS, NO, MK, CH)	CAS-No.: 12055-23-1 EC-No.: 235-013-2	< 0,05	Not classified

Specific concentration limits:

Name	Product identifier	Specific concentration limits (%)
hydrochloric acid	CAS-No.: 7647-01-0 EC-No.: 231-595-7 EC Index-No.: 017-002-01-X REACH-no: 01-2119484862-27-XXXX	(10 ≤ C < 100) STOT SE 3, H335 (10 ≤ C < 25) Eye Irrit. 2, H319 (10 ≤ C < 25) Skin Irrit. 2, H315 (25 ≤ C < 100) Skin Corr. 1B, H314
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

Full text of H- and EUH-statements: see section 16

SECTION 4: First aid measures

4.1. Description of first aid measures

- First-aid measures general : Call a poison center or a doctor if you feel unwell.
- First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing. Call a poison center or a doctor if you feel unwell.

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First-aid measures after skin contact	: Wash skin with plenty of water. Take off contaminated clothing. If skin irritation occurs: Get medical advice/attention.
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 inhalation	: May cause respiratory irritation.
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.
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5.2. Special hazards arising from the substance or mixture

Hazardous decomposition products in case of fire	: Toxic fumes may be released.
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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	: Ventilate spillage area. Avoid breathing dust/fume/gas/mist/vapours/spray. Avoid contact with skin and eyes.
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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".
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6.2. Environmental precautions

Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up	: Take up liquid spill into absorbent material.
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.

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SECTION 7: Handling and storage

7.1. Precautions for safe handling

- Precautions for safe handling : Use only outdoors or in a well-ventilated area. Avoid breathing dust/fume/gas/mist/vapours/spray. Avoid contact with skin and eyes. Wear personal protective equipment.
- Hygiene measures : 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 in corrosive resistant container with a resistant inner liner. Keep only in original container. Store locked up. Store in a well-ventilated place. Keep container tightly closed. Keep cool.
- Incompatible materials : Metals.

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

8.1.1 National occupational exposure and biological limit values

nitric acid (7697-37-2)	
EU - Indicative Occupational Exposure Limit (IOEL)	
Local name	Nitric acid
IOEL STEL	2,6 mg/m ³ 2,6 mg/m ³
IOEL STEL [ppm]	1 ppm 1 ppm
Regulatory reference	COMMISSION DIRECTIVE 2006/15/EC COMMISSION DIRECTIVE 2006/15/EC
Albania - Occupational Exposure Limits	
Local name	Acid nitrik
OEL STEL	2,6 mg/m ³
OEL STEL [ppm]	1 ppm
Regulatory reference	VENDIM Nr. 522, datë 6.8.2014 PËR MIRATIMIN E RREGULLORES "PËR MBROJTJEN E SIGURISË DHE SHËNDETIT TË PUNËMARRËSVE NGA RISQET E LIDHURA ME AGJENTËT KIMIKË NË PUNË"
Austria - Occupational Exposure Limits	
Local name	Salpetersäure
MAK (OEL STEL)	2,6 mg/m ³ (Mow)
MAK (OEL STEL) [ppm]	1 ppm (Mow)
OEL C	2,6 mg/m ³
OEL C [ppm]	1 ppm

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nitric acid (7697-37-2)	
Regulatory reference	BGBl. II Nr. 156/2021 BGBl. II Nr. 156/2021
Belgium - Occupational Exposure Limits	
Local name	Acide nitrique # Salpeterzuur
OEL STEL	2,6 mg/m ³
OEL STEL [ppm]	1 ppm
Regulatory reference	Koninklijk besluit/Arrêté royal 11/05/2021
Bulgaria - Occupational Exposure Limits	
Local name	Азотна киселина
OEL STEL	2,6 mg/m ³
OEL STEL [ppm]	1 ppm
Remark	• (Химични агенти, за които са определени гранични стойности във въздуха на работната среда за Европейската общност)
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. 47 от 2021 г., в сила от 04.06.2021 г.)
Croatia - Occupational Exposure Limits	
Local name	Dušična kiselina
KGVI (OEL STEL)	2,6 mg/m ³
KGVI (OEL STEL) [ppm]	1 ppm
Remark	Direktiva: 2006/15/EZ
Regulatory reference	Pravilnik o zaštiti radnika od izloženosti opasnim kemikalijama na radu, граничним vrijednostima izloženosti i biološkim граничним vrijednostima (NN 1/2021)
Cyprus - Occupational Exposure Limits	
Local name	Νιτρικό οξύ
OEL STEL	2,6 mg/m ³
OEL STEL [ppm]	1 ppm
Regulatory reference	Κανονισμοί του 2007 (Κ.Δ.Π. 295/2007)
Czech Republic - Occupational Exposure Limits	
Local name	Kyselina dusičná
PEL (OEL TWA)	1 mg/m ³
PEL (OEL TWA) [ppm]	0,4 ppm
NPK-P (OEL C)	2,5 mg/m ³
NPK-P (OEL C) [ppm]	1 ppm
Remark	I - dráždí sliznice (oči, dýchací cesty), respektive kůži.
Regulatory reference	Nařízení vlády č. 361/2007 Sb. (Předpis 195/2021 Sb.)
Denmark - Occupational Exposure Limits	
Local name	Salpetersyre

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nitric acid (7697-37-2)	
OEL STEL	2,6 mg/m ³
OEL STEL [ppm]	1 ppm
Remark	E (betyder, at stoffet har en EF-grænseværdi); S (betyder, at grænseværdien ikke bør overskrides. Værdien gælder for en eksponeringsperiode på 15 minutter)
Regulatory reference	BEK nr 2203 af 29. november 2021
Estonia - Occupational Exposure Limits	
Local name	Lämmastikhape
OEL STEL	2,6 mg/m ³
OEL STEL [ppm]	1 ppm
Regulatory reference	Vabariigi Valitsuse 20. märtsi 2001. a määruse nr 105 (RT I, 15.05.2021, 1)
Finland - Occupational Exposure Limits	
Local name	Typpihappo
HTP (OEL TWA) [1]	1,3 mg/m ³
HTP (OEL TWA) [2]	0,5 ppm
HTP (OEL STEL)	2,6 mg/m ³
HTP (OEL STEL) [ppm]	1 ppm
Regulatory reference	HTP-ARVOT 2020 (Sosiaali- ja terveysministeriö)
France - Occupational Exposure Limits	
Local name	Acide nitrique
VLE (OEL C/STEL)	2,6 mg/m ³
VLE (OEL C/STEL) [ppm]	1 ppm
Remark	Valeurs réglementaires indicatives
Regulatory reference	Arrêté du 30 juin 2004 modifié (réf.: INRS ED 984, 2016)
Germany - Occupational Exposure Limits (TRGS 900)	
Local name	Salpetersäure
AGW (OEL TWA) [1]	2,6 mg/m ³
AGW (OEL TWA) [2]	1 ppm
Remark	EU - Europäische Union (Von der EU wurde ein Luftgrenzwert festgelegt: Abweichungen bei Wert und Spitzenbegrenzung sind möglich); 13 - Eine Begründung für die Ableitung eines gesundheitsbasierten AGW liegt nicht vor; 16 - Der Arbeitsplatzgrenzwert ist nur als Kurzzeitwert festgelegt. Die betriebliche Überwachung soll durch messtechnische Mittelwertbildung über 15 Minuten erfolgen, z.B. durch eine 15-minütige Probenahme
Regulatory reference	TRGS900
Gibraltar - Occupational Exposure Limits	
Local name	Nitric acid
OEL STEL	2,6 mg/m ³
OEL STEL [ppm]	1 ppm
Regulatory reference	Factories (Control of Chemical Agents at Work) Regulations 2003 (LN. 2018/181)

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nitric acid (7697-37-2)	
Greece - Occupational Exposure Limits	
Local name	Νιτρικό οξύ
OEL STEL	2,6 mg/m ³
OEL STEL [ppm]	1 ppm
Regulatory reference	Π.Δ. 162/2007 - Προστασία της υγείας των εργαζομένων που εκτίθενται σε ορισμένους χημικούς παράγοντες κατά τη διάρκεια της εργασίας τους
Hungary - Occupational Exposure Limits	
Local name	SALÉTROMSAV
CK (OEL STEL)	2,6 mg/m ³
Remark	i (ingerlő anyag, amely izgatja a bőrt, nyálkahártyát, szemet vagy mindhármát), m (maró hatású anyag, amely felmarja a bőrt, nyálkahártyát, szemet vagy mindhármát); EU2 (2006/15/EK irányelvben közölt érték)
Regulatory reference	5/2020. (II. 6.) ITM rendelet - A kémiai kóroki tényezők hatásának kitett munkavállalók egészségének és biztonságának védelméről
Ireland - Occupational Exposure Limits	
Local name	Nitric acid
OEL STEL	2,6 mg/m ³
OEL STEL [ppm]	1 ppm
Remark	IOELV (Indicative Occupational Exposure Limit Values)
Regulatory reference	Chemical Agents Code of Practice 2021
Italy - Occupational Exposure Limits	
Local name	Acido nitrico
OEL STEL	2,6 mg/m ³
OEL STEL [ppm]	1 ppm
Regulatory reference	Allegato XXXVIII del D.Lgs. 9 aprile 2008, n. 81 e s.m.i.
Latvia - Occupational Exposure Limits	
Local name	Slāpek skābe
OEL TWA	2 mg/m ³
OEL TWA [ppm]	0,78 ppm
OEL STEL	2,6 mg/m ³
OEL STEL [ppm]	1 ppm
Regulatory reference	Ministru kabineta 2007. gada 15. maija noteikumiem Nr. 325
Lithuania - Occupational Exposure Limits	
Local name	Nitrato rūgštis (azoto rūgštis)
TPRV (OEL STEL)	2,6 mg/m ³
TPRV (OEL STEL) [ppm]	1 ppm
Regulatory reference	LIETUVOS HIGIENOS NORMA HN 23:2011 (Nr. V-695/A1-272, 2018-06-12)

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nitric acid (7697-37-2)	
Luxembourg - Occupational Exposure Limits	
Local name	Acide nitrique
OEL STEL	2,6 mg/m ³
OEL STEL [ppm]	1 ppm
Regulatory reference	Mémorial A N° 226 de 2021 concernant la protection de la sécurité et de la santé des salariés contre les risques liés à des agents chimiques sur le lieu de travail
Malta - Occupational Exposure Limits	
Local name	Nitric acid
OEL STEL	2,6 mg/m ³
OEL STEL [ppm]	1 ppm
Regulatory reference	S.L.424.24 - Chemical Agents at Work Regulations (L.N.356 of 2021)
Netherlands - Occupational Exposure Limits	
Local name	Salpeterzuur
TGG-15min (OEL STEL)	1,3 mg/m ³
TGG-15min (OEL STEL) [ppm]	0,5 ppm (Salpeterzuur; Netherlands; Short time value; Public occupational exposure limit value)
Regulatory reference	Arbeidsomstandighedenregeling 2022
Poland - Occupational Exposure Limits	
Local name	Kwas azotowy (V)
NDS (OEL TWA)	1,4 mg/m ³
NDSch (OEL STEL)	2,6 mg/m ³
Regulatory reference	Dz. U. 2018 poz. 1286
Portugal - Occupational Exposure Limits	
Local name	Ácido nítrico
OEL TWA [ppm]	2 ppm
OEL STEL [ppm]	4 ppm
Regulatory reference	Norma Portuguesa NP 1796:2014
Romania - Occupational Exposure Limits	
Local name	Acid nitric/Acid azotic
OEL STEL	2,6 mg/m ³
OEL STEL [ppm]	1 ppm
Regulatory reference	Hotărârea Guvernului nr. 1.218/2006 (Hotărârea nr. 53/2021)
Serbia - Occupational Exposure Limits	
Local name	азотна киселина
OEL STEL	3 mg/m ³
OEL STEL [ppm]	1 ppm
Remark	ЕУ** – напомена да се ради о хемијским материјама за које су утврђене индикативне граничне вредности изложености према Директиви 2006/15/ЕЗ (друга листа)

Multi-element calibration standard-3: 10 components; 10ug/ml each of Sb ; Au ; Hf ; Ir ; Pd ; Pt ; Rh ; Ru ; Te ; Sn in HCl 10 % / HNO3 1% Equivalent to Agilent Ref: 8500-6948

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

nitric acid (7697-37-2)	
Regulatory reference	ПРАВИЛНИК о превентивним мерама за безбедан и здрав рад при излагању хемијским материјама („Службени гласник РС”, бр. 106/09, 117/17 и 107/21)
Slovakia - Occupational Exposure Limits	
Local name	Kyselina dusičná
NPHV (OEL STEL)	2,6 mg/m ³
NPHV (OEL STEL) [ppm]	1 ppm
Regulatory reference	Nariadenie vlády č. 355/2006 Z. z. (236/2020 Z. z.)
Slovenia - Occupational Exposure Limits	
Local name	dušikova kislina
OEL TWA	2,6 mg/m ³
OEL TWA [ppm]	1 ppm
OEL STEL	2,6 mg/m ³
OEL STEL [ppm]	1 ppm
Remark	EU
Regulatory reference	Uradni list RS, št. 72/2021 z dne 11.5.2021
Spain - Occupational Exposure Limits	
Local name	Ácido nítrico
VLA-EC (OEL STEL)	2,6 mg/m ³
VLA-EC (OEL STEL) [ppm]	1 ppm
Remark	VLI (Agente químico para el que la U.E. estableció en su día un valor límite indicativo).
Regulatory reference	Límites de Exposición Profesional para Agentes Químicos en España 2022. INSHT
Sweden - Occupational Exposure Limits	
Local name	Salpetersyra
NGV (OEL TWA)	1,3 mg/m ³
NGV (OEL TWA) [ppm]	0,5 ppm
KTV (OEL STEL)	2,6 mg/m ³
KTV (OEL STEL) [ppm]	1 ppm
Regulatory reference	Hygieniska gränsvärden (AFS 2018:1)
United Kingdom - Occupational Exposure Limits	
Local name	Nitric acid
WEL STEL (OEL STEL)	2,6 mg/m ³
WEL STEL (OEL STEL) [ppm]	1 ppm
Regulatory reference	EH40/2005 (Fourth edition, 2020). HSE
Iceland - Occupational Exposure Limits	
Local name	Saltpéturssýra
OEL STEL	2,6 mg/m ³
OEL STEL [ppm]	1 ppm

Multi-element calibration standard-3: 10 components; 10ug/ml each of Sb ; Au ; Hf ; Ir ; Pd ; Pt ; Rh ; Ru ; Te ; Sn in HCl 10 % / HNO3 1% Equivalent to Agilent Ref: 8500-6948

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according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

nitric acid (7697-37-2)	
Regulatory reference	Reglugerð um mengunarmörk og aðgerðir til að draga úr mengun á vinnustöðum (Nr. 390/2009)
Norway - Occupational Exposure Limits	
Local name	Salpetersyre
Grenseverdi (OEL TWA) [1]	5 mg/m ³
Grenseverdi (OEL TWA) [2]	2 ppm
Remark	E: EU har en veiledende grenseverdi og/eller anmerkning for stoffet.
Regulatory reference	FOR-2021-06-28-2248
North Macedonia - Occupational Exposure Limits	
Local name	азотна киселина
OEL TWA	2,6 mg/m ³
OEL TWA [ppm]	1 ppm
KTV	1
Short time value [mg/m ³]	2,6 mg/m ³
Short time value [ppm]	1 ppm
Remark	(KTV) краткотрајна вредност (КТВ) значи концентрација на опасни хемиски супстанции во воздухот на работното место внатре во зона на дишење, на која работникот без опасност по здравјето може да е изложен на покусо време. Изложеноста на краткотрајни вредности може да трае највеќе 15 минути и не смее да се повтори повеќе од четирипати во работната смена, при што меѓу две изложености на оваа концентрација мора да измине најмалку 60 минути. Краткотрајната вредност е изразена во mg/m ³ или во ml/m ³ (ppm) а е дадена како многукратни дозволени пречекорувања на граничната вредност; (EU) European Union – гранична вредност, определена на ниво на Европската унија; (*) дополнување на граничната вредност заради донесената Директива на Комисијата 2006/15ES од 7 февруари 2006 за создавање на втора листа на индикативни гранични вредности за професионална изложеност според директивата 98/24/EC и за измените на директивата 91/322/EEC и директивата 2000/39/ EC (Сл. весник бр. 38 од ден 9.2.2006, стр. 36)
Regulatory reference	Правилник за минималните барања за безбедност и здравје при работа на вработени од ризици поврзани со изложување на хемиски супстанции („Службен весник на Република Македонија” бр.46/10)
Switzerland - Occupational Exposure Limits	
Local name	Acide nitrique / Salpetersäure
MAK (OEL TWA) [1]	5 mg/m ³
MAK (OEL TWA) [2]	2 ppm
KZGW (OEL STEL)	5 mg/m ³
KZGW (OEL STEL) [ppm]	2 ppm
Critical toxicity	VRS, Yeux, Dent / OAW, Auge, Zahn
Remark	NIOSH, OSHA
Regulatory reference	www.suva.ch, 28.03.2022

Multi-element calibration standard-3: 10 components; 10ug/ml each of Sb ; Au ; Hf ; Ir ; Pd ; Pt ; Rh ; Ru ; Te ; Sn in HCl 10 % / HNO3 1% Equivalent to Agilent Ref: 8500-6948

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nitric acid (7697-37-2)	
USA - ACGIH - Occupational Exposure Limits	
Local name	Nitric acid
ACGIH OEL TWA [ppm]	2 ppm
ACGIH OEL STEL [ppm]	4 ppm
Remark (ACGIH)	TLV® Basis: URT & eye irr; dental erosion
Regulatory reference	ACGIH 2022
hydrochloric acid (7647-01-0)	
EU - Indicative Occupational Exposure Limit (IOEL)	
Local name	Hydrogen chloride
IOEL TWA	8 mg/m ³
IOEL TWA [ppm]	5 ppm
IOEL STEL	15 mg/m ³
IOEL STEL [ppm]	10 ppm
Regulatory reference	COMMISSION DIRECTIVE 2000/39/EC
Belgium - Occupational Exposure Limits	
Local name	Hydrogène (chlorure d') # Waterstofchloride
OEL TWA	8 mg/m ³
OEL TWA [ppm]	5 ppm
OEL STEL	15 mg/m ³
OEL STEL [ppm]	10 ppm
Regulatory reference	Koninklijk besluit/Arrêté royal 11/05/2021
Bulgaria - Occupational Exposure Limits	
Local name	Хлороводород
OEL TWA	8 mg/m ³
OEL TWA [ppm]	5 ppm
OEL STEL	15 mg/m ³
OEL STEL [ppm]	10 ppm
Remark	• (Химични агенти, за които са определени гранични стойности във въздуха на работната среда за Европейската общност)
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. 47 от 2021 г., в сила от 04.06.2021 г.)
Croatia - Occupational Exposure Limits	
Local name	Vodikov klorid
GVI (OEL TWA) [1]	8 mg/m ³
GVI (OEL TWA) [2]	5 ppm
KGVI (OEL STEL)	15 mg/m ³
KGVI (OEL STEL) [ppm]	10 ppm

Multi-element calibration standard-3: 10 components; 10ug/ml each of Sb ; Au ; Hf ; Ir ; Pd ; Pt ; Rh ; Ru ; Te ; Sn in HCl 10 % / HNO3 1% Equivalent to Agilent Ref: 8500-6948

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hydrochloric acid (7647-01-0)	
Remark	Direktiva: 2000/39/EZ
Regulatory reference	Pravidnik o zaštiti radnika od izloženosti opasnim kemikalijama na radu, graničnim vrijednostima izloženosti i biološkim graničnim vrijednostima (NN 1/2021)
Czech Republic - Occupational Exposure Limits	
Local name	Chlorovodík
PEL (OEL TWA)	8 mg/m ³
PEL (OEL TWA) [ppm]	5,3 ppm
NPK-P (OEL C)	15 mg/m ³
NPK-P (OEL C) [ppm]	9,9 ppm
Remark	I - dráždí sliznice (oči, dýchací cesty), respektive kůži.
Regulatory reference	Nařízení vlády č. 361/2007 Sb. (Předpis 195/2021 Sb.)
Denmark - Occupational Exposure Limits	
Local name	Hydrogenchlorid (Chlorbrinte)
OEL C	8 mg/m ³
OEL C [ppm]	5 ppm
Remark	E (betyder, at stoffet har en EF-grænseværdi)
Regulatory reference	BEK nr 2203 af 29. november 2021
Estonia - Occupational Exposure Limits	
Local name	Vesinikkloriid
OEL TWA	8 mg/m ³
OEL TWA [ppm]	5 ppm
OEL STEL	15 mg/m ³
OEL STEL [ppm]	10 ppm
Regulatory reference	Vabariigi Valitsuse 20. märtsi 2001. a määruse nr 105 (RT I, 15.05.2021, 1)
Finland - Occupational Exposure Limits	
Local name	Kloorivety, vedetön
HTP (OEL STEL)	7,6 mg/m ³
HTP (OEL STEL) [ppm]	5 ppm
Regulatory reference	HTP-ARVOT 2020 (Sosiaali- ja terveysministeriö)
France - Occupational Exposure Limits	
Local name	Chlorure d'hydrogène (Acide chlorhydrique)
VLE (OEL C/STEL)	7,6 mg/m ³
VLE (OEL C/STEL) [ppm]	5 ppm
Remark	Valeurs réglementaires contraignantes
Regulatory reference	Article R4412-149 du Code du travail (réf.: INRS ED 984, 2016; Décret n° 2019-1487; Décret n° 2020-1546; Décret n° 2021-434; Décret n° 2021-1849)

Multi-element calibration standard-3: 10 components; 10ug/ml each of Sb ; Au ; Hf ; Ir ; Pd ; Pt ; Rh ; Ru ; Te ; Sn in HCl 10 % / HNO3 1% Equivalent to Agilent Ref: 8500-6948

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hydrochloric acid (7647-01-0)	
Germany - Occupational Exposure Limits (TRGS 900)	
Local name	Hydrogenchlorid
AGW (OEL TWA) [1]	3 mg/m ³
AGW (OEL TWA) [2]	2 ppm
Peak exposure limitation factor	2(l)
Remark	DFG - Senatskommission zur Prüfung gesundheitsschädlicher Arbeitsstoffe der DFG (MAK-Kommission); EU - Europäische Union (Von der EU wurde ein Luftgrenzwert festgelegt: Abweichungen bei Wert und Spitzenbegrenzung sind möglich); Y - Ein Risiko der Fruchtschädigung braucht bei Einhaltung des Arbeitsplatzgrenzwertes und des biologischen Grenzwertes (BGW) nicht befürchtet zu werden
Regulatory reference	TRGS900
Gibraltar - Occupational Exposure Limits	
Local name	Hydrogen chloride
OEL TWA	8 mg/m ³
OEL TWA [ppm]	5 ppm
OEL STEL	15 mg/m ³
OEL STEL [ppm]	10 ppm
Regulatory reference	Factories (Control of Chemical Agents at Work) Regulations 2003 (LN. 2018/181)
Greece - Occupational Exposure Limits	
Local name	Υδροχλώριο
OEL TWA	7 mg/m ³
OEL TWA [ppm]	5 ppm
OEL STEL	7 mg/m ³
OEL STEL [ppm]	5 ppm
Regulatory reference	Π.Δ. 90/1999 - Προστασία της υγείας των εργαζομένων που εκτίθενται σε ορισμένους χημικούς παράγοντες κατά τη διάρκεια της εργασίας τους
Hungary - Occupational Exposure Limits	
Local name	SÓSAV
AK (OEL TWA)	8 mg/m ³
CK (OEL STEL)	16 mg/m ³
Remark	i (ingerlő anyag, amely izgatja a bőrt, nyálkahártyát, szemet vagy mindhármát), m (maró hatású anyag, amely felmarja a bőrt, nyálkahártyát, szemet vagy mindhármát); EU1 (2000/39/EK irányelvben közölt érték); N (Irritáló anyagok, egyszerű fojtógázok, csekély egészségkárosító hatással bíró anyagok)
Regulatory reference	5/2020. (II. 6.) ITM rendelet - A kémiai kóroki tényezők hatásának kitett munkavállalók egészségének és biztonságának védelméről
Ireland - Occupational Exposure Limits	
Local name	Hydrogen chloride
OEL TWA [1]	8 mg/m ³
OEL TWA [2]	5 ppm

Multi-element calibration standard-3: 10 components; 10ug/ml each of Sb ; Au ; Hf ; Ir ; Pd ; Pt ; Rh ; Ru ; Te ; Sn in HCl 10 % / HNO3 1% Equivalent to Agilent Ref: 8500-6948

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hydrochloric acid (7647-01-0)	
OEL STEL	15 mg/m ³
OEL STEL [ppm]	10 ppm
Remark	IOELV (Indicative Occupational Exposure Limit Values)
Regulatory reference	Chemical Agents Code of Practice 2021
Italy - Occupational Exposure Limits	
Local name	Acido cloridrico
OEL TWA	8 mg/m ³
OEL TWA [ppm]	5 ppm
OEL STEL	15 mg/m ³
OEL STEL [ppm]	10 ppm
Regulatory reference	Allegato XXXVIII del D.Lgs. 9 aprile 2008, n. 81 e s.m.i.
Latvia - Occupational Exposure Limits	
Local name	Hlorūdeņradis
OEL TWA	8 mg/m ³
OEL TWA [ppm]	5 ppm
OEL STEL	15 mg/m ³
OEL STEL [ppm]	10 ppm
Regulatory reference	Ministru kabineta 2007. gada 15. maija noteikumiem Nr. 325
Lithuania - Occupational Exposure Limits	
Local name	Vandenilio chloridas
IPRV (OEL TWA)	8 mg/m ³
IPRV (OEL TWA) [ppm]	5 ppm
TPRV (OEL STEL)	15 mg/m ³
TPRV (OEL STEL) [ppm]	10 ppm
Regulatory reference	LIETUVOS HIGIENOS NORMA HN 23:2011 (Nr. V-695/A1-272, 2018-06-12)
Luxembourg - Occupational Exposure Limits	
Local name	Chlorure d'hydrogène
OEL TWA	8 mg/m ³
OEL TWA [ppm]	5 ppm
OEL STEL	15 mg/m ³
OEL STEL [ppm]	10 ppm
Regulatory reference	Mémorial A N° 226 de 2021 concernant la protection de la sécurité et de la santé des salariés contre les risques liés à des agents chimiques sur le lieu de travail
Malta - Occupational Exposure Limits	
Local name	Hydrogen chloride
OEL TWA	8 mg/m ³
OEL TWA [ppm]	5 ppm

Multi-element calibration standard-3: 10 components; 10ug/ml each of Sb ; Au ; Hf ; Ir ; Pd ; Pt ; Rh ; Ru ; Te ; Sn in HCl 10 % / HNO3 1% Equivalent to Agilent Ref: 8500-6948

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hydrochloric acid (7647-01-0)	
OEL STEL	15 mg/m ³
OEL STEL [ppm]	10 ppm
Regulatory reference	S.L.424.24 - Chemical Agents at Work Regulations (L.N.356 of 2021)
Netherlands - Occupational Exposure Limits	
Local name	Zoutzuur
TGG-8u (OEL TWA)	8 mg/m ³
TGG-8u (OEL TWA) [ppm]	5 ppm
TGG-15min (OEL STEL)	15 mg/m ³
TGG-15min (OEL STEL) [ppm]	10 ppm
Regulatory reference	Arbeidsomstandighedenregeling 2022
Poland - Occupational Exposure Limits	
Local name	Chlorowodór
NDS (OEL TWA)	5 mg/m ³
NDSch (OEL STEL)	10 mg/m ³
Regulatory reference	Dz. U. 2018 poz. 1286
Portugal - Occupational Exposure Limits	
Local name	Ácido clorídrico
OEL C	2 mg/m ³
OEL C [ppm]	2 ppm
Remark	A4 (Agente não classificável como carcinogénico no Homem)
Regulatory reference	Norma Portuguesa NP 1796:2014
Romania - Occupational Exposure Limits	
Local name	Acid clorhidric/Clorură de hidrogen
OEL TWA	8 mg/m ³
OEL TWA [ppm]	5 ppm
OEL STEL	15 mg/m ³
OEL STEL [ppm]	10 ppm
Regulatory reference	Hotărârea Guvernului nr. 1.218/2006 (Hotărârea nr. 53/2021)
Serbia - Occupational Exposure Limits	
Local name	водоник хлорид, хлороводоник
OEL TWA	8 mg/m ³
OEL TWA [ppm]	5 ppm
OEL STEL	15 mg/m ³
OEL STEL [ppm]	10 ppm
Remark	EУ* – напомена да се ради о хемијским материјама за које су утврђене индикативне граничне вредности изложености према Директиви 2000/39/ЕЗ (прва листа)

Multi-element calibration standard-3: 10 components; 10ug/ml each of Sb ; Au ; Hf ; Ir ; Pd ; Pt ; Rh ; Ru ; Te ; Sn in HCl 10 % / HNO3 1% Equivalent to Agilent Ref: 8500-6948

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hydrochloric acid (7647-01-0)	
Regulatory reference	ПРАВИЛНИК о превентивним мерама за безбедан и здрав рад при излагању хемијским материјама („Службени гласник РС”, бр. 106/09, 117/17 и 107/21)
Slovakia - Occupational Exposure Limits	
Local name	Chlorovodík
NPHV (OEL TWA) [1]	8 mg/m ³
NPHV (OEL TWA) [2]	5 ppm
NPHV (OEL STEL)	15 mg/m ³
NPHV (OEL STEL) [ppm]	10 ppm
Regulatory reference	Nariadenie vlády č. 355/2006 Z. z. (236/2020 Z. z.)
Slovenia - Occupational Exposure Limits	
Local name	vodikov klorid, brezvodni (klorovodik, brezvodni)
OEL TWA	8 mg/m ³
OEL TWA [ppm]	5 ppm
OEL STEL	16 mg/m ³
OEL STEL [ppm]	10 ppm
Remark	Y (Snovi, pri katerih ni nevarnosti za zarodek ob upoštevanju mejnih vrednosti in bat vrednosti), EU
Regulatory reference	Uradni list RS, št. 72/2021 z dne 11.5.2021
Spain - Occupational Exposure Limits	
Local name	Cloruro de hidrógeno
VLA-ED (OEL TWA) [1]	7,6 mg/m ³
VLA-ED (OEL TWA) [2]	5 ppm
VLA-EC (OEL STEL)	15 mg/m ³
VLA-EC (OEL STEL) [ppm]	10 ppm
Remark	VLI (Agente químico para el que la U.E. estableció en su día un valor límite indicativo. Todos estos agentes químicos figuran al menos en una de las directivas de valores límite indicativos publicadas hasta ahora (ver Anexo C. Bibliografía). Los estados miembros disponen de un tiempo fijado en dichas directivas para su transposición a los valores límites de cada país miembro. Una vez adoptados, estos valores tienen la misma validez que el resto de los valores adoptados por el país).
Sweden - Occupational Exposure Limits	
Local name	Saltsyra (Väteklorid)
NGV (OEL TWA)	3 mg/m ³
NGV (OEL TWA) [ppm]	2 ppm
KTV (OEL STEL)	6 mg/m ³
KTV (OEL STEL) [ppm]	4 ppm
Regulatory reference	Hygieniska gränsvärden (AFS 2018:1)
United Kingdom - Occupational Exposure Limits	
Local name	Hydrogen chloride

Multi-element calibration standard-3: 10 components; 10ug/ml each of Sb ; Au ; Hf ; Ir ; Pd ; Pt ; Rh ; Ru ; Te ; Sn in HCl 10 % / HNO3 1% Equivalent to Agilent Ref: 8500-6948

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hydrochloric acid (7647-01-0)	
WEL TWA (OEL TWA) [1]	2 mg/m ³ gas and aerosol mists
WEL TWA (OEL TWA) [2]	1 ppm gas and aerosol mists
WEL STEL (OEL STEL)	8 mg/m ³ gas and aerosol mists
WEL STEL (OEL STEL) [ppm]	5 ppm gas and aerosol mists
Regulatory reference	EH40/2005 (Fourth edition, 2020). HSE
Iceland - Occupational Exposure Limits	
Local name	Vetnisklórfíð (klórvetni)
OEL STEL	8 mg/m ³
OEL STEL [ppm]	5 ppm
Regulatory reference	Reglugerð um mengunarmörk og aðgerðir til að draga úr mengun á vinnustöðum (Nr. 390/2009)
Norway - Occupational Exposure Limits	
Local name	Hydrogenklorid (Saltsyre)
Grenseverdi (OEL TWA) [1]	7 mg/m ³
Grenseverdi (OEL TWA) [2]	5 ppm
Takverdi (OEL C) [1]	7 mg/m ³
Takverdi (OEL C) [2]	5 ppm
Remark	E: EU har en veiledende grenseverdi og/eller anmerkning for stoffet.
Regulatory reference	FOR-2021-06-28-2248
Switzerland - Occupational Exposure Limits	
Local name	Chlorwasserstoff
MAK (OEL TWA) [1]	3 mg/m ³ 3 mg/m ³
MAK (OEL TWA) [2]	2 ppm 2 ppm
KZGW (OEL STEL)	6 mg/m ³ 6 mg/m ³
KZGW (OEL STEL) [ppm]	4 ppm 4 ppm
Critical toxicity	VRS / OAW
Notation	SS _c / SS _c
Remark	SS _c - OAW ^{KT AN} - DFG, NIOSH, OSHA
Regulatory reference	www.suva.ch, 28.03.2022
USA - ACGIH - Occupational Exposure Limits	
Local name	Hydrogen chloride
ACGIH OEL C [ppm]	2 ppm
Remark (ACGIH)	TLV® Basis: URT irr. Notations: A4 (Not classifiable as a Human Carcinogen)
Regulatory reference	ACGIH 2022

Multi-element calibration standard-3: 10 components; 10ug/ml each of Sb ; Au ; Hf ; Ir ; Pd ; Pt ; Rh ; Ru ; Te ; Sn in HCl 10 % / HNO3 1% Equivalent to Agilent Ref: 8500-6948

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hexafluoroantimony acid (16950-06-4)	
EU - Indicative Occupational Exposure Limit (IOEL)	
IOEL TWA	2,5 mg/m ³ (Fluorides, inorganic; EU; Time-weighted average exposure limit 8 h; Indicative occupational exposure limit value)
Austria - Occupational Exposure Limits	
Local name	Antimon
MAK (OEL TWA)	0,5 mg/m ³
MAK (OEL STEL)	5 mg/m ³
Regulatory reference	BGBI. II Nr. 156/2021 BGBI. II Nr. 156/2021
Belgium - Occupational Exposure Limits	
Local name	Antimoine et ses composés (en Sb) # Antimoon en verbindingen (als Sb)
OEL TWA	0,5 mg/m ³
Regulatory reference	Koninklijk besluit/Arrêté royal 11/05/2021
Bulgaria - Occupational Exposure Limits	
Local name	АНТИМОН
OEL TWA	0,5 mg/m ³ и неорганични съединения (като антимон)
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. 47 от 2021 г., в сила от 04.06.2021 г.)
Croatia - Occupational Exposure Limits	
Local name	Antimon i drugi spojevi kao (Sb) osim atimonovog trihidrida
GVI (OEL TWA) [1]	0,5 mg/m ³
Remark	Xn (Štetno); N (opasno za okoliš)
Regulatory reference	Pravilnik o zaštiti radnika od izloženosti opasnim kemikalijama na radu, граниčnim vrijednostima izloženosti i biološkim граниčnim vrijednostima (NN 1/2021)
Czech Republic - Occupational Exposure Limits	
Local name	Antimon
PEL (OEL TWA)	0,5 mg/m ³
NPK-P (OEL C)	1,5 mg/m ³
Regulatory reference	Nařízení vlády č. 361/2007 Sb. (Předpis 195/2021 Sb.)
Denmark - Occupational Exposure Limits	
Local name	Antimon, pulver og forbindelser
OEL TWA [1]	0,5 mg/m ³ beregnet som Sb, se dog stibin
Regulatory reference	BEK nr 2203 af 29. november 2021
Estonia - Occupational Exposure Limits	
Local name	Antimon ja oksiidid (arvutatud antimonile)
OEL TWA	0,5 mg/m ³
Regulatory reference	Vabariigi Valitsuse 20. märtsi 2001. a määruse nr 105 (RT I, 15.05.2021, 1)

Multi-element calibration standard-3: 10 components; 10ug/ml each of Sb ; Au ; Hf ; Ir ; Pd ; Pt ; Rh ; Ru ; Te ; Sn in HCl 10 % / HNO3 1% Equivalent to Agilent Ref: 8500-6948

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

hexafluoroantimony acid (16950-06-4)	
France - Occupational Exposure Limits	
Local name	Antimoine et ses composés, en Sb
VME (OEL TWA)	0,5 mg/m ³ (Antimoine et ses composés, en Sb; France; Time-weighted average exposure limit 8 h; VL: Valeur non réglementaire indicative; Fluorures inorganiques; 2.5 mg/m ³ ; France; Time-weighted average exposure limit 8 h; VRI: Valeur réglementaire indicative)
Remark	Valeurs recommandées/admises; certains ou tous ces composés sont classés cancérogène de catégorie 1A, 1B ou 2
Regulatory reference	Circulaire du Ministère du travail (réf.: INRS ED 984, 2016)
Greece - Occupational Exposure Limits	
Local name	Αντιμόνιο και ενώσεις του (ως Sb)
OEL TWA	0,5 mg/m ³
Regulatory reference	Π.Δ. 90/1999 - Προστασία της υγείας των εργαζομένων που εκτίθενται σε ορισμένους χημικούς παράγοντες κατά τη διάρκεια της εργασίας τους
Hungary - Occupational Exposure Limits	
Local name	ANTIMON ÉS SZERVETLEN VEGYÜLETEI (Sb-ra számítva)
AK (OEL TWA)	0,5 mg/m ³
Remark	i (ingerlő anyag, amely izgatja a bőrt, nyálkahártyát, szemet vagy mindhármat); T (Azok az anyagok, amelyek egészségkárosító hatása TARTÓS expozíciót követően jelentkezik)
Regulatory reference	5/2020. (II. 6.) ITM rendelet - A kémiai kóroki tényezők hatásának kitett munkavállalók egészségének és biztonságának védelméről
Ireland - Occupational Exposure Limits	
Local name	Antimony & compounds (as Sb)
OEL TWA [1]	0,5 mg/m ³
Regulatory reference	Chemical Agents Code of Practice 2021
Latvia - Occupational Exposure Limits	
Local name	Antimonametāliskie putekļi
OEL TWA	0,2 mg/m ³
OEL STEL	0,5 mg/m ³
Regulatory reference	Ministru kabineta 2007. gada 15. maija noteikumiem Nr. 325 (Grozījumi Ministru kabineta 2011. gada 1. februārī noteikumiem Nr. 92)
Netherlands - Occupational Exposure Limits	
Local name	Antimoon
TGG-8u (OEL TWA)	0,5 mg/m ³ en -verbindingen (als Sb)
TGG-15min (OEL STEL)	2 mg/m ³ (Fluoriden, anorganisch en oplosbaar (als F); Netherlands; Short time value; Public occupational exposure limit value; als F)
Regulatory reference	Arbeidsomstandighedenregeling 2022
Poland - Occupational Exposure Limits	
Local name	Antymon i jego związki nieorganiczne, z wyjątkiem stibanu w przeliczeniu na Sb
NDS (OEL TWA)	0,5 mg/m ³
Regulatory reference	Dz. U. 2018 poz. 1286

Multi-element calibration standard-3: 10 components; 10ug/ml each of Sb ; Au ; Hf ; Ir ; Pd ; Pt ; Rh ; Ru ; Te ; Sn in HCl 10 % / HNO3 1% Equivalent to Agilent Ref: 8500-6948

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according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

hexafluoroantimony acid (16950-06-4)	
Portugal - Occupational Exposure Limits	
Local name	Antimónio e compostos, expressos em Sb
OEL TWA	0,5 mg/m ³
Regulatory reference	Norma Portuguesa NP 1796:2014
Romania - Occupational Exposure Limits	
Local name	Antimoniu (stibiu)
OEL TWA	0,2 mg/m ³
OEL STEL	0,5 mg/m ³
Regulatory reference	Hotărârea Guvernului nr. 1.218/2006 (Hotărârea nr. 53/2021)
Romania - Biological limit values	
Local name	Antimoniu (Stibiu)
BLV	1 mg/l Indicator biologic: Antimoniu - Material biologic: urină - Momentul recoltării: sfârșit de schimb
Regulatory reference	Hotărârea Guvernului nr. 1.218/2006 (Hotărârea nr. 584/2018)
Slovakia - Occupational Exposure Limits	
Local name	Antimón a jeho anorganické zlúčeniny ako Sb
NPHV (OEL TWA) [1]	0,5 mg/m ³
Regulatory reference	Nariadenie vlády č. 355/2006 Z. z. (236/2020 Z. z.)
Slovenia - Occupational Exposure Limits	
Local name	antimon
OEL TWA	0,5 mg/m ³
OEL STEL	2 mg/m ³
Spain - Occupational Exposure Limits	
Local name	Antimonio
VLA-ED (OEL TWA) [1]	0,5 mg/m ³ elemental 0,5 mg/m ³ Compuestos de antimonio, como Sb, excepto hidruro de antimonio
Regulatory reference	Límites de Exposición Profesional para Agentes Químicos en España 2022. INSHT
Sweden - Occupational Exposure Limits	
Local name	Antimon, och föreningar (som Sb), utom Antimontrihydrid
NGV (OEL TWA)	0,25 mg/m ³ inhalerbar damm
Remark	3 (Med inhalerbar fraktion menas den mängd partiklar, av totalmängden partiklar i luften, som man inandas genom näsa och mun)
Regulatory reference	Hygieniska gränsvärden (AFS 2018:1)
United Kingdom - Occupational Exposure Limits	
Local name	Antimony
WEL TWA (OEL TWA) [1]	0,5 mg/m ³ and compounds except stibine (as Sb)
Regulatory reference	EH40/2005 (Fourth edition, 2020). HSE

Multi-element calibration standard-3: 10 components; 10ug/ml each of Sb ; Au ; Hf ; Ir ; Pd ; Pt ; Rh ; Ru ; Te ; Sn in HCl 10 % / HNO3 1% Equivalent to Agilent Ref: 8500-6948

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hexafluoroantimonyic acid (16950-06-4)	
Iceland - Occupational Exposure Limits	
Local name	Antimón, duft og sambönd (sem Sb)
OEL TWA	0,5 mg/m ³
Regulatory reference	Reglugerð um mengunarmörk og aðgerðir til að draga úr mengun á vinnustöðum (Nr. 390/2009)
Norway - Occupational Exposure Limits	
Local name	Antimon og antimonforb. (beregnet som Sb)
Grenseverdi (OEL TWA) [1]	0,5 mg/m ³
Remark	K: Kjemikalier som skal betraktes som kreftfremkallende.
Regulatory reference	FOR-2021-06-28-2248
North Macedonia - Occupational Exposure Limits	
Local name	АНТИМОН
OEL TWA	0,5 mg/m ³ (l) инхалабилна фракција – дел на вкупно суспендирани материји, кои работникот ги вдишува
KTV	4
Short time value [mg/m ³]	2 mg/m ³
Remark	(KTV) краткотрајна вредност (КТВ) значи концентрација на опасни хемиски супстанции во воздухот на работното место внатре во зона на дишење, на која работникот без опасност по здравјето може да е изложен на покусо време. Изложеноста на краткотрајни вредности може да трае највеќе 15 минути и не смее да се повтори повеќе од четирипати во работната смена, при што меѓу две изложености на оваа концентрација мора да измине најмалку 60 минути. Краткотрајната вредност е изразена во mg/m ³ или во ml/m ³ (ppm) а е дадена како многукратни дозволени пречекорувања на граничната вредност
Regulatory reference	Правилник за минималните барања за безбедност и здравје при работа на вработени од ризици поврзани со изложување на хемиски супстанции („Службен весник на Република Македонија“ бр.46/10)
Switzerland - Occupational Exposure Limits	
Local name	Antimon
MAK (OEL TWA) [1]	0,5 mg/m ³
Critical toxicity	VRS, Peau / OAW, Haut
Notation	R2 / R2
Remark	e(mg/m ³) - Haut & OAW - NIOSH
Regulatory reference	www.suva.ch, 28.03.2022
USA - ACGIH - Occupational Exposure Limits	
Local name	Antimony and compounds, as Sb
ACGIH OEL TWA	0,5 mg/m ³
Remark (ACGIH)	TLV® Basis: Skin & URT irr
Regulatory reference	ACGIH 2022

Multi-element calibration standard-3: 10 components; 10ug/ml each of Sb ; Au ; Hf ; Ir ; Pd ; Pt ; Rh ; Ru ; Te ; Sn in HCl 10 % / HNO3 1% Equivalent to Agilent Ref: 8500-6948

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according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

hafnium dioxide (12055-23-1)	
Austria - Occupational Exposure Limits	
Local name	Hafnium
MAK (OEL TWA)	0,5 mg/m ³
MAK (OEL STEL)	5 mg/m ³
Regulatory reference	BGBI. II Nr. 156/2021
Belgium - Occupational Exposure Limits	
Local name	Hafnium # Hafnium
OEL TWA	0,5 mg/m ³
Regulatory reference	Koninklijk besluit/Arrêté royal 11/05/2021
Denmark - Occupational Exposure Limits	
Local name	Hafnium
OEL TWA [1]	0,5 mg/m ³ pulver eller støv
Regulatory reference	BEK nr 1054 af 28/06/2022
Finland - Occupational Exposure Limits	
Local name	Hafnium, metalli
HTP (OEL TWA) [1]	0,5 mg/m ³
Regulatory reference	HTP-ARVOT 2020 (Sosiaali- ja terveystieteiden ministeriö)
France - Occupational Exposure Limits	
Local name	Hafnium
VME (OEL TWA)	0,5 mg/m ³
Remark	Valeurs recommandées/admises
Regulatory reference	Circulaire du Ministère du travail (réf.: INRS ED 984, 2016)
Greece - Occupational Exposure Limits	
Local name	Αφνιο
OEL TWA	0,5 mg/m ³
OEL STEL	1,5 mg/m ³
Regulatory reference	Π.Δ. 90/1999 - Προστασία της υγείας των εργαζομένων που εκτίθενται σε ορισμένους χημικούς παράγοντες κατά τη διάρκεια της εργασίας τους
Ireland - Occupational Exposure Limits	
Local name	Hafnium
OEL TWA [1]	0,5 mg/m ³
OEL STEL	1,5 mg/m ³
Regulatory reference	Chemical Agents Code of Practice 2021
Poland - Occupational Exposure Limits	
Local name	Hafn i jego związku w przeliczeniu na Hf
NDS (OEL TWA)	0,5 mg/m ³
Regulatory reference	Dz. U. 2018 poz. 1286

Multi-element calibration standard-3: 10 components; 10ug/ml each of Sb ; Au ; Hf ; Ir ; Pd ; Pt ; Rh ; Ru ; Te ; Sn in HCl 10 % / HNO3 1% Equivalent to Agilent Ref: 8500-6948

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hafnium dioxide (12055-23-1)	
Portugal - Occupational Exposure Limits	
Local name	Háfnio e compostos, expressos em Hf
OEL TWA	0,5 mg/m ³
Regulatory reference	Norma Portuguesa NP 1796:2014
Romania - Occupational Exposure Limits	
Local name	Hafniu
OEL TWA	0,2 mg/m ³
OEL STEL	0,5 mg/m ³
Regulatory reference	Hotărârea Guvernului nr. 1.218/2006 (Hotărârea nr. 53/2021)
Slovenia - Occupational Exposure Limits	
Local name	hafnij in njegove spojine
OEL TWA	0,5 mg/m ³
OEL STEL	2 mg/m ³
Spain - Occupational Exposure Limits	
Local name	Hafnio
VLA-ED (OEL TWA) [1]	0,5 mg/m ³ elemental 0,5 mg/m ³ Compuestos de Hafnio, como Hf
Regulatory reference	Límites de Exposición Profesional para Agentes Químicos en España 2022. INSHT
Iceland - Occupational Exposure Limits	
Local name	Hafnium, duft eða ryk
OEL TWA	0,5 mg/m ³
Regulatory reference	Reglugerð um mengunarmörk og aðgerðir til að draga úr mengun á vinnustöðum (Nr. 390/2009)
Norway - Occupational Exposure Limits	
Local name	Hafnium
Grenseverdi (OEL TWA) [1]	0,5 mg/m ³
Regulatory reference	FOR-2021-06-28-2248
North Macedonia - Occupational Exposure Limits	
Local name	хафниум и неговите соединенија
OEL TWA	0,5 mg/m ³ (l) инхалабилна фракција – дел на вкупно суспендирани материји, кои работникот ги вдишува
KTV	4
Short time value [mg/m ³]	2 mg/m ³

Multi-element calibration standard-3: 10 components; 10ug/ml each of Sb ; Au ; Hf ; Ir ; Pd ; Pt ; Rh ; Ru ; Te ; Sn in HCl 10 % / HNO3 1% Equivalent to Agilent Ref: 8500-6948

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according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

hafnium dioxide (12055-23-1)	
Remark	(KTV) краткотрајна вредност (КТВ) значи концентрација на опасни хемиски супстанции во воздухот на работното место внатре во зона на дишење, на која работникот без опасност по здравјето може да е изложен на покусо време. Изложеноста на краткотрајни вредности може да трае највеќе 15 минути и не смее да се повтори повеќе од четирипати во работната смена, при што меѓу две изложености на оваа концентрација мора да измине најмалку 60 минути. Краткотрајната вредност е изразена во mg/m ³ или во ml/m ³ (ppm) а е дадена како многукратни дозволени пречекорувања на граничната вредност
Regulatory reference	Правилник за минималните барања за безбедност и здравје при работа на вработени од ризици поврзани со изложување на хемиски супстанции („Службен весник на Република Македонија” бр.46/10)
Switzerland - Occupational Exposure Limits	
Local name	Hafnium
MAK (OEL TWA) [1]	0,5 mg/m ³
Critical toxicity	VRS, Foie, Yeux / OAW, Leber, Auge
Remark	e(mg/m ³) - OAW, Auge, Leber - NIOSH, OSHA
Regulatory reference	www.suva.ch, 01.01.2023
USA - ACGIH - Occupational Exposure Limits	
Local name	Hafnium and compounds, as Hf
ACGIH OEL TWA	0,5 mg/m ³
Remark (ACGIH)	URT & eye irr; liver dam
Regulatory reference	ACGIH 2023
iridium trichloride (10025-83-9)	
Austria - Occupational Exposure Limits	
Local name	Indium und seine Verbindungen
MAK (OEL TWA)	0,1 mg/m ³ (als In berechnet, E)
MAK (OEL STEL)	0,2 mg/m ³ (als In berechnet, E, 4x 15(Miw) min)
Regulatory reference	BGBI. II Nr. 156/2021
Belgium - Occupational Exposure Limits	
Local name	Indium et composés (en In) # Indium en -verbindingen (als In)
OEL TWA	0,1 mg/m ³
Regulatory reference	Koninklijk besluit/Arrêté royal 11/05/2021
Denmark - Occupational Exposure Limits	
Local name	Indium, pulver, støv og forbindelser
OEL TWA [1]	0,1 mg/m ³ beregnet som In
Regulatory reference	BEK nr 2203 af 29. november 2021
Finland - Occupational Exposure Limits	
Local name	Indium ja sen yhdisteet
HTP (OEL TWA) [1]	0,1 mg/m ³ In
Regulatory reference	HTP-ARVOT 2020 (Sosiaali- ja terveysministeriö)

Multi-element calibration standard-3: 10 components; 10ug/ml each of Sb ; Au ; Hf ; Ir ; Pd ; Pt ; Rh ; Ru ; Te ; Sn in HCl 10 % / HNO3 1% Equivalent to Agilent Ref: 8500-6948

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according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

iridium trichloride (10025-83-9)	
Germany - Occupational Exposure Limits (TRGS 900)	
Local name	Indium
AGW (OEL TWA) [1]	0,0001 mg/m ³ (A)
Peak exposure limitation factor	8(II)
Remark	AGS - Ausschuss für Gefahrstoffe; 10 - Der Arbeitsplatzgrenzwert bezieht sich auf den Elementgehalt des entsprechenden Metalls
Regulatory reference	TRGS900
Ireland - Occupational Exposure Limits	
Local name	Indium & Compounds (as In)
OEL TWA [1]	0,1 mg/m ³
OEL STEL	0,3 mg/m ³
Regulatory reference	Chemical Agents Code of Practice 2021
Sweden - Occupational Exposure Limits	
Local name	Indium och oorg föreningar (som In)
NGV (OEL TWA)	0,1 mg/m ³ totaldamm
Remark	3 (Med totaldamm menas de partiklar (aerosoler) som fastnar på ett filter i den provtagare som beskrivs i Metodserien, Provtagnings av totaldamm och respirabelt damm, Metod nr 1010, Arbetarskyddsstyrelsen, numera Arbetsmiljöverket. Filterdiametern är normalt 37 mm, men kan även vara 25 mm. Trots sitt namn provtas inte den totala mängden luftburna partiklar med denna metod)
Regulatory reference	Hygieniska gränsvärden (AFS 2018:1)
United Kingdom - Occupational Exposure Limits	
Local name	Indium
WEL TWA (OEL TWA) [1]	0,1 mg/m ³ and compounds (as In)
WEL STEL (OEL STEL)	0,3 mg/m ³ and compounds (as In)
Regulatory reference	EH40/2005 (Fourth edition, 2020). HSE
Norway - Occupational Exposure Limits	
Local name	Indium og Indiumforb. (beregnet som In)
Grenseverdi (OEL TWA) [1]	0,1 mg/m ³
Regulatory reference	FOR-2021-06-28-2248
Switzerland - Occupational Exposure Limits	
Local name	Indium et ses composés / Indium und seine Verbindungen
MAK (OEL TWA) [1]	0,1 mg/m ³ (i) / (e)
Critical toxicity	Poumons, Dent / Lunge, Zahn
Remark	NIOSH, OSHA
Regulatory reference	www.suva.ch, 28.03.2022
USA - ACGIH - Occupational Exposure Limits	
Local name	Indium and compounds, as In

Multi-element calibration standard-3: 10 components; 10ug/ml each of Sb ; Au ; Hf ; Ir ; Pd ; Pt ; Rh ; Ru ; Te ; Sn in HCl 10 % / HNO3 1% Equivalent to Agilent Ref: 8500-6948

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iridium trichloride (10025-83-9)	
ACGIH OEL TWA	0,1 mg/m ³
Remark (ACGIH)	TLV® Basis: Pulm edema; pneumonitis; dental erosion; malaise
Regulatory reference	ACGIH 2022
palladium dinitrate (10102-05-3)	
Finland - Occupational Exposure Limits	
Local name	Palladium
HTP (OEL TWA) [1]	0,5 mg/m ³
Regulatory reference	HTP-ARVOT 2020 (Sosiaali- ja terveysministeriö)
chloroplatinic acid, hexahydrate (18497-13-7)	
EU - Indicative Occupational Exposure Limit (IOEL)	
Local name	Platinum (metallic)
IOEL TWA	1 mg/m ³
Regulatory reference	COMMISSION DIRECTIVE 91/322/EEC
Austria - Occupational Exposure Limits	
Local name	Platinverbindungen
MAK (OEL TWA)	0,002 mg/m ³ (als Pt berechnet, E)
Remark	Sah
Regulatory reference	BGBI. II Nr. 156/2021
Belgium - Occupational Exposure Limits	
Local name	Platine (sels solubles) (en Pt) # Platina (oplosbare zouten) (als Pt)
OEL TWA	0,002 mg/m ³
Regulatory reference	Koninklijk besluit/Arrêté royal 11/05/2021
Croatia - Occupational Exposure Limits	
Local name	Platina spojevi, topivi (osim određenih halogenih spojeva platine) (kao Pt)
GVI (OEL TWA) [1]	0,002 mg/m ³
Regulatory reference	Pravilnik o zaštiti radnika od izloženosti opasnim kemikalijama na radu, graničnim vrijednostima izloženosti i biološkim graničnim vrijednostima (NN 1/2021)
Czech Republic - Occupational Exposure Limits	
Local name	Platina (kov) a nerozpustné sloučeniny
PEL (OEL TWA)	0,5 mg/m ³
NPK-P (OEL C)	1 mg/m ³
Remark	I - dráždí sliznice (oči, dýchací cesty), respektive kůže, S - látka má senzibilizující účinek (s větou H317, H334).
Regulatory reference	Nařízení vlády č. 361/2007 Sb. (Předpis 195/2021 Sb.)
Denmark - Occupational Exposure Limits	
Local name	Platin
OEL TWA [1]	1 mg/m ³ pulver og støv

Multi-element calibration standard-3: 10 components; 10ug/ml each of Sb ; Au ; Hf ; Ir ; Pd ; Pt ; Rh ; Ru ; Te ; Sn in HCl 10 % / HNO3 1% Equivalent to Agilent Ref: 8500-6948

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chloroplatinic acid, hexahydrate (18497-13-7)	
Regulatory reference	BEK nr 1054 af 28/06/2022
Estonia - Occupational Exposure Limits	
Local name	Plaatina
OEL TWA	1 mg/m ³
Regulatory reference	Vabariigi Valitsuse 20. märtsi 2001. a määruse nr 105 (RT I, 15.05.2021, 1)
Finland - Occupational Exposure Limits	
Local name	Platina, liukoiset suolat
HTP (OEL TWA) [1]	0,002 mg/m ³ Pt
Regulatory reference	HTP-ARVOT 2020 (Sosiaali- ja terveystieteiden ministeriö)
Gibraltar - Occupational Exposure Limits	
Local name	Platinum (metallic)
OEL TWA	1 mg/m ³
Remark	Existing scientific data on health effects appear to be particularly limited
Regulatory reference	Factories (Control of Chemical Agents at Work) Regulations 2003 (LN. 2018/181)
Hungary - Occupational Exposure Limits	
Local name	PLATINA OLDHATÓ VEGYÜLETEI (Pt-ra számítva)
AK (OEL TWA)	0,002 mg/m ³
Remark	i (ingerlő anyag, amely izgatja a bőrt, nyálkahártyát, szemet vagy mindhármát), sz (Túlérzékenységet okozó (szenzibilizáló) tulajdonságú anyag. Az anyagra érzékeny egyének „túlérzékenységen” alapuló bőr-, légzőrendszeri, esetleg más szervet/szervrendszert károsító megbetegedést okozhat); T (Azok az anyagok, amelyek egészségkárosító hatása TARTÓS expozíciót követően jelentkezik)
Regulatory reference	5/2020. (II. 6.) ITM rendelet - A kémiai kóroki tényezők hatásának kitett munkavállalók egészségének és biztonságának védelméről
Ireland - Occupational Exposure Limits	
Local name	Platinum salts, soluble (as Pt)
OEL TWA [1]	0,002 mg/m ³
Regulatory reference	Chemical Agents Code of Practice 2021
Lithuania - Occupational Exposure Limits	
Local name	Platina
IPRV (OEL TWA)	1 mg/m ³
Regulatory reference	LIETUVOS HIGIENOS NORMA HN 23:2011 (Nr. V-695/A1-272, 2018-06-12)
Malta - Occupational Exposure Limits	
Local name	Platinum (metallic) # Platina (metalliku)
OEL TWA	1 mg/m ³
Regulatory reference	S.L.424.24 - Chemical Agents at Work Regulations (L.N.356 of 2021)
Portugal - Indicative Occupational Exposure Limit (IOEL)	
Local name	Platina

Multi-element calibration standard-3: 10 components; 10ug/ml each of Sb ; Au ; Hf ; Ir ; Pd ; Pt ; Rh ; Ru ; Te ; Sn in HCl 10 % / HNO3 1% Equivalent to Agilent Ref: 8500-6948

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

chloroplatinic acid, hexahydrate (18497-13-7)	
IOEL TWA	1 mg/m ³
Regulatory reference	Decreto-Lei n.º 1/2021 de 6 de janeiro
Portugal - Occupational Exposure Limits	
Local name	Platina
OEL TWA	1 mg/m ³ Metal 0,002 mg/m ³ Sais solúveis, expresso em platina
Regulatory reference	Norma Portuguesa NP 1796:2014
Romania - Occupational Exposure Limits	
Local name	Platină
OEL TWA	1 mg/m ³ (Metalică)
Regulatory reference	Hotărârea Guvernului nr. 1.218/2006 (Hotărârea nr. 53/2021)
Slovakia - Occupational Exposure Limits	
Local name	Platina – zlúčeniny rozpustné (ako Pt)
NPHV (OEL TWA) [1]	0,001 mg/m ³
NPHV (OEL STEL)	0,002 mg/m ³
Remark	S - znamená, že faktor môže spôsobiť senzibilizáciu
Regulatory reference	Nariadenie vlády č. 355/2006 Z. z. (236/2020 Z. z.)
Sweden - Occupational Exposure Limits	
Local name	Platina, metall och svärlösliga föreningar (som Pt)
NGV (OEL TWA)	1 mg/m ³ totaldamm
Remark	3 (Med totaldamm menas de partiklar (aerosoler) som fastnar på ett filter i den provtagare som beskrivs i Metodserien, Provtagning av totaldamm och respirabelt damm, Metod nr 1010, Arbetarskyddsstyrelsen, numera Arbetsmiljöverket. Filterdiametern är normalt 37 mm, men kan även vara 25 mm. Trots sitt namn provtas inte den totala mängden luftburna partiklar med denna metod)
Regulatory reference	Hygieniska gränsvärden (AFS 2018:1)
United Kingdom - Occupational Exposure Limits	
Local name	Platinum
WEL TWA (OEL TWA) [1]	5 mg/m ³ metal 0,002 mg/m ³ compounds, soluble (except certain halogeno-Pt compounds) (as Pt)
Remark	Sen (Capable of causing occupational asthma)
Regulatory reference	EH40/2005 (Fourth edition, 2020). HSE
Norway - Occupational Exposure Limits	
Local name	Platinaforbindelser, løselige (beregnet som Pt)
Grenseverdi (OEL TWA) [1]	0,002 mg/m ³
Regulatory reference	FOR-2021-06-28-2248
Switzerland - Occupational Exposure Limits	
Local name	Platine, composés du / Platinverbindungen
MAK (OEL TWA) [1]	0,002 mg/m ³

Multi-element calibration standard-3: 10 components; 10ug/ml each of Sb ; Au ; Hf ; Ir ; Pd ; Pt ; Rh ; Ru ; Te ; Sn in HCl 10 % / HNO3 1% Equivalent to Agilent Ref: 8500-6948

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

chloroplatinic acid, hexahydrate (18497-13-7)	
Critical toxicity	VRS, Asthme / OAW, Asthma
Notation	S / S
Remark	NIOSH
Regulatory reference	www.suva.ch, 01.01.2023
USA - ACGIH - Occupational Exposure Limits	
Local name	Platinum, soluble salts, as Pt
ACGIH OEL TWA	0,002 mg/m ³
Remark (ACGIH)	TLV® Basis: Asthma; URT irr
Regulatory reference	ACGIH 2023
rhodium trichloride (10049-07-7)	
Belgium - Occupational Exposure Limits	
Local name	Rhodium (composés solubles) (en Rh) # Rhodium (oplosbare verbindingen) (als Rh)
OEL TWA	0,01 mg/m ³
Regulatory reference	Koninklijk besluit/Arrêté royal 11/05/2021
Croatia - Occupational Exposure Limits	
Local name	Rodij (kao Rh)
GVI (OEL TWA) [1]	0,1 mg/m ³ dim i prašina metala 0,001 mg/m ³ topivi spojevi
KGVI (OEL STEL)	0,3 mg/m ³ dim i prašina metala 0,003 mg/m ³ topivi spojevi
Regulatory reference	Pravilnik o zaštiti radnika od izloženosti opasnim kemikalijama na radu, graničnim vrijednostima izloženosti i biološkim graničnim vrijednostima (NN 1/2021)
Denmark - Occupational Exposure Limits	
Local name	Rhodiumforbindelser, opløselige
OEL TWA [1]	0,001 mg/m ³ beregnet som Rh
Regulatory reference	BEK nr 1054 af 28/06/2022
Finland - Occupational Exposure Limits	
Local name	Rodium, metallihuurut ja -pöly
HTP (OEL TWA) [1]	0,1 mg/m ³ Rh
Regulatory reference	HTP-ARVOT 2020 (Sosiaali- ja terveysministeriö)
France - Occupational Exposure Limits	
Local name	Rhodium (métal)
VME (OEL TWA)	1 mg/m ³
Remark	Valeurs recommandées/admises
Regulatory reference	Circulaire du Ministère du travail (réf.: INRS ED 984, 2016)
Greece - Occupational Exposure Limits	
Local name	Ρόδιο
OEL TWA	0,1 mg/m ³

Multi-element calibration standard-3: 10 components; 10ug/ml each of Sb ; Au ; Hf ; Ir ; Pd ; Pt ; Rh ; Ru ; Te ; Sn in HCl 10 % / HNO3 1% Equivalent to Agilent Ref: 8500-6948

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

rhodium trichloride (10049-07-7)	
OEL STEL	0,3 mg/m ³
Regulatory reference	Π.Δ. 90/1999 - Προστασία της υγείας των εργαζομένων που εκτίθενται σε ορισμένους χημικούς παράγοντες κατά τη διάρκεια της εργασίας τους
Ireland - Occupational Exposure Limits	
Local name	Rhodium (as Rh)
OEL TWA [1]	0,1 mg/m ³ metal fume and dust 0,001 mg/m ³ soluble salts
OEL STEL	0,3 mg/m ³ metal fume and dust 0,003 mg/m ³ soluble salts
Regulatory reference	Chemical Agents Code of Practice 2021
Portugal - Occupational Exposure Limits	
Local name	Ródio
OEL TWA	1 mg/m ³ Metal e compostos insolúveis, expresso em Rh 0,01 mg/m ³ Compostos solúveis, expresso em Rh
Remark	A4 (Agente não classificável como carcinogénico no Homem)
Regulatory reference	Norma Portuguesa NP 1796:2014
Spain - Occupational Exposure Limits	
Local name	Rodio metal
VLA-ED (OEL TWA) [1]	1 mg/m ³
Remark	c (Los términos "soluble" e "insoluble" se entienden con referencia al agua).
Regulatory reference	Límites de Exposición Profesional para Agentes Químicos en España 2022. INSHT
United Kingdom - Occupational Exposure Limits	
Local name	Rhodium
WEL TWA (OEL TWA) [1]	0,1 mg/m ³ metal fume and dust (as Rh) 0,001 mg/m ³ soluble salts (as Rh)
WEL STEL (OEL STEL)	0,3 mg/m ³ metal fume and dust (as Rh) 0,003 mg/m ³ soluble salts (as Rh)
Regulatory reference	EH40/2005 (Fourth edition, 2020). HSE
Iceland - Occupational Exposure Limits	
Local name	Ródíum, duft, ryk og reykur, sem Rh
OEL TWA	0,1 mg/m ³
Regulatory reference	Reglugerð um mengunarmörk og aðgerðir til að draga úr mengun á vinnustöðum (Nr. 390/2009)
Norway - Occupational Exposure Limits	
Local name	Rhodium
Grenseverdi (OEL TWA) [1]	0,1 mg/m ³
Regulatory reference	FOR-2021-06-28-2248
Switzerland - Occupational Exposure Limits	
Local name	Rhodium, sels solubles / Rhodiumsalze (löslich)

Multi-element calibration standard-3: 10 components; 10ug/ml each of Sb ; Au ; Hf ; Ir ; Pd ; Pt ; Rh ; Ru ; Te ; Sn in HCl 10 % / HNO3 1% Equivalent to Agilent Ref: 8500-6948

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

rhodium trichloride (10049-07-7)	
MAK (OEL TWA) [1]	0,001 mg/m ³ (i) / (e)
Critical toxicity	Asthme / Asthma
Remark	OSHA
Regulatory reference	www.suva.ch, 01.01.2023
USA - ACGIH - Occupational Exposure Limits	
Local name	Rhodium, soluble compounds, as Rh
ACGIH OEL TWA	0,01 mg/m ³ (Rhodium, Soluble compounds, as Rh; USA; Time-weighted average exposure limit 8 h; TLV - Adopted Value)
Remark (ACGIH)	TLV® Basis: Asthma. Notations: A4 (Not classifiable as a Human Carcinogen)
Regulatory reference	ACGIH 2023
telluric acid (7803-68-1)	
Austria - Occupational Exposure Limits	
Local name	Tellur und seine Verbindungen
MAK (OEL TWA)	0,1 mg/m ³ (als Te berechnet, E)
MAK (OEL STEL)	0,5 mg/m ³ (als Te berechnet, E, 2x 30(Miw) min)
Regulatory reference	BGBI. II Nr. 156/2021
Belgium - Occupational Exposure Limits	
Local name	Tellure et composés (en Te) # Telluur en -verbindingen (als Te)
OEL TWA	0,1 mg/m ³ (Tellure et composés (en Te); Belgium; Time-weighted average exposure limit 8 h)
Regulatory reference	Koninklijk besluit/Arrêté royal 11/05/2021
Bulgaria - Occupational Exposure Limits	
Local name	Телур и неговите съединения
OEL TWA	0,1 mg/m ³
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. 47 от 2021 г., в сила от 04.06.2021 г.)
Czech Republic - Occupational Exposure Limits	
Local name	Tellur a jeho sloučeniny, jako Te
PEL (OEL TWA)	0,1 mg/m ³
NPK-P (OEL C)	0,5 mg/m ³
Remark	V - vdechovatelná frakce aerosolu.
Regulatory reference	Nařízení vlády č. 361/2007 Sb. (Předpis 195/2021 Sb.)
Denmark - Occupational Exposure Limits	
Local name	Tellur, pulver og forbindelser
OEL TWA [1]	0,1 mg/m ³ beregnet som Te
Regulatory reference	BEK nr 1054 af 28/06/2022

Multi-element calibration standard-3: 10 components; 10ug/ml each of Sb ; Au ; Hf ; Ir ; Pd ; Pt ; Rh ; Ru ; Te ; Sn in HCl 10 % / HNO3 1% Equivalent to Agilent Ref: 8500-6948

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

telluric acid (7803-68-1)	
Estonia - Occupational Exposure Limits	
Local name	Telluur ja ühendid (arvutatud telluurile)
OEL TWA	0,1 mg/m ³
Regulatory reference	Vabariigi Valitsuse 20. märtsi 2001. a määruse nr 105 (RT I, 15.05.2021, 1)
Finland - Occupational Exposure Limits	
Local name	Telluuri, alkuaine
HTP (OEL TWA) [1]	0,1 mg/m ³ Te
HTP (OEL STEL)	0,3 mg/m ³
Regulatory reference	HTP-ARVOT 2020 (Sosiaali- ja terveystieteiden ministeriö)
France - Occupational Exposure Limits	
VME (OEL TWA)	0,1 mg/m ³ (Tellure et composés de (sauf hexafluorure), en Te; France; Time-weighted average exposure limit 8 h; VL: Valeur non réglementaire indicative)
Greece - Occupational Exposure Limits	
Local name	Τελλούριο και ενώσεις του (ως Te)
OEL TWA	0,1 mg/m ³
Regulatory reference	Π.Δ. 90/1999 - Προστασία της υγείας των εργαζομένων που εκτίθενται σε ορισμένους χημικούς παράγοντες κατά τη διάρκεια της εργασίας τους
Ireland - Occupational Exposure Limits	
Local name	Tellurium & compounds, except hydrogen telluride, (as Te)
OEL TWA [1]	0,1 mg/m ³
Regulatory reference	Chemical Agents Code of Practice 2021
Latvia - Occupational Exposure Limits	
Local name	Telūrs
OEL TWA	0,01 mg/m ³
Regulatory reference	Ministru kabineta 2007. gada 15. maija noteikumiem Nr. 325
Poland - Occupational Exposure Limits	
Local name	Tellur i jego związki
NDS (OEL TWA)	0,01 mg/m ³ w przeliczeniu na Te
NDSch (OEL STEL)	0,03 mg/m ³ w przeliczeniu na Te
Regulatory reference	Dz. U. 2018 poz. 1286
Portugal - Occupational Exposure Limits	
Local name	Telúrio e compostos, expressos em Te, excepto Ácido telúrico
OEL TWA	0,1 mg/m ³
Regulatory reference	Norma Portuguesa NP 1796:2014
Romania - Occupational Exposure Limits	
Local name	Telur
OEL TWA	0,05 mg/m ³

Multi-element calibration standard-3: 10 components; 10ug/ml each of Sb ; Au ; Hf ; Ir ; Pd ; Pt ; Rh ; Ru ; Te ; Sn in HCl 10 % / HNO3 1% Equivalent to Agilent Ref: 8500-6948

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

telluric acid (7803-68-1)	
OEL STEL	0,15 mg/m ³
Regulatory reference	Hotărârea Guvernului nr. 1.218/2006 (Hotărârea nr. 53/2021)
Romania - Biological limit values	
Local name	Telur
BLV	20 µg/l Indicator biologic: Telur - Material biologic: urină - Momentul recoltării: sfârşit schimb
Regulatory reference	Hotărârea Guvernului nr. 1.218/2006 (Hotărârea nr. 584/2018)
Slovakia - Occupational Exposure Limits	
Local name	Telúr a jeho zlúčeniny (ako Te)
NPHV (OEL TWA) [1]	0,1 mg/m ³
Regulatory reference	Nariadenie vlády č. 355/2006 Z. z. (236/2020 Z. z.)
Spain - Occupational Exposure Limits	
Local name	Teluro elemental
VLA-ED (OEL TWA) [1]	0,1 mg/m ³
Regulatory reference	Límites de Exposición Profesional para Agentes Químicos en España 2022. INSHT
Sweden - Occupational Exposure Limits	
Local name	Tellur metall och föreningar (som Te)
NGV (OEL TWA)	0,1 mg/m ³ totaldamm
Remark	3 (Med totaldamm menas de partiklar (aerosoler) som fastnar på ett filter i den provtagare som beskrivs i Metodserien, Provtagning av totaldamm och respirabelt damm, Metod nr 1010, Arbetarskyddsstyrelsen, numera Arbetsmiljöverket. Filterdiametern är normalt 37 mm, men kan även vara 25 mm. Trots sitt namn provtas inte den totala mängden luftburna partiklar med denna metod)
Regulatory reference	Hygieniska gränsvärden (AFS 2018:1)
United Kingdom - Occupational Exposure Limits	
Local name	Tellurium
WEL TWA (OEL TWA) [1]	0,1 mg/m ³ Tellurium compounds, except hydrogen telluride (as Te); United Kingdom; Time-weighted average exposure limit 8 h; Workplace exposure limit (EH40/2005)
Regulatory reference	EH40/2005 (Fourth edition, 2020). HSE
Iceland - Occupational Exposure Limits	
Local name	Tellúr, duft og sambönd, sem Te
OEL TWA	0,1 mg/m ³
Regulatory reference	Reglugerð um mengunarmörk og aðgerðir til að draga úr mengun á vinnustöðum (Nr. 390/2009)
Norway - Occupational Exposure Limits	
Local name	Tellur
Grenseverdi (OEL TWA) [1]	0,1 mg/m ³
Regulatory reference	FOR-2021-06-28-2248

Multi-element calibration standard-3: 10 components; 10ug/ml each of Sb ; Au ; Hf ; Ir ; Pd ; Pt ; Rh ; Ru ; Te ; Sn in HCl 10 % / HNO3 1% Equivalent to Agilent Ref: 8500-6948

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

telluric acid (7803-68-1)	
North Macedonia - Occupational Exposure Limits	
Local name	телур и негови соединенија
OEL TWA	0,1 mg/m ³ (I) инхалабилна фракција – дел на вкупно суспендирани материи, кои работникот ги вдишува
KTV	4
Short time value [mg/m ³]	0,4 mg/m ³
Remark	(KTV) краткотрајна вредност (КТВ) значи концентрација на опасни хемиски супстанции во воздухот на работното место внатре во зона на дишење, на која работникот без опасност по здравјето може да е изложен на покусо време. Изложеноста на краткотрајни вредности може да трае највеќе 15 минути и не смее да се повтори повеќе од четирипати во работната смена, при што меѓу две изложености на оваа концентрација мора да измине најмалку 60 минути. Краткотрајната вредност е изразена во mg/m ³ или во ml/m ³ (ppm) а е дадена како многукратни дозволени пречекорувања на граничната вредност
Regulatory reference	Правилник за минималните барања за безбедност и здравје при работа на вработени од ризици поврзани со изложување на хемиски супстанции („Службен весник на Република Македонија“ бр.46/10)
Switzerland - Occupational Exposure Limits	
Local name	Tellure et ses composés (sauf l'hexafluorure) / Tellur und seine Verbindungen (ausser Tellurhexafluorid)
MAK (OEL TWA) [1]	0,1 mg/m ³ (i) / (e)
KZGW (OEL STEL)	0,2 mg/m ³ (i) / (e)
Critical toxicity	Halitose / Halitosis
Remark	NIOSH, OSHA
Regulatory reference	www.suva.ch, 01.01.2023
USA - ACGIH - Occupational Exposure Limits	
Local name	Tellurium and compounds (NOS), as Te
ACGIH OEL TWA	0,1 mg/m ³ (Tellurium compounds (NOS) ,as Te(except hydrogen telluride); USA; Time-weighted average exposure limit 8 h; TLV - Adopted Value)
Remark (ACGIH)	TLV® Basis: Halitosis
Regulatory reference	ACGIH 2023
tetrafluorostannane (7783-62-2)	
EU - Indicative Occupational Exposure Limit (IOEL)	
Local name	Tin (inorganic compounds as Sn)
IOEL TWA	2 mg/m ³ 2 mg/m ³
Regulatory reference	COMMISSION DIRECTIVE 91/322/EEC COMMISSION DIRECTIVE 91/322/EEC
Austria - Occupational Exposure Limits	
Local name	Zinn
MAK (OEL TWA)	2 mg/m ³ (E)
MAK (OEL STEL)	4 mg/m ³ (E, 4x 15(Miw) min)

Multi-element calibration standard-3: 10 components; 10ug/ml each of Sb ; Au ; Hf ; Ir ; Pd ; Pt ; Rh ; Ru ; Te ; Sn in HCl 10 % / HNO3 1% Equivalent to Agilent Ref: 8500-6948

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according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

tetrafluorostannane (7783-62-2)	
Regulatory reference	BGBI. II Nr. 156/2021
Belgium - Occupational Exposure Limits	
Local name	Etain # Tin
OEL TWA	2,5 mg/m ³ (Fluorures inorganiques (en F); Belgium; Time-weighted average exposure limit 8 h; Etain (oxyde et composés inorganiques de; sauf SnH4, en Sn); 2 mg/m ³ ; Belgium; Time-weighted average exposure limit 8 h)
OEL STEL	0,2 mg/m ³ (composés organiques de) # (organische verbindingen)
Remark	D: la mention "D" signifie que la résorption de l'agent, via la peau, les muqueuses ou les yeux, constitue une partie importante de l'exposition totale. Cette résorption peut se faire tant par contact direct que par présence de l'agent dans l'air. # D: de vermelding "D" betekent dat de opname van het agens via de huid, de slijmvliezen of de ogen een belangrijk deel van de totale blootstelling vormt. Deze opname kan het gevolg zijn van zowel direct contact als zijn aanwezigheid in de lucht.
Regulatory reference	Koninklijk besluit/Arrêté royal 11/05/2021
Bulgaria - Occupational Exposure Limits	
Local name	Калай
OEL TWA	2 mg/m ³ (неорг. съединения, оксиди (като калай)) 0,1 mg/m ³ (орг. съединения (като калай))
Remark	• (Химични агенти, за които са определени гранични стойности във въздуха на работната среда за Европейската общност)
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. 47 от 2021 г., в сила от 04.06.2021 г.)
Croatia - Occupational Exposure Limits	
Local name	Kositar, anorganski spojevi kao Sn (osim SnH4)
GVI (OEL TWA) [1]	2 mg/m ³
Remark	Direktiva: 91/322/EEZ
Regulatory reference	Pravilnik o zaštiti radnika od izloženosti opasnim kemikalijama na radu, граниčnim vrijednostima izloženosti i biološkim граниčnim vrijednostima (NN 1/2021)
Cyprus - Occupational Exposure Limits	
Local name	Κασσίτερος (ανόργανες ενώσεις ως Sn)
OEL TWA	2 mg/m ³
Remark	Τα υπάρχοντα επιστημονικά δεδομένα για τις συνέπειες στην υγεία είναι ιδιαίτερα περιορισμένα
Regulatory reference	Κανονισμοί του 2007 (Κ.Δ.Π. 295/2007)
Czech Republic - Occupational Exposure Limits	
Local name	Cínu anorganické sloučeniny, jako Sn
PEL (OEL TWA)	2 mg/m ³
NPK-P (OEL C)	4 mg/m ³
Remark	I - dráždí sliznice (oči, dýchací cesty), respektive kůži.
Regulatory reference	Nařízení vlády č. 361/2007 Sb. (Předpis 195/2021 Sb.)

Multi-element calibration standard-3: 10 components; 10ug/ml each of Sb ; Au ; Hf ; Ir ; Pd ; Pt ; Rh ; Ru ; Te ; Sn in HCl 10 % / HNO3 1% Equivalent to Agilent Ref: 8500-6948

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according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

tetrafluorostannane (7783-62-2)	
Denmark - Occupational Exposure Limits	
Local name	Tinforbindelser, uorganiske
OEL TWA [1]	2 mg/m ³ beregnet som Sn
Remark	E (betyder, at stoffet har en EF-grænseværdi)
Regulatory reference	BEK nr 2203 af 29. november 2021
Estonia - Occupational Exposure Limits	
Local name	Tinaorgaanilised ühendid arvatatud tinale (Sn)
OEL TWA	0,1 mg/m ³
OEL STEL	0,2 mg/m ³
Remark	A (Naha kaudu kergesti imenduv aine)
Regulatory reference	Vabariigi Valitsuse 20. märtsi 2001. a määruse nr 105 (RT I, 15.05.2021, 1)
Finland - Occupational Exposure Limits	
Local name	Tina, metalli
HTP (OEL TWA) [1]	2 mg/m ³ Sn
Regulatory reference	HTP-ARVOT 2020 (Sosiaali- ja terveystieteiden ministeriö)
France - Occupational Exposure Limits	
VME (OEL TWA)	2,5 mg/m ³ (Fluorures inorganiques; France; Time-weighted average exposure limit 8 h; VRI: Valeur réglementaire indicative)
Gibraltar - Occupational Exposure Limits	
Local name	Tin (inorganic compounds as Sn)
OEL TWA	2 mg/m ³
Remark	Existing scientific data on health effects appear to be particularly limited
Regulatory reference	Factories (Control of Chemical Agents at Work) Regulations 2003 (LN. 2018/181)
Greece - Occupational Exposure Limits	
Local name	Κασσίτερος
OEL TWA	2 mg/m ³
Regulatory reference	Π.Δ. 90/1999 - Προστασία της υγείας των εργαζομένων που εκτίθενται σε ορισμένους χημικούς παράγοντες κατά τη διάρκεια της εργασίας τους
Hungary - Occupational Exposure Limits	
Local name	ÓN SZERVETLEN VEGYÜLETEI (Sn-ra számítva)
AK (OEL TWA)	2 mg/m ³
CK (OEL STEL)	8 mg/m ³
Remark	b (Bőrön át is felszívódik), i (ingerlő anyag, amely izgatja a bőrt, nyálkahártyát, szemet vagy mindhármát); EU91 (91/322/EGK irányelvben közölt érték); T (Azok az anyagok, amelyek egészségkárosító hatása TARTÓS expozíciót követően jelentkezik)
Regulatory reference	5/2020. (II. 6.) ITM rendelet - A kémiai kóroki tényezők hatásának kitett munkavállalók egészségének és biztonságának védelméről

Multi-element calibration standard-3: 10 components; 10ug/ml each of Sb ; Au ; Hf ; Ir ; Pd ; Pt ; Rh ; Ru ; Te ; Sn in HCl 10 % / HNO3 1% Equivalent to Agilent Ref: 8500-6948

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tetrafluorostannane (7783-62-2)	
Ireland - Occupational Exposure Limits	
Local name	Tin, as Sn
OEL TWA [1]	2 mg/m ³ Metal 2 mg/m ³ Oxide & inorganic compounds, except tin hydride 0,1 mg/m ³ Organic compounds
OEL STEL	0,2 mg/m ³ Organic compounds
Remark	IOELV (Indicative Occupational Exposure Limit Values)
Regulatory reference	Chemical Agents Code of Practice 2021
Luxembourg - Occupational Exposure Limits	
Local name	Etain (composés inorganiques en Sn)
OEL TWA	2 mg/m ³
Regulatory reference	Mémorial A N° 226 de 2021 concernant la protection de la sécurité et de la santé des salariés contre les risques liés à des agents chimiques sur le lieu de travail
Malta - Occupational Exposure Limits	
Local name	Tin (inorganic compounds as Sn)
OEL TWA	2 mg/m ³
Regulatory reference	S.L.424.24 - Chemical Agents at Work Regulations (L.N.356 of 2021)
Netherlands - Occupational Exposure Limits	
Local name	Tin
TGG-8u (OEL TWA)	2 mg/m ³ (anorganische verbindingen als Sn)
TGG-15min (OEL STEL)	2 mg/m ³ (Fluoriden, anorganisch en oplosbaar (als F); Netherlands; Short time value; Public occupational exposure limit value; als F)
Regulatory reference	Arbeidsomstandighedenregeling 2022
Poland - Occupational Exposure Limits	
Local name	Cyna i jej związki nieorganiczne, z wyjątkiem stannanu (cyny wodorku)
NDS (OEL TWA)	2 mg/m ³ w przeliczeniu na Sn: frakcja wycalna
Remark	Frakcja wdychalna – frakcja aerozolu wnikająca przez nos i usta, która po zdeponowaniu w drogach oddechowych stwarza zagrożenie dla zdrowia.
Regulatory reference	Dz. U. 2018 poz. 1286
Portugal - Occupational Exposure Limits	
Local name	Estanho e compostos, excluindo Hidreto de estanho
OEL TWA	2 mg/m ³ Metal 2 mg/m ³ Óxido e compostos inorgânicos, expresso em Sn 0,1 mg/m ³ Compostos orgânicos, expresso em Sn
OEL STEL	0,2 mg/m ³ Compostos orgânicos, expresso em Sn
Remark	Compostos orgânicos: P (Toxicidade percutânea); A4 (Agente não classificável como carcinogénico no Homem)
Regulatory reference	Norma Portuguesa NP 1796:2014
Romania - Occupational Exposure Limits	
Local name	Staniu (compuși anorganici exprimați în Sn)

Multi-element calibration standard-3: 10 components; 10ug/ml each of Sb ; Au ; Hf ; Ir ; Pd ; Pt ; Rh ; Ru ; Te ; Sn in HCl 10 % / HNO3 1% Equivalent to Agilent Ref: 8500-6948

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tetrafluorostannane (7783-62-2)	
OEL TWA	2 mg/m ³
Regulatory reference	Hotărârea Guvernului nr. 1.218/2006 (Hotărârea nr. 53/2021)
Slovakia - Occupational Exposure Limits	
Local name	Cín zlúčeniny anorganické (ako Sn)
NPHV (OEL TWA) [1]	2 mg/m ³
NPHV (OEL STEL)	4 mg/m ³
Regulatory reference	Nariadenie vlády č. 355/2006 Z. z. (236/2020 Z. z.)
Slovenia - Occupational Exposure Limits	
Local name	kositrove (IV) spojine (anorganske, računano kot Sn)
OEL TWA	2 mg/m ³
Remark	EU
Regulatory reference	Uradni list RS, št. 72/2021 z dne 11.5.2021
Spain - Occupational Exposure Limits	
Local name	Estaño metal
VLA-ED (OEL TWA) [1]	2 mg/m ³
Remark	VLI (Agente químico para el que la U.E. estableció en su día un valor límite indicativo).
Regulatory reference	Límites de Exposición Profesional para Agentes Químicos en España 2022. INSHT
Sweden - Occupational Exposure Limits	
Local name	Tenn metall och oorg. föreningar (som Sn)
NGV (OEL TWA)	2 mg/m ³ inhalerbar fraktion
Remark	3 (Med inhalerbar fraktion menas den mängd partiklar, av totalmängden partiklar i luften, som man inandas genom näsa och mun)
Regulatory reference	Hygieniska gränsvärden (AFS 2018:1)
United Kingdom - Occupational Exposure Limits	
Local name	Tin compounds, inorganic, except SnH4
WEL TWA (OEL TWA) [1]	2 mg/m ³ (as Sn4)
WEL STEL (OEL STEL)	4 mg/m ³ (as Sn4)
Regulatory reference	EH40/2005 (Fourth edition, 2020). HSE
Iceland - Occupational Exposure Limits	
Local name	Tinsambönd, ólífræn, sem Sn
OEL TWA	2 mg/m ³
Regulatory reference	Reglugerð um mengunarmörk og aðgerðir til að draga úr mengun á vinnustöðum (Nr. 390/2009)
Norway - Occupational Exposure Limits	
Local name	Tinnforbindelser, uorganiske (beregnet som Sn)
Grenseverdi (OEL TWA) [1]	2 mg/m ³
Remark	E: EU har en veiledende grenseverdi og/eller anmerkning for stoffet.

Multi-element calibration standard-3: 10 components; 10ug/ml each of Sb ; Au ; Hf ; Ir ; Pd ; Pt ; Rh ; Ru ; Te ; Sn in HCl 10 % / HNO3 1% Equivalent to Agilent Ref: 8500-6948

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tetrafluorostannane (7783-62-2)	
Regulatory reference	FOR-2021-06-28-2248
North Macedonia - Occupational Exposure Limits	
Local name	Калај (неорганиски соединенија, пресметано како Sn)
OEL TWA	2 mg/m ³ (l) инхалабилна фракција – дел на вкупно суспендирани материи, кои работникот ги вдишува
Remark	(EU) European Union – гранична вредност, определена на ниво на Европската унија
Regulatory reference	Правилник за минималните барања за безбедност и здравје при работа на вработени од ризици поврзани со изложување на хемиски супстанции („Службен весник на Република Македонија“ бр.46/10)
Switzerland - Occupational Exposure Limits	
Local name	Etain, composés inorganiques / Zinnverbindungen, anorganische
MAK (OEL TWA) [1]	2 mg/m ³ (i) / (e)
KZGW (OEL STEL)	4 mg/m ³ (i) / (e)
Critical toxicity	Fibpulm / Lungenfibrose
Remark	NIOSH, OSHA
Regulatory reference	www.suva.ch, 28.03.2022
USA - ACGIH - Occupational Exposure Limits	
Local name	Tin and inorganic compounds, excluding Tin hydride and Indium tin oxide, as Sn
ACGIH OEL TWA	2 mg/m ³ (l - Inhalable particulate matter)
Remark (ACGIH)	Non fibrous = TLV® Basis: URT irr Fibrous (including whiskers) = TLV® Basis: Mesothelioma; cancer. Notations: A2 (Suspected Human Carcinogen)
Regulatory reference	ACGIH 2022

8.1.2. Recommended monitoring procedures

No additional information available

8.1.3. Air contaminants formed

No additional information available

8.1.4. DNEL and PNEC

No additional information available

8.1.5. Control banding

No additional information available

8.2. Exposure controls

8.2.1. Appropriate engineering controls

Appropriate engineering controls:

Ensure good ventilation of the work station.

8.2.2. Personal protection equipment

Personal protective equipment:

Avoid all unnecessary exposure. Personal protective equipment should be chosen according to the CEN standards and in discussion with the supplier of the protective equipment.

Multi-element calibration standard-3: 10 components; 10ug/ml each of Sb ; Au ; Hf ; Ir ; Pd ; Pt ; Rh ; Ru ; Te ; Sn in HCl 10 % / HNO3 1% Equivalent to Agilent Ref: 8500-6948

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Personal protective equipment symbol(s):



8.2.2.1. Eye and face protection

Eye protection:

Safety glasses

8.2.2.2. Skin protection

Skin and body protection:

Wear suitable protective clothing

Hand protection:

Protective gloves

8.2.2.3. Respiratory protection

Respiratory protection:

In case of insufficient ventilation, wear suitable respiratory equipment

8.2.2.4. Thermal hazards

No additional information available

8.2.3. Environmental exposure controls

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	: Not available
Odour	: Not available
Odour threshold	: Not available
Melting point	: Not applicable
Freezing point	: Not available
Boiling point	: Not available
Flammability	: Non flammable.
Lower explosion limit	: Not available
Upper explosion limit	: Not available
Flash point	: Not available
Auto-ignition temperature	: Not available
Decomposition temperature	: Not available
pH	: Not available
Viscosity, kinematic	: Not available
Solubility	: Miscible with water.
Partition coefficient n-octanol/water (Log Kow)	: Not available
Vapour pressure	: Not available
Vapour pressure at 50°C	: Not available
Density	: Not available
Relative density	: 1,07
Relative vapour density at 20°C	: Not available
Particle characteristics	: Not applicable

Multi-element calibration standard-3: 10 components; 10ug/ml each of Sb ; Au ; Hf ; Ir ; Pd ; Pt ; Rh ; Ru ; Te ; Sn in HCl 10 % / HNO3 1% Equivalent to Agilent Ref: 8500-6948

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9.2. Other information

9.2.1. Information with regard to physical hazard classes

No additional information available

9.2.2. Other safety characteristics

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

metals.

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 hazard classes as defined in Regulation (EC) No 1272/2008

Acute toxicity (oral) : Not classified
Acute toxicity (dermal) : Not classified
Acute toxicity (inhalation) : Not classified

nitric acid (7697-37-2)	
LC50 Inhalation - Rat	> 2,65 mg/L air
hafnium dioxide (12055-23-1)	
LD50 oral rat	> 5000 mg/kg
LC50 Inhalation - Rat	> 4,3 mg/l
palladium dinitrate (10102-05-3)	
LD50 oral rat	200 – 2000 mg/kg
chloroplatinic acid, hexahydrate (18497-13-7)	
LD50 oral rat	25 – 200 mg/kg bodyweight
LD50 oral	82 mg/kg (mouse) intraperitoneal
rhodium trichloride (10049-07-7)	
LD50 oral rat	1302 mg/kg

Multi-element calibration standard-3: 10 components; 10ug/ml each of Sb ; Au ; Hf ; Ir ; Pd ; Pt ; Rh ; Ru ; Te ; Sn in HCl 10 % / HNO3 1% Equivalent to Agilent Ref: 8500-6948

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Skin corrosion/irritation : Causes skin irritation.

nitric acid (7697-37-2)	
pH	< 1
hydrochloric acid (7647-01-0)	
pH	< 1
hexafluoroantimonic acid (16950-06-4)	
pH	< 2
palladium dinitrate (10102-05-3)	
pH	< 2

Serious eye damage/irritation : Causes serious eye irritation.

nitric acid (7697-37-2)	
pH	< 1
hydrochloric acid (7647-01-0)	
pH	< 1
hexafluoroantimonic acid (16950-06-4)	
pH	< 2
palladium dinitrate (10102-05-3)	
pH	< 2

Respiratory or skin sensitisation : Not classified
 Germ cell mutagenicity : Not classified
 Carcinogenicity : Not classified

hydrochloric acid (7647-01-0)	
IARC group	3 - Not classifiable
Reproductive toxicity	: Not classified
STOT-single exposure	: May cause respiratory irritation.
hydrochloric acid (7647-01-0)	
STOT-single exposure	May cause respiratory irritation.
STOT-repeated exposure	: Not classified

nitric acid (7697-37-2)	
NOAEL (oral, rat, 90 days)	1500 mg/kg bodyweight
NOAEC (inhalation, rat, gas, 90 days)	2,15 ppm
hafnium dioxide (12055-23-1)	
NOAEL (oral, rat, 90 days)	3156 – 7085 mg/kg bodyweight
chloroplatinic acid, hexahydrate (18497-13-7)	
LOAEL (oral, rat, 90 days)	30 mg/kg bodyweight
NOAEL (oral, rat, 90 days)	10 mg/kg bodyweight

Aspiration hazard : Not classified

Multi-element calibration standard-3: 10 components; 10ug/ml each of Sb ; Au ; Hf ; Ir ; Pd ; Pt ; Rh ; Ru ; Te ; Sn in HCl 10 % / HNO3 1% Equivalent to Agilent Ref: 8500-6948

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nitric acid (7697-37-2)

Viscosity, kinematic	0,595 mm ² /s
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11.2. Information on other hazards

No additional information available

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.

Hazardous to the aquatic environment, short-term (acute) : Not classified

Hazardous to the aquatic environment, long-term (chronic) : Not classified

nitric acid (7697-37-2)

EC50 - Crustacea [1]	180 mg/l Daphnia magna (Water flea)
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Threshold limit - Algae [1]	> 19 mg/l
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hafnium dioxide (12055-23-1)

LC50 - Fish [1]	> 100 mg/l Brachydanio rerio (zebra-fish)
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EC50 - Crustacea [1]	> 100 mg/l Daphnia magna (Water flea)
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palladium dinitrate (10102-05-3)

LC50 - Fish [1]	306 µg/l Oncorhynchus mykiss (Rainbow trout)
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EC50 - Crustacea [1]	35,19 µg/l Daphnia magna (Water flea)
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chloroplatinic acid, hexahydrate (18497-13-7)

LC50 - Fish [1]	76,55 mg/l Oncorhynchus mykiss (Rainbow trout)
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tetrafluorostannane (7783-62-2)

EC50 - Crustacea [1]	21,56 mg/l Daphnia magna (Water flea)
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12.2. Persistence and degradability

No additional information available

12.3. Bioaccumulative potential

nitric acid (7697-37-2)

Partition coefficient n-octanol/water (Log Pow)	-2,3
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12.4. Mobility in soil

No additional information available

12.5. Results of PBT and vPvB assessment

Component

nitric acid (7697-37-2)	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
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Multi-element calibration standard-3: 10 components; 10ug/ml each of Sb ; Au ; Hf ; Ir ; Pd ; Pt ; Rh ; Ru ; Te ; Sn in HCl 10 % / HNO3 1% Equivalent to Agilent Ref: 8500-6948

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Component	
hydrochloric acid (7647-01-0)	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
hexafluoroantimonic acid (16950-06-4)	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
hafnium dioxide (12055-23-1)	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
iridium trichloride (10025-83-9)	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
palladium dinitrate (10102-05-3)	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
chloroplatinic acid, hexahydrate (18497-13-7)	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
rhodium trichloride (10049-07-7)	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
telluric acid (7803-68-1)	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
tetrafluorostannane (7783-62-2)	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. Endocrine disrupting properties

No additional information available

12.7. 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.

SECTION 14: Transport information

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

ADR	IMDG	IATA	ADN	RID
14.1. UN number or ID number				
UN 1789	UN 1789	UN 1789	UN 1789	UN 1789
14.2. UN proper shipping name				
HYDROCHLORIC ACID	HYDROCHLORIC ACID	Hydrochloric acid	HYDROCHLORIC ACID	HYDROCHLORIC ACID
Transport document description				
UN 1789 HYDROCHLORIC ACID, 8, III, (E)	UN 1789 HYDROCHLORIC ACID, 8, III	UN 1789 Hydrochloric acid, 8, III	UN 1789 HYDROCHLORIC ACID, 8, III	UN 1789 HYDROCHLORIC ACID, 8, III
14.3. Transport hazard class(es)				
8	8	8	8	8

Multi-element calibration standard-3: 10 components; 10ug/ml each of Sb ; Au ; Hf ; Ir ; Pd ; Pt ; Rh ; Ru ; Te ; Sn in HCl 10 % / HNO3 1% Equivalent to Agilent Ref: 8500-6948

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ADR	IMDG	IATA	ADN	RID
14.4. Packing group				
III	III	III	III	III
14.5. Environmental hazards				
Dangerous for the environment: No	Dangerous for the environment: No Marine pollutant: No	Dangerous for the environment: No	Dangerous for the environment: No	Dangerous for the environment: No
No supplementary information available				

14.6. Special precautions for user

Overland transport

Classification code (ADR)	: C1
Special provisions (ADR)	: 520
Limited quantities (ADR)	: 5I
Excepted quantities (ADR)	: E1
Packing instructions (ADR)	: P001, IBC03, LP01, R001
Mixed packing provisions (ADR)	: MP19
Portable tank and bulk container instructions (ADR)	: T4
Portable tank and bulk container special provisions (ADR)	: TP1
Tank code (ADR)	: L4BN
Vehicle for tank carriage	: AT
Transport category (ADR)	: 3
Special provisions for carriage - Packages (ADR)	: V12
Hazard identification number (Kemler No.)	: 80
Orange plates	:

Tunnel restriction code (ADR)	: E
EAC code	: 2R

Transport by sea

Special provisions (IMDG)	: 223
Limited quantities (IMDG)	: 5 L
Excepted quantities (IMDG)	: E1
Packing instructions (IMDG)	: P001, LP01
IBC packing instructions (IMDG)	: IBC03
Tank instructions (IMDG)	: T4
Tank special provisions (IMDG)	: TP1
EmS-No. (Fire)	: F-A
EmS-No. (Spillage)	: S-B
Stowage category (IMDG)	: C

Air transport

PCA Excepted quantities (IATA)	: E1
PCA Limited quantities (IATA)	: Y841
PCA limited quantity max net quantity (IATA)	: 1L
PCA packing instructions (IATA)	: 852
PCA max net quantity (IATA)	: 5L

Multi-element calibration standard-3: 10 components; 10ug/ml each of Sb ; Au ; Hf ; Ir ; Pd ; Pt ; Rh ; Ru ; Te ; Sn in HCl 10 % / HNO3 1% Equivalent to Agilent Ref: 8500-6948

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CAO packing instructions (IATA)	: 856
CAO max net quantity (IATA)	: 60L
Special provisions (IATA)	: A3
ERG code (IATA)	: 8L

Inland waterway transport

Classification code (ADN)	: C1
Special provisions (ADN)	: 520
Limited quantities (ADN)	: 5 L
Excepted quantities (ADN)	: E1
Carriage permitted (ADN)	: T
Equipment required (ADN)	: PP, EP
Number of blue cones/lights (ADN)	: 0

Rail transport

Classification code (RID)	: C1
Special provisions (RID)	: 520
Limited quantities (RID)	: 5L
Excepted quantities (RID)	: E1
Packing instructions (RID)	: P001, IBC03, LP01, R001
Mixed packing provisions (RID)	: MP19
Portable tank and bulk container instructions (RID)	: T4
Portable tank and bulk container special provisions (RID)	: TP1
Tank codes for RID tanks (RID)	: L4BN
Transport category (RID)	: 3
Special provisions for carriage – Packages (RID)	: W12
Colis express (express parcels) (RID)	: CE8
Hazard identification number (RID)	: 80

14.7. Maritime transport in bulk according to IMO instruments

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

REACH Annex XVII (Restriction List)

EU restriction list (REACH Annex XVII)		
Reference code	Applicable on	Entry title or description
3(a)	nitric acid	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
3(b)	Multi-element calibration standard-3: 10 components; 10ug/ml each of Sb ; Au ; Hf ; Ir ; Pd ; Pt ; Rh ; Ru ; Te ; Sn in HCl 10 % / HNO3 1% Equivalent to Agilent Ref: 8500-6948 ; nitric acid ; hydrochloric acid ; hexafluoroantimonyic acid	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

Multi-element calibration standard-3: 10 components; 10ug/ml each of Sb ; Au ; Hf ; Ir ; Pd ; Pt ; Rh ; Ru ; Te ; Sn in HCl 10 % / HNO3 1% Equivalent to Agilent Ref: 8500-6948

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EU restriction list (REACH Annex XVII)		
Reference code	Applicable on	Entry title or description
3(c)	hexafluoroantimonic acid	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 class 4.1

REACH Annex XIV (Authorisation List)

Contains no substance(s) listed on REACH Annex XIV (Authorisation List)

REACH Candidate List (SVHC)

Contains no substance(s) listed on the REACH Candidate List

PIC Regulation (Prior Informed Consent)

Contains no substance(s) listed on the PIC list (Regulation EU 649/2012 concerning the export and import of hazardous chemicals)

POP Regulation (Persistent Organic Pollutants)

Contains no substance(s) listed on the POP list (Regulation EU 2019/1021 on persistent organic pollutants)

Ozone Regulation (1005/2009)

Contains no substance(s) listed on the Ozone Depletion list (Regulation EU 1005/2009 on substances that deplete the ozone layer)

Explosives Precursors Regulation (2019/1148)

Contains substance(s) listed on the Explosives Precursors list (Regulation EU 2019/1148 on the marketing and use of explosives precursors)

ANNEX I RESTRICTED EXPLOSIVES PRECURSORS

List of substances which shall not be made available to, or introduced, possessed or used by, members of the general public, whether on their own or in mixtures or substances that include those substances, unless the concentration is equal to or lower than the limit values set out in column 2, and for which suspicious transactions and significant disappearances and thefts are to be reported to the relevant national contact point within 24 hours.

Name	CAS-No.	Limit value	Upper limit value for licensing under Article 5(3)	Combined Nomenclature (CN) code for a separate chemically defined compound meeting the requirements of Note 1 to Chapter 28 or 29 of the CN, respectively	Combined Nomenclature code for mixture without constituents which would determine classification under another CN code
Nitric acid	7697-37-2	3 % w/w	10% w/w	ex 2808 00 00	ex 3824 99 96

Please see https://home-affairs.ec.europa.eu/policies/internal-security/counter-terrorism-and-radicalisation/protection/legislation-chemicals-used-home-made-explosives_en

Drug Precursors Regulation (273/2004)

Contains no substance(s) listed on the Drug Precursors list (Regulation EC 273/2004 on the manufacture and the placing on market of certain substances used in the illicit manufacture of narcotic drugs and psychotropic substances)

Multi-element calibration standard-3: 10 components; 10ug/ml each of Sb ; Au ; Hf ; Ir ; Pd ; Pt ; Rh ; Ru ; Te ; Sn in HCl 10 % / HNO3 1% Equivalent to Agilent Ref: 8500-6948

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15.1.2. National regulations

France

Occupational diseases	
Code	Description
RG 65	Eczematiform lesions of allergic mechanism
RG 66	Occupational rhinitis and asthma

Germany

Water hazard class (WGK)
Storage class (LGK, TRGS 510)
Joint storage table

: WGK 1, Slightly hazardous to water (Classification according to AwSV, Annex 1).
: LGK 8B - Non-combustible corrosive substances.

LGK 1	LGK 2A	LGK 2B	LGK 3	LGK 4.1A
LGK 4.1B	LGK 4.2	LGK 4.3	LGK 5.1A	LGK 5.1B
LGK 5.1C	LGK 5.2	LGK 6.1A	LGK 6.1B	LGK 6.1C
LGK 6.1D	LGK 6.2	LGK 7	LGK 8A	LGK 8B
LGK 10	LGK 11	LGK 12	LGK 13	LGK 10-13

Joint storage not permitted for
Joint storage with restrictions permitted for
Joint storage permitted for

: LGK 1, LGK 5.1A, LGK 5.2, LGK 6.2, LGK 7.
: LGK 4.1A, LGK 4.2, LGK 4.3, LGK 5.1C.
: LGK 2A, LGK 2B, LGK 3, LGK 4.1B, LGK 5.1B, LGK 6.1A, LGK 6.1B, LGK 6.1C, LGK 6.1D, LGK 8A, LGK 8B, LGK 10, LGK 11, LGK 12, LGK 13, LGK 10-13.

Hazardous Incident Ordinance (12. BImSchV)

: Is not subject of the Hazardous Incident Ordinance (12. BImSchV)

Netherlands

ABM category
SZW-lijst van kankerverwekkende stoffen
SZW-lijst van mutagene stoffen
SZW-lijst van reprotoxische stoffen – Borstvoeding
SZW-lijst van reprotoxische stoffen – Vruchtbaarheid
SZW-lijst van reprotoxische stoffen – Ontwikkeling

: B(4) - low hazard for aquatic organisms
: telluric acid, tetrafluorostannane are listed
: telluric acid, tetrafluorostannane are listed
: None of the components are listed
: None of the components are listed
: 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

15.2. Chemical safety assessment

No chemical safety assessment has been carried out

SECTION 16: Other information

Indication of changes			
Section	Changed item	Change	Comments
	Supersedes version of	Added	
	Revision date	Modified	
	Flammability	Modified	
2.2	Precautionary statements (CLP)	Modified	
8.2	Personal protective equipment	Modified	
15.1	REACH Annex XVII	Modified	

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Indication of changes			
Section	Changed item	Change	Comments
16	Abbreviations and acronyms	Added	

Abbreviations and acronyms:	
ADN	European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road
ATE	Acute Toxicity Estimate
BCF	Bioconcentration factor
BLV	Biological limit value
BOD	Biochemical oxygen demand (BOD)
COD	Chemical oxygen demand (COD)
DMEL	Derived Minimal Effect level
DNEL	Derived-No Effect Level
EC-No.	European Community number
EC50	Median effective concentration
EN	European Standard
IARC	International Agency for Research on Cancer
IATA	International Air Transport Association
IMDG	International Maritime Dangerous Goods
LC50	Median lethal concentration
LD50	Median lethal dose
LOAEL	Lowest Observed Adverse Effect Level
NOAEC	No-Observed Adverse Effect Concentration
NOAEL	No-Observed Adverse Effect Level
NOEC	No-Observed Effect Concentration
OECD	Organisation for Economic Co-operation and Development
OEL	Occupational Exposure Limit
PBT	Persistent Bioaccumulative Toxic
PNEC	Predicted No-Effect Concentration
RID	Regulations concerning the International Carriage of Dangerous Goods by Rail
SDS	Safety Data Sheet
STP	Sewage treatment plant
ThOD	Theoretical oxygen demand (ThOD)
TLM	Median Tolerance Limit
VOC	Volatile Organic Compounds
CAS-No.	Chemical Abstract Service number
N.O.S.	Not Otherwise Specified

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Abbreviations and acronyms:	
vPvB	Very Persistent and Very Bioaccumulative
ED	Endocrine disrupting properties

Full text of H- and EUH-statements:	
Acute Tox. 1 (Dermal)	Acute toxicity (dermal), Category 1
Acute Tox. 1 (Inhalation)	Acute toxicity (inhal.), Category 1
Acute Tox. 2 (Inhalation)	Acute toxicity (inhal.), Category 2
Acute Tox. 2 (Oral)	Acute toxicity (oral), Category 2
Acute Tox. 3 (Oral)	Acute toxicity (oral), Category 3
Acute Tox. 4 (Dermal)	Acute toxicity (dermal), Category 4
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
Aquatic Chronic 2	Hazardous to the aquatic environment – Chronic Hazard, Category 2
Aquatic Chronic 4	Hazardous to the aquatic environment – Chronic Hazard, Category 4
Eye Dam. 1	Serious eye damage/eye irritation, Category 1
Eye Irrit. 2	Serious eye damage/eye irritation, Category 2
H271	May cause fire or explosion; strong oxidiser.
H272	May intensify fire; oxidiser.
H290	May be corrosive to metals.
H300	Fatal if swallowed.
H301	Toxic if swallowed.
H302	Harmful if swallowed.
H310	Fatal in contact with skin.
H312	Harmful in contact with skin.
H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H330	Fatal if inhaled.
H332	Harmful if inhaled.
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H335	May cause respiratory irritation.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.

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Full text of H- and EUH-statements:	
H411	Toxic to aquatic life with long lasting effects.
H413	May cause long lasting harmful effects to aquatic life.
Met. Corr. 1	Corrosive to metals, Category 1
Ox. Liq. 2	Oxidising Liquids, Category 2
Ox. Liq. 3	Oxidising Liquids, Category 3
Ox. Sol. 1	Oxidising Solids, Category 1
Resp. Sens. 1	Respiratory sensitisation, Category 1
Skin Corr. 1A	Skin corrosion/irritation, Category 1, Sub-Category 1A
Skin Corr. 1B	Skin corrosion/irritation, Category 1, Sub-Category 1B
Skin Irrit. 2	Skin corrosion/irritation, Category 2
Skin Sens. 1	Skin sensitisation, Category 1
STOT RE Not classified	Specific target organ toxicity (repeated exposure) Not classified
STOT SE 3	Specific target organ toxicity – Single exposure, Category 3, Respiratory tract irritation

Classification and procedure used to derive the classification for mixtures according to Regulation (EC) 1272/2008 [CLP]:		
Met. Corr. 1	H290	On basis of test data
Skin Irrit. 2	H315	Calculation method
Eye Irrit. 2	H319	Calculation method
STOT SE 3	H335	Calculation method

Safety Data Sheet (SDS), EU

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.