

Printing date 03/29/2019 Reviewed on 03/29/2019

1 Identification

· Product identifier

· Trade name: EPA Method 200.7 Calibration Standard 6

· Article number: ICP-200.7-6-A

Details of the supplier of the safety data sheet

· Manufacturer/Supplier: High-Purity Standards

P.O. Box 41727

Charleston, SC 29423

Telephone: (843) 767-7900 FAX: (843) 767-7906

· Information department: Product safety department

· Emergency telephone number:

INFOTRAC

Emergency telephone numbers 1-800-535-5053

Other emergency telephone numbers 1-352-323-3500

2 Hazard(s) identification

· Classification of the substance or mixture



GHS05 Corrosion

Met. Corr.1 H290 May be corrosive to metals.

Skin Corr. 1A H314 Causes severe skin burns and eye damage.

Eye Dam. 1 H318 Causes serious eye damage.



GHS07

Acute Tox. 4 H312 Harmful in contact with skin.

- · Label elements
- · GHS label elements The product is classified and labeled according to the Globally Harmonized System (GHS).
- · Hazard pictograms





GHS05

GHS07

- · Signal word Danger
- · Hazard-determining components of labeling:

nitric acid

Hydrofluoric acid

· Hazard statements

H290 May be corrosive to metals.

H312 Harmful in contact with skin.

H314 Causes severe skin burns and eye damage.

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· Precautionary statements

Keep only in original container.

Do not breathe dusts or mists.

Wash thoroughly after handling.

Wear protective gloves/protective clothing/eye protection/face protection.

If swallowed: Rinse mouth. Do NOT induce vomiting.

If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.

IF INHALED: Remove person to fresh air and keep comfortable for breathing.

If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.

Continue rinsing.

Immediately call a poison center/doctor.

Specific treatment (see on this label).

Take off contaminated clothing and wash it before reuse.

Wash contaminated clothing before reuse.

Absorb spillage to prevent material damage.

Store locked up.

Store in corrosive resistant container with a resistant inner liner.

Dispose of contents/container in accordance with local/regional/national/international regulations.

- · Classification system:
- · NFPA ratings (scale 0 4)



Health = 3Fire = 0Reactivity = 0

· HMIS-ratings (scale 0 - 4)



Fire = 0

- · Other hazards
- · Results of PBT and vPvB assessment
- · **PBT:** Not applicable.
- · vPvB: Not applicable.

3 Composition/information on ingredients

- · Chemical characterization: Mixtures
- · **Description:** Mixture of the substances listed below with nonhazardous additions.

· Dangerous	components:	
7697-37-2	nitric acid	2.0%
· Chemical id	entification of the substance/preparation	
	Hydrofluoric acid	0.49%
513-77-9	barium carbonate	0.002%
	beryllium acetate	0.002%
10043-35-3	boric acid	0.002%
471-34-1	calcium carbonate	0.002%
	(Con	td. on page 3)



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7440-43-9 cadmium (non-pyrophoric)	(Contd. of page 0.002%
7440-47-3 chromium	
	0.002%
7440-48-4 cobalt	0.002%
7440-50-8 copper	0.002%
7439-89-6 iron	0.002%
7439-92-1 lead	0.002%
554-13-2 lithium carbonate	0.002%
7439-95-4 magnesium	0.002%
6156-78-1 Manganese(II) acetate tetrahydrate	0.002%
7439-98-7 molybdenum	0.0029
7440-02-0 nickel	0.0029
7722-76-1 Ammonium dihydrogenphosphate	0.002%
7757-79-1 potassium nitrate	0.0029
7782-49-2 selenium	0.0029
16919-19-0 ammonium hexafluorosilicate	0.002%
7440-22-4 silver	0.0029
497-19-8 sodium carbonate	0.002%
10042-76-9 strontium nitrate	0.002%
7440-28-0 thallium	0.002%
7440-31-5 tin	0.002%
7803-55-6 Ammonium Vanadate	0.002%
7440-66-6 zinc	0.0029
7440-36-0 antimony	0.0029
7440-38-2 arsenic	0.0029
7429-90-5 aluminium	0.002%
7732-18-5 water, distilled, conductivity or of similar purity	97.4529

4 First-aid measures

- · Description of first aid measures
- · General information:

Immediately remove any clothing soiled by the product.

Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.

- · After inhalation: In case of unconsciousness place patient stably in side position for transportation.
- · After skin contact: Immediately wash with water and soap and rinse thoroughly.
- · After eye contact: Rinse opened eye for several minutes under running water. Then consult a doctor.
- After swallowing: Drink copious amounts of water and provide fresh air. Immediately call a doctor.
- · Information for doctor:
- · Most important symptoms and effects, both acute and delayed No further relevant information available.

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· Indication of any immediate medical attention and special treatment needed No further relevant information available.

5 Fire-fighting measures

- · Extinguishing media
- · Suitable extinguishing agents: Use fire fighting measures that suit the environment.
- · Special hazards arising from the substance or mixture

During heating or in case of fire poisonous gases are produced.

- · Advice for firefighters
- · Protective equipment: Mouth respiratory protective device.

6 Accidental release measures

· Personal precautions, protective equipment and emergency procedures

Mount respiratory protective device.

Wear protective equipment. Keep unprotected persons away.

- Environmental precautions: Do not allow to enter sewers/ surface or ground water.
- · Methods and material for containment and cleaning up:

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).

Use neutralizing agent.

Dispose contaminated material as waste according to item 13.

Ensure adequate ventilation.

· Reference to other sections

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

· Protective Action Criteria for Chemicals

PAC-1:		
7697-37-2	nitric acid	0.16 ppm
7664-39-3	Hydrofluoric acid	1.0 ppm
513-77-9	barium carbonate	2.2 mg/m^3
10043-35-3	boric acid	6 mg/m ³
471-34-1	calcium carbonate	45 mg/m^3
7440-43-9	cadmium (non-pyrophoric)	0.10 mg/m
7440-47-3	chromium	1.5 mg/m^3
7440-48-4	cobalt	0.18 mg/m
7440-50-8	copper	$3 mg/m^3$
7439-89-6	iron	3.2 mg/m^3
7439-92-1	lead	0.15 mg/m
554-13-2	lithium carbonate	3.1 mg/m^3
7439-95-4	magnesium	18 mg/m³
6156-78-1	Manganese(II) acetate tetrahydrate	13 mg/m^3
7439-98-7	molybdenum	30 mg/m ³
7440-02-0	nickel	4.5 mg/m^3



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7711 76 1	Ammonium dihaduogarahasahata	(Contd. of pag
	Ammonium dihydrogenphosphate	17 mg/m
	potassium nitrate	9 mg/m^3
7782-49-2		0.6 mg/m
	ammonium hexafluorosilicate	12 mg/m
7440-22-4		0.3 mg/m
	sodium carbonate	7.6 mg/m
	strontium nitrate	5.7 mg/m
7440-28-0		0.06 mg/s
7440-31-5		6 mg/m^3
7803-55-6	Ammonium Vanadate	0.01 mg/s
7440-66-6	zinc	6 mg/m ³
7440-36-0	antimony	1.5 mg/m
7440-38-2	arsenic	1.5 mg/m
· PAC-2:		
7697-37-2	nitric acid	24 ppm
7664-39-3	Hydrofluoric acid	24 ppm
513-77-9	barium carbonate	270 mg/r
10043-35-3	boric acid	23 mg/m
471-34-1	calcium carbonate	210 mg/n
7440-43-9	cadmium (non-pyrophoric)	0.76 mg/
	chromium	17 mg/m
7440-48-4	cobalt	$2 mg/m^3$
7440-50-8	copper	33 mg/m
7439-89-6	**	35 mg/m
7439-92-1	lead	120 mg/n
554-13-2	lithium carbonate	34 mg/m
7439-95-4	magnesium	200 mg/r
	Manganese(II) acetate tetrahydrate	22 mg/m
	molybdenum	330 mg/r
7440-02-0		50 mg/m
	Ammonium dihydrogenphosphate	190 mg/n
	potassium nitrate	100 mg/r
7782-49-2	 	6.6 mg/m
	ammonium hexafluorosilicate	130 mg/n
7440-22-4	, and the second	170 mg/r
	sodium carbonate	83 mg/m
	strontium nitrate	62 mg/m
7440-28-0		3.3 mg/m
7440-31-5		67 mg/m
	Ammonium Vanadate	0.11 mg/m



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7110 66 6	-in a	(Contd. of pag
7440-66-6		21 mg/m
7440-36-0	•	13 mg/m
7440-38-2	arsenic	17 mg/m ⁻
PAC-3:		
7697-37-2	nitric acid	92 ppm
7664-39-3	Hydrofluoric acid	44 ppm
513-77-9	barium carbonate	1,600 mg/s
10043-35-3	boric acid	830 mg/m
471-34-1	calcium carbonate	1,300 mg/s
7440-43-9	cadmium (non-pyrophoric)	4.7 mg/m³
7440-47-3	chromium	99 mg/m³
7440-48-4	cobalt	20 mg/m³
7440-50-8	copper	200 mg/m
7439-89-6	iron	150 mg/m
7439-92-1	lead	700 mg/m
554-13-2	lithium carbonate	210 mg/m
	magnesium	1,200 mg/s
	Manganese(II) acetate tetrahydrate	740 mg/m
7439-98-7	molybdenum	2,000 mg/s
7440-02-0	nickel	99 mg/m³
7722-76-1	Ammonium dihydrogenphosphate	1,100 mg/s
7757-79-1	potassium nitrate	600 mg/m
7782-49-2	selenium	40 mg/m³
16919-19-0	ammonium hexafluorosilicate	780 mg/m
7440-22-4	silver	990 mg/m
497-19-8	sodium carbonate	500 mg/m
10042-76-9	strontium nitrate	370 mg/m
7440-28-0	thallium	20 mg/m^3
7440-31-5	tin	400 mg/m
7803-55-6	Ammonium Vanadate	80 mg/m^3
7440-66-6	zinc	120 mg/m
7440-36-0	antimony	80 mg/m^3
7440-38-2	arsenic	100 mg/m

7 Handling and storage

- · Handling:
- · Precautions for safe handling

Ensure good ventilation/exhaustion at the workplace.

Prevent formation of aerosols.

· Information about protection against explosions and fires: Keep respiratory protective device available.

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- · Conditions for safe storage, including any incompatibilities
- · Storage:
- Requirements to be met by storerooms and receptacles: No special requirements.
- · Information about storage in one common storage facility: Not required.
- · Further information about storage conditions: Keep receptacle tightly sealed.
- · Specific end use(s) No further relevant information available.

8 Exposure controls/personal protection

- · Additional information about design of technical systems: No further data; see item 7.
- · Control parameters
- · Components with limit values that require monitoring at the workplace:

7697-37-2 nitric acid

PEL Long-term value: 5 mg/m³, 2 ppm
REL Short-term value: 10 mg/m³, 4 ppm
Long-term value: 5 mg/m³, 2 ppm
TLV Short-term value: 10 mg/m³, 4 ppm
Long-term value: 5.2 mg/m³, 2 ppm

- · Additional information: The lists that were valid during the creation were used as basis.
- · Exposure controls
- · Personal protective equipment:
- · General protective and hygienic measures:

Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing.

Wash hands before breaks and at the end of work.

Avoid contact with the eyes.

Avoid contact with the eyes and skin.

· Breathing equipment:

In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.

· Protection of hands:



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

· Material of gloves

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

· Penetration time of glove material

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

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· Eye protection:



Tightly sealed goggles

Information on basic physical and of	chemical properties
General Information	
Appearance: Form:	Liquid
Color:	Colorless
Odor:	Characteristic
Odor threshold:	Not determined.
pH-value:	Not determined.
Change in condition	
Melting point/Melting range:	Undetermined.
Boiling point/Boiling range:	100 °C (212 °F)
Flash point:	Not applicable.
Flammability (solid, gaseous):	Not applicable.
Decomposition temperature:	Not determined.
Auto igniting:	Product is not selfigniting.
Danger of explosion:	Product does not present an explosion hazard.
Explosion limits:	
Lower:	Not determined.
Upper:	Not determined.
Vapor pressure at 20 °C (68 °F):	23 hPa (17.3 mm Hg)
Density:	Not determined.
Relative density	Not determined.
Vapor density	Not determined.
Evaporation rate	Not determined.
Solubility in / Miscibility with	
Water:	Not miscible or difficult to mix.
Partition coefficient (n-octanol/wate	er): Not determined.
Viscosity:	
Dynamic:	Not determined.
Kinematic:	Not determined.

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VOC content:	0.00 % 0.0 g/l / 0.00 lb/gal	
Solids content: Other information	0.1% No further relevant information available.	

10 Stability and reactivity

- · Reactivity No further relevant information available.
- · Chemical stability
- Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications.
- · Possibility of hazardous reactions No dangerous reactions known.
- · Conditions to avoid No further relevant information available.
- · Incompatible materials: No further relevant information available.
- · Hazardous decomposition products: No dangerous decomposition products known.

11 Toxicological information

- · Information on toxicological effects
- · Acute toxicity:

Treme tomes	·y•
LD/LC50 values that are relevant for classification:	
7664-39-3 F	Hydrofluoric acid
Oral LD50	1,276 mg/kg (rat)

- · Primary irritant effect:
- on the skin: Strong caustic effect on skin and mucous membranes.
- on the eye:

Strong caustic effect.

Strong irritant with the danger of severe eye injury.

- · Sensitization: No sensitizing effects known.
- · Additional toxicological information:

The product shows the following dangers according to internally approved calculation methods for preparations: Harmful

Corrosive

Irritant

Swallowing will lead to a strong caustic effect on mouth and throat and to the danger of perforation of esophagus and stomach.

· Carcinogenic categories

· IARC (Inte	· IARC (International Agency for Research on Cancer)		
543-81-7	beryllium acetate	1	
7440-43-9	cadmium (non-pyrophoric)	1	
7440-47-3	chromium	3	
7440-48-4		2B	
7439-92-1	lead	2B	
7440-02-0		2B	
7782-49-2	selenium	3	

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		(Contd. of page
7440-38-2	arsenic	1
· NTP (Natio	onal Toxicology Program)	
543-81-7	beryllium acetate	K
7440-43-9	cadmium (non-pyrophoric)	K
7440-48-4	cobalt	R
7439-92-1	lead	R
7440-02-0	nickel	R
7440-38-2	arsenic	K
· OSHA-Ca	(Occupational Safety & Health Administration)	
7440-43-9	cadmium (non-pyrophoric)	
7440-38-2	arsenic	

12 Ecological information

- · Toxicity
- · Aquatic toxicity: No further relevant information available.
- · Persistence and degradability No further relevant information available.
- · Behavior in environmental systems:
- · Bioaccumulative potential No further relevant information available.
- · Mobility in soil No further relevant information available.
- · Additional ecological information:
- · General notes:

Water hazard class 1 (Self-assessment): slightly hazardous for water

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system. Must not reach bodies of water or drainage ditch undiluted or unneutralized.

- · Results of PBT and vPvB assessment
- · **PBT:** Not applicable.
- · vPvB: Not applicable.
- · Other adverse effects No further relevant information available.

13 Disposal considerations

- · Waste treatment methods
- · Recommendation:

Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

- · Uncleaned packagings:
- · Recommendation: Disposal must be made according to official regulations.

14 Transport information

- · UN-Number
- · **DOT**, **ADR**, **IMDG**, **IATA** UN3264

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	(Contd. of page
UN proper shipping name	
DOT	Corrosive liquid, acidic, inorganic, n.o.s. (Nitric acid, Hydrog
	fluoride)
ADR	3264 Corrosive liquid, acidic, inorganic, n.o.s. (Nitric ac
	Hydrogen fluoride)
IMDG, IATA	CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (NITE
,	ACID, HYDROGEN FLUORIDE)
Transport hazard class(es)	
DOT	
<i></i>	
CORROSIVE	
8	
*	
Class	8 Corrosive substances
Label	8
ADR, IMDG, IATA	
À	
8	
Class	8 Corrosive substances
Label	8
Packing group	111
DOT, ADR, IMDG, IATA	III
Environmental hazards:	Not applicable.
Special precautions for user	Warning: Corrosive substances
Danger code (Kemler):	80
EMS Number:	F- A , S - B
Segregation groups	Acids
Stowage Category	A
Stowage Code	SW2 Clear of living quarters.
Transport in bulk according to Anne.	x II of
MARPOL73/78 and the IBC Code	Not applicable.
Transport/Additional information:	
DOT Quantity limitations	On passenger aircraft/rail: 5 L
Lummy anamons	On cargo aircraft only: 60 L
	On cargo aircraft only. 00 L
ADR	C-1 E1
Excepted quantities (EQ)	Code: E1
	Maximum net quantity per inner packaging: 30 ml
	Maximum net quantity per outer packaging: 1000 ml



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· IMDG · Limited quantities (LQ) · Excepted quantities (EQ)	5L Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml
· UN "Model Regulation":	UN 3264 CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (NITRIC ACID, HYDROGEN FLUORIDE), 8, III

15 Regulat	000 100	OVMOU	1010
13 Alexandri			www

Section 355	(extremely hazardous substances):	
7697-37-2	nitric acid	
7664-39-3	Hydrofluoric acid	
Section 313	(Specific toxic chemical listings):	
7697-37-2	nitric acid	
7664-39-3	Hydrofluoric acid	
513-77-9	barium carbonate	
543-81-7	beryllium acetate	
7440-43-9	cadmium (non-pyrophoric)	
7440-47-3	chromium	
7440-48-4	cobalt	
7440-50-8	copper	
7439-92-1	lead	
554-13-2	lithium carbonate	
7440-02-0	nickel	
7757-79-1	potassium nitrate	
7782-49-2	selenium	
7440-22-4	silver	
10042-76-9	strontium nitrate	
7440-28-0	thallium	
7803-55-6	Ammonium Vanadate	
7440-66-6	zinc	
7440-36-0	antimony	
7440-38-2	arsenic	
7429-90-5	aluminium	
TSCA (Toxi	ic Substances Control Act):	
7697-37-2	nitric acid	
7664-39-3	Hydrofluoric acid	



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512 77 0	(Contd. of page 1
	barium carbonate
10043-35-3	
	calcium carbonate
	cadmium (non-pyrophoric)
	chromium
7440-48-4	
7440-50-8	**
7439-89-6	
7439-92-1	
554-13-2	lithium carbonate
	magnesium
	molybdenum
7440-02-0	nickel
7722-76-1	Ammonium dihydrogenphosphate
7757-79-1	potassium nitrate
7782-49-2	selenium
16919-19-0	ammonium hexafluorosilicate
7440-22-4	silver
497-19-8	sodium carbonate
10042-76-9	strontium nitrate
7440-28-0	thallium
7440-31-5	tin
7803-55-6	Ammonium Vanadate
7440-66-6	zinc
7440-36-0	antimony
7440-38-2	·
7429-90-5	aluminium
	water, distilled, conductivity or of similar purity
Proposition	
-	known to cause cancer:
	beryllium acetate
	cadmium (non-pyrophoric)
7440-48-4	
7439-92-1	
7440-02-0	
7440-38-2	
	known to cause reproductive toxicity for females:
7439-92-1	* * * *
	known to cause reproductive toxicity for males:
7440-43-9	cadmium (non-pyrophoric)
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7420 02 1	1	(Contd. of page
7439-92-1 l		
	nown to cause developmental toxicity:	
	cadmium (non-pyrophoric)	
7439-92-1 l		
554-13-2 l	ithium carbonate	
Carcinogen	ic categories	
EPA (Envir	onmental Protection Agency) (Substances not listed)	
7697-37-2	nitric acid	
7664-39-3	Hydrofluoric acid	
543-81-7	beryllium acetate	
471-34-1	calcium carbonate	
7440-48-4	cobalt	
7439-89-6	iron	
554-13-2	lithium carbonate	
7439-95-4	magnesium	
6156-78-1	Manganese(II) acetate tetrahydrate	
7439-98-7	molybdenum	
7440-02-0	nickel	
7722-76-1	Ammonium dihydrogenphosphate	
	potassium nitrate	
16919-19-0	ammonium hexafluorosilicate	
497-19-8	sodium carbonate	
10042-76-9	strontium nitrate	
7440-28-0	thallium	
7440-31-5	tin	
7803-55-6	Ammonium Vanadate	
7440-36-0	antimony	
	aluminium	
7732-18-5	water, distilled, conductivity or of similar purity	
TLV (Thres	hold Limit Value established by ACGIH)	
	barium carbonate	1
10043-35-3	boric acid	1
	cadmium (non-pyrophoric)	1
7440-47-3		2
7440-48-4		2
7439-92-1	lead	1
7439-98-7	molybdenum	2
7440-02-0		2
7440-38-2	arsenic	1
7.130.00.5	aluminium	



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· NIOSH-Ca (National Institute for Occupational Safety and Health)

7440-43-9 cadmium (non-pyrophoric)

7440-02-0 nickel

7440-38-2 arsenic

- GHS label elements The product is classified and labeled according to the Globally Harmonized System (GHS).
- · Hazard pictograms





GHS05 GHS07

- · Signal word Danger
- · Hazard-determining components of labeling:

nitric acid

Hvdrofluoric acid

· Hazard statements

H290 May be corrosive to metals.

H312 Harmful in contact with skin.

H314 Causes severe skin burns and eye damage.

· Precautionary statements

Keep only in original container.

Do not breathe dusts or mists.

Wash thoroughly after handling.

Wear protective gloves/protective clothing/eye protection/face protection.

If swallowed: Rinse mouth. Do NOT induce vomiting.

If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.

IF INHALED: Remove person to fresh air and keep comfortable for breathing.

If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Immediately call a poison center/doctor.

Specific treatment (see on this label).

Take off contaminated clothing and wash it before reuse.

Wash contaminated clothing before reuse.

Absorb spillage to prevent material damage.

Store locked up.

Store in corrosive resistant container with a resistant inner liner.

Dispose of contents/container in accordance with local/regional/national/international regulations.

· Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

- · Department issuing SDS: Environment protection department.
- · Contact:

High-Purity Standards Tel: 843-767-7900 Fax: 843-767-7906



Reviewed on 03/29/2019 Printing date 03/29/2019

Trade name: EPA Method 200.7 Calibration Standard 6

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· Date of preparation / last revision 03/29/2019 / -

· Abbreviations and acronyms:

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International

Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

ACGIH: American Conference of Governmental Industrial Hygienists

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

NFPA: National Fire Protection Association (USA)

HMIS: Hazardous Materials Identification System (USA)

VOC: Volatile Organic Compounds (USA, EU)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

NIOSH: National Institute for Occupational Safety

OSHA: Occupational Safety & Health

TLV: Threshold Limit Value

PEL: Permissible Exposure Limit

REL: Recommended Exposure Limit

Met. Corr.1: Corrosive to metals – Category 1

Acute Tox. 4: Acute toxicity - Category 4

Skin Corr. 1A: Skin corrosion/irritation - Category 1A

Eye Dam. 1: Serious eye damage/eye irritation – Category 1



Printing date 03/29/2019 Reviewed on 03/29/2019

1 Identification

· Product identifier

· Trade name: EPA Method 200.7 Calibration Standard 6

· Article number: ICP-200.7-6-B

Details of the supplier of the safety data sheet

· Manufacturer/Supplier: High-Purity Standards

P.O. Box 41727

Charleston, SC 29423 Telephone: (843) 767-7900

FAX: (843) 767-7906

· Information department: Product safety department

· Emergency telephone number:

INFOTRAC

Emergency telephone numbers 1-800-535-5053 Other emergency telephone numbers 1-352-323-3500

2 Hazard(s) identification

· Classification of the substance or mixture



GHS08 Health hazard

Repr. 1A H360 May damage fertility or the unborn child.



GHS05 Corrosion

Met. Corr.1 H290 May be corrosive to metals.

Skin Corr. 1A H314 Causes severe skin burns and eye damage.

Eye Dam. 1 H318 Causes serious eye damage.

- · Label elements
- · GHS label elements The product is classified and labeled according to the Globally Harmonized System (GHS).
- · Hazard pictograms





GHS05 GHS08

- · Signal word Danger
- · Hazard-determining components of labeling:

nitric acid

mercury

· Hazard statements

H290 May be corrosive to metals.

H314 Causes severe skin burns and eye damage.

H360 May damage fertility or the unborn child.

(Contd. on page 2)



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· Precautionary statements

Obtain special instructions before use.

Do not handle until all safety precautions have been read and understood.

Keep only in original container.

Do not breathe dusts or mists.

Wash thoroughly after handling.

Wear protective gloves/protective clothing/eye protection/face protection.

If swallowed: Rinse mouth. Do NOT induce vomiting.

If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.

IF INHALED: Remove person to fresh air and keep comfortable for breathing.

If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.

Continue rinsing.

Immediately call a poison center/doctor.

IF exposed or concerned: Get medical advice/attention.

Specific treatment (see on this label).

Wash contaminated clothing before reuse.

Absorb spillage to prevent material damage.

Store locked up.

Store in corrosive resistant container with a resistant inner liner.

Dispose of contents/container in accordance with local/regional/national/international regulations.

- · Classification system:
- NFPA ratings (scale 0 4)



Health = 3 Fire = 0 Reactivity = 0

· HMIS-ratings (scale 0 - 4)



- · Other hazards
- · Results of PBT and vPvB assessment
- · **PBT:** Not applicable.
- · vPvB: Not applicable.

3 Composition/information on ingredients

- · Chemical characterization: Mixtures
- · Description: Mixture of the substances listed below with nonhazardous additions.

· Dangerous components:		
7697-37-2 nitric acid	5.0%	
7439-97-6 mercury	0.1%	

· Chemical identification of the substance/preparation

7732-18-5 water, distilled, conductivity or of similar purity

94.9% ______



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4 First-aid measures

- · Description of first aid measures
- General information: Immediately remove any clothing soiled by the product.
- · After inhalation: In case of unconsciousness place patient stably in side position for transportation.
- · After skin contact: Immediately wash with water and soap and rinse thoroughly.
- After eye contact: Rinse opened eye for several minutes under running water. Then consult a doctor.
- · After swallowing: Drink copious amounts of water and provide fresh air. Immediately call a doctor.
- · Information for doctor:
- Most important symptoms and effects, both acute and delayed No further relevant information available.
- · Indication of any immediate medical attention and special treatment needed

No further relevant information available.

5 Fire-fighting measures

- Extinguishing media
- · Suitable extinguishing agents: Use fire fighting measures that suit the environment.
- · Special hazards arising from the substance or mixture

During heating or in case of fire poisonous gases are produced.

- Advice for firefighters
- · Protective equipment: Mouth respiratory protective device.

6 Accidental release measures

· Personal precautions, protective equipment and emergency procedures

Mount respiratory protective device.

Wear protective equipment. Keep unprotected persons away.

· Environmental precautions:

Dilute with plenty of water.

Do not allow to enter sewers/surface or ground water.

· Methods and material for containment and cleaning up:

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).

Use neutralizing agent.

Dispose contaminated material as waste according to item 13.

Ensure adequate ventilation.

· Reference to other sections

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

· Protective Action Criteria for Chemicals

PAC-1:	
7697-37-2 nitric acid	0.16 ppm
7439-97-6 mercury	0.15 mg/m^{3}
PAC-2:	
7697-37-2 nitric acid	24 ppm
7439-97-6 mercury	1.7 mg/m ³
•	(Contd. on page



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· PAC-3:		
7697-37-2	nitric acid	92 ppm
7439-97-6	mercury	8.9 mg/m^3

7 Handling and storage

- · Handling:
- · Precautions for safe handling

Ensure good ventilation/exhaustion at the workplace.

Open and handle receptacle with care.

Prevent formation of aerosols.

- · Information about protection against explosions and fires: Keep respiratory protective device available.
- · Conditions for safe storage, including any incompatibilities
- · Storage:
- · Requirements to be met by storerooms and receptacles: No special requirements.
- · Information about storage in one common storage facility: Not required.
- · Further information about storage conditions: Keep receptacle tightly sealed.
- · Specific end use(s) No further relevant information available.

8 Exposure controls/personal protection

- · Additional information about design of technical systems: No further data; see item 7.
- · Control parameters

as Hg; Skin; BEI

Cont	· Control parameters		
· Components with limit values that require monitoring at the workplace:			
7697-37-2 nitric acid			
PEL	Long-term value: 5 mg/m³, 2 ppm		
REL	Short-term value: 10 mg/m³, 4 ppm Long-term value: 5 mg/m³, 2 ppm		
TLV	Short-term value: 10 mg/m³, 4 ppm Long-term value: 5.2 mg/m³, 2 ppm		
7439	7439-97-6 mercury		
PEL	Long-term value: 0.1 mg/m³ as Hg; see OSHA standard interpretation memo		
REL	Long-term value: 0.05* mg/m³ Ceiling limit value: 0.1 mg/m³ as Hg; *Vapor; Skin		
TLV	Long-term value: 0.025 mg/m³		

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Ingredients with biological limit values:

7439-97-6 mercury

BEI 35 μg/g creatinine

Medium: urine Time: prior to shift

Parameter: Total inorganic mercury (background

15 μg/L

Medium: blood

Time: end of shift at end of workweek

Parameter: Total inorganic mercury (background)

- · Additional information: The lists that were valid during the creation were used as basis.
- · Exposure controls
- · Personal protective equipment:
- · General protective and hygienic measures:

Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing.

Wash hands before breaks and at the end of work.

Store protective clothing separately.

Avoid contact with the eyes.

Avoid contact with the eyes and skin.

Breathing equipment:

In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.

· Protection of hands:



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

· Material of gloves

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

· Penetration time of glove material

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

· Eve protection:



Tightly sealed goggles



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Information on basic physical and c General Information	themical properties
Appearance:	
Form:	Liquid
Color:	Colorless
Odor:	Characteristic
Odor threshold:	Not determined.
pH-value:	Not determined.
Change in condition	
Melting point/Melting range:	Undetermined.
Boiling point/Boiling range:	83 °C (181.4 °F)
Flash point:	Not applicable.
Flammability (solid, gaseous):	Not applicable.
Decomposition temperature:	Not determined.
Auto igniting:	Product is not selfigniting.
Danger of explosion:	Product does not present an explosion hazard.
Explosion limits:	
Lower:	Not determined.
Upper:	Not determined.
Vapor pressure at 20 °C (68 °F):	23 hPa (17.3 mm Hg)
Density at 20 °C (68 °F):	1.03769 g/cm³ (8.65952 lbs/gal)
Bulk density:	$1,038 \text{ kg/m}^3$
Relative density	Not determined.
Vapor density	Not determined.
Evaporation rate	Not determined.
Solubility in / Miscibility with	
Water:	Fully miscible.
Partition coefficient (n-octanol/wate	er): Not determined.
Viscosity:	
Dynamic:	Not determined.
Kinematic:	Not determined.
Solvent content:	
Water:	94.9 %
VOC content:	0.00 %
, oc comem.	0.00 // 0.0 g/l / 0.00 lb/gal
Solids content:	0.0 %
Other information	No further relevant information available.



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(Contd. of page 6)

10 Stability and reactivity

- · Reactivity No further relevant information available.
- · Chemical stability
- Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications.
- · Possibility of hazardous reactions No dangerous reactions known.
- · Conditions to avoid No further relevant information available.
- · Incompatible materials: No further relevant information available.
- · Hazardous decomposition products: No dangerous decomposition products known.

11 Toxicological information

- · Information on toxicological effects
- · Acute toxicity:
- · Primary irritant effect:
- on the skin: Strong caustic effect on skin and mucous membranes.
- on the eye:

Strong caustic effect.

Strong irritant with the danger of severe eye injury.

- · Sensitization: No sensitizing effects known.
- · Additional toxicological information:

The product shows the following dangers according to internally approved calculation methods for preparations: Corrosive

Irritant

Swallowing will lead to a strong caustic effect on mouth and throat and to the danger of perforation of esophagus and stomach.

· Carcinogenic categories

· IARC (International Agency for Research on Cancer)

7439-97-6 mercury

3

· NTP (National Toxicology Program)

None of the ingredients is listed.

· OSHA-Ca (Occupational Safety & Health Administration)

None of the ingredients is listed.

12 Ecological information

- · Toxicity
- · Aquatic toxicity: No further relevant information available.
- · Persistence and degradability No further relevant information available.
- Behavior in environmental systems:
- · Bioaccumulative potential No further relevant information available.
- · Mobility in soil No further relevant information available.
- · Additional ecological information:
- · General notes:

Water hazard class 1 (Self-assessment): slightly hazardous for water

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system. Must not reach bodies of water or drainage ditch undiluted or unneutralized.

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Trade name: EPA Method 200.7 Calibration Standard 6

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- · Results of PBT and vPvB assessment
- · **PBT:** Not applicable. · **vPvB:** Not applicable.
- · Other adverse effects No further relevant information available.

13 Disposal considerations

- · Waste treatment methods
- · Recommendation:

Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

- · Uncleaned packagings:
- · Recommendation: Disposal must be made according to official regulations.
- · Recommended cleansing agent: Water, if necessary with cleansing agents.

UN-Number	
DOT, ADR, IMDG, IATA	UN3264
UN proper shipping name	
DOT	Corrosive liquid, acidic, inorganic, n.o.s. (Nitric acid)
ADR	3264 Corrosive liquid, acidic, inorganic, n.o.s. (Nitric acid)
IMDG, IATA	CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (NITRACID)
Transport hazard class(es)	
DOT	
CORROSIVE	
Class	8 Corrosive substances
Label	8
ADR, IMDG, IATA	
Class	8 Corrosive substances
Label	8
Packing group	
DOT, ADR, IMDG, IATA	III
Environmental hazards:	Not applicable.
Special precautions for user	Warning: Corrosive substances
Danger code (Kemler):	80



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		(Contd. of page
EMS Number:	F-A,S-B	
Segregation groups	Acids	
Stowage Category	A	
Stowage Code	SW2 Clear of living quarters.	
Transport in bulk according to Annex II of	•	
MARPOL73/78 and the IBC Code	Not applicable.	
Transport/Additional information:		
DOT		
Quantity limitations	On passenger aircraft/rail: 5 L	
	On cargo aircraft only: 60 L	
ADR		
Excepted quantities (EQ)	Code: E1	
	Maximum net quantity per inner packaging: 30 ml	
	Maximum net quantity per outer packaging: 1000 ml	
IMDG		
Limited quantities (LQ)	5L	
Excepted quantities (EQ)	Code: E1	
	Maximum net quantity per inner packaging: 30 ml	
	${\it Maximum\ net\ quantity\ per\ outer\ packaging:\ 1000\ ml}$	
UN "Model Regulation":	UN 3264 CORROSIVE LIQUID, ACIDIC, INORG (NITRIC ACID), 8, III	GANIC, N.O.

15 Regulatory information

- Safety, health and environmental regulations/legislation specific for the substance or mixture
- · Sara

	~	
· Section 355 (extremely hazardous substances):		5 (extremely hazardous substances):
	7697-37-2	nitric acid
	· Section 313 (Specific toxic chemical listings):	
	7697-37-2	nitric acid
	7439-97-6	mercury

· TSCA (Toxic Substances Control Act):

All ingredients are listed.

- · Proposition 65
- · Chemicals known to cause cancer:

None of the ingredients is listed.

· Chemicals known to cause reproductive toxicity for females:

None of the ingredients is listed.

· Chemicals known to cause reproductive toxicity for males:

None of the ingredients is listed.

· Chemicals known to cause developmental toxicity:

7439-97-6 mercury

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Trade name: EPA Method 200.7 Calibration Standard 6

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Carcinogenic categories

· EPA (Environmental Protection Agency) (Substances not listed)	
7697-37-2	nitric acid
7732-18-5	water, distilled, conductivity or of similar purity

· TLV (Threshold Limit Value established by ACGIH)

7439-97-6 mercury A4

· NIOSH-Ca (National Institute for Occupational Safety and Health)

None of the ingredients is listed.

- · GHS label elements The product is classified and labeled according to the Globally Harmonized System (GHS).
- · Hazard pictograms





GHS05 GHS08

- · Signal word Danger
- Hazard-determining components of labeling:

nitric acid

mercury

· Hazard statements

H290 May be corrosive to metals.

H314 Causes severe skin burns and eye damage.

H360 May damage fertility or the unborn child.

· Precautionary statements

Obtain special instructions before use.

Do not handle until all safety precautions have been read and understood.

Keep only in original container.

Do not breathe dusts or mists.

Wash thoroughly after handling.

Wear protective gloves/protective clothing/eye protection/face protection.

If swallowed: Rinse mouth. Do NOT induce vomiting.

If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.

IF INHALED: Remove person to fresh air and keep comfortable for breathing.

If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Immediately call a poison center/doctor.

IF exposed or concerned: Get medical advice/attention.

Specific treatment (see on this label).

Wash contaminated clothing before reuse.

Absorb spillage to prevent material damage.

Store locked up.

Store in corrosive resistant container with a resistant inner liner.

Dispose of contents/container in accordance with local/regional/national/international regulations.

· Chemical safety assessment: A Chemical Safety Assessment has not been carried out.



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Trade name: EPA Method 200.7 Calibration Standard 6

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16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

- · **Department issuing SDS:** Environment protection department.
- · Contact:

High-Purity Standards Tel: 843-767-7900 Fax: 843-767-7906

- · Date of preparation / last revision 03/29/2019 / -
- · Abbreviations and acronyms:

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HMIS: Hazardous Materials Identification System (USA)

VOC: Volatile Organic Compounds (USA, EU)

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

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OSHA: Occupational Safety & Health

TLV: Threshold Limit Value

PEL: Permissible Exposure Limit

REL: Recommended Exposure Limit

BEI: Biological Exposure Limit

Met. Corr. I: Corrosive to metals – Category 1

Skin Corr. 1A: Skin corrosion/irritation - Category 1A

Eye Dam. 1: Serious eye damage/eye irritation – Category 1

Repr. 1A: Reproductive toxicity - Category 1A