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Safety Data Sheet acc. to OSHA HCS

Printing date 02/27/2023 Reviewed on 02/27/2023

1 Identification

· Product identifier

· Trade name: CLP Analyte Standard-Revised

· Article number: ANALCS-R

Details of the supplier of the safety data sheet

· Manufacturer/Supplier:

High-Purity Standards

7221 Investment Drive, North Charleston, SC 29418 United States

Telephone: +1-843-767-7900 Fax: +1-843-767-7906 highpuritystandards.com

Email: info@highpuritystandards.com

· 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

Corrosive to Metals 1 H290 May be corrosive to metals.

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

Eye Damage 1 H318 Causes serious eye damage.



Acute Toxicity - Oral 4 H302 Harmful if swallowed. Acute Toxicity - Dermal 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



· Signal word Danger

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· Hazard-determining components of labeling:

nitric acid

hydrofluoric acid

· Hazard statements

H290 *May be corrosive to metals.*

H302+H312 Harmful if swallowed or in contact with skin. Causes severe skin burns and eye damage.

· Precautionary statements

Keep only in original container.

Do not breathe dusts or mists.

Wash thoroughly after handling.

Do not eat, drink or smoke when using this product.

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

If swallowed: Call a poison center/doctor if you feel unwell.

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 = 0

Reactivity = 0

· HMIS-ratings (scale 0 - 4)



Health = 3

Fire = 0

REACTIVITY 0 Reactivity = 0

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





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3 Composition/information on ingredients

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

· Dangerou	is components:		
7697-37-2	nitric acid		2.0%
7664-39-3	hydrofluoric acid		0.49%
· Chemical	identification of the substance/preparation		
7732-18-5	water, distilled, conductivity or of similar purity	9	7.434%
7440-02-0	nickel		0.01%
7440-43-9	cadmium		0.01%
7440-66-6	s zinc		0.01%
7440-36-0	antimony	(0.006%
513-77-9	barium carbonate	(0.005%
543-81-7	beryllium acetate	(0.005%
6156-78-1	Manganese(II) acetate tetrahydrate	(0.005%
7440-47-3	3 chromium	(0.005%
7440-48-4	t cobalt	(0.005%
7440-50-8	8 copper	(0.005%
7803-55-6	Ammonium Vanadate	(0.005%
7440-22-4	silver	(0.002%
7440-28-0) thallium	(0.001%
7440-38-2	? arsenic	(0.001%
7439-92-1	l lead		0.0005%
7782-49-2	? selenium	6	0.0005%

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:

Immediately call a doctor.

Drink copious amounts of water and provide fresh air. Immediately call a doctor.

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- · 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
7440-02-0 nickel	4.5 mg/m^3
7440-43-9 cadmium	0.10 mg/m^3
7440-66-6 zinc	6 mg/m³
7440-36-0 antimony	1.5 mg/m^3
513-77-9 barium carbonate	2.2 mg/m^3
6156-78-1 Manganese(II) acetate tetrahydrate	13 mg/m³
7440-47-3 chromium	1.5 mg/m^3
7440-48-4 cobalt	0.18 mg/m^3

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7440-50-8 copper	(Contd. of page 3 mg/m ³
7803-55-6 Ammonium Vanadate	0.01 mg/m
7440-22-4 silver	0.3 mg/m^3
7440-28-0 thallium	0.06 mg/m
7440-38-2 arsenic	1.5 mg/m ³
7439-92-1 lead	0.15 mg/m
7782-49-2 selenium	0.6 mg/m ³
PAC-2:	
7697-37-2 nitric acid	24 ppm
7440-02-0 nickel	50 mg/m^3
7440-43-9 cadmium	0.76 mg/m
7440-66-6 zinc	$\frac{21 \text{ mg/m}^3}{}$
7440-36-0 antimony	13 mg/m^3
513-77-9 barium carbonate	270 mg/m
6156-78-1 Manganese(II) acetate tetrahydrate	$\frac{22 \text{ mg/m}^3}{\text{mg}}$
7440-47-3 chromium	17 mg/m^3
7440-48-4 cobalt	$2 mg/m^3$
7440-50-8 copper	33 mg/m^3
7803-55-6 Ammonium Vanadate	0.11 mg/m
7440-22-4 silver	170 mg/m
7440-28-0 thallium	3.3 mg/m^3
7440-38-2 arsenic	17 mg/m^3
7439-92-1 lead	120 mg/m
7782-49-2 selenium	6.6 mg/m^3
PAC-3:	1
7697-37-2 nitric acid	92 ppm
7440-02-0 nickel	99 mg/m^3
7440-43-9 cadmium	4.7 mg/m^3
7440-66-6 zinc	120 mg/m³
7440-36-0 antimony	80 mg/m^3
513-77-9 barium carbonate	1,600 mg/m
6156-78-1 Manganese(II) acetate tetrahydrate	740 mg/m^3
7440-47-3 chromium	99 mg/m^3
7440-48-4 cobalt	20 mg/m^3
7440-50-8 copper	200 mg/m³
7803-55-6 Ammonium Vanadate	80 mg/m^3
7440-22-4 silver	990 mg/m^3





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7440-28-0		(Contd. of page 5) 20 mg/m^3
7440-38-2	arsenic	100 mg/m^3
7439-92-1	lead	700 mg/m³
7782-49-2	selenium	40 mg/m^3

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.
- · 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.

· Cont	rol parameters			
· Com	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			
7664	-39-3 hydrofluoric acid			
PEL	Long-term value: 3 ppm as F			
REL	Long-term value: 2.5 mg/m³, 3 ppm Ceiling limit value: 5* mg/m³, 6* ppm			

TLV Long-term value: 0.41 mg/m³, 0.5 ppm Ceiling limit value: 1.64 mg/m³, 2 ppm

as F; Skin; BEI

*15-min, as F

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· Ingredients with biological limit values:

7664-39-3 hydrofluoric acid

BEI 3 mg/g creatinine

Medium: urine Time: prior to shift

Parameter: Flourides (background)

10 mg/g creatinine Medium: urine Time: end of shift

Parameter: Flourides (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.

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

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	c		,•			,		,			,		,	,	

· Information on basic physical and 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. Product is not selfigniting. · Auto igniting: Product does not present an explosion hazard. Danger of explosion: · 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): 1.00994 g/cm³ (8.42795 lbs/gal)

 $1,009 \, kg/m^3$ · Bulk density: · Relative density Not determined.

· Vapor density Not determined. · Evaporation rate Not determined.

· Solubility in / Miscibility with Water: Fully miscible.

· Partition coefficient (n-octanol/water): Not determined.

· Viscosity:

Dynamic: Not determined.

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	(Contd.	of page 8)
Kinematic:	Not determined.	
· Solvent content:		
Water:	97.4 %	
VOC content:	0.00 %	
	0.0 g/l / 0.00 lb/gal	
Solids content:	0.1 %	
· Other information	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:
- 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)				
7440-02-0	nickel	2B			
7440-43-9	cadmium	1			
543-81-7	beryllium acetate	1			
7440-47-3	chromium	3			

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		(Contd. of page
7440-48-4	cobalt	2.
7440-38-2	arsenic	1
7439-92-1	lead	2.
7782-49-2	selenium	3
· NTP (Nat	ional Toxicology Program)	
7440-02-0	nickel	i
7440-43-9	cadmium	i
543-81-7	beryllium acetate	i
7440-48-4	cobalt	i
7440-38-2	arsenic	i
7439-92-1	lead	i
· OSHA-Ca	(Occupational Safety & Health Administration)	
7440-43-9	cadmium	
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.

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· 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. (Hydrofluoric ac Nitric acid)
· ADR	3264 CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O (HYDROFLUORIC ACID, NITRIC ACID)
· IMDG, IATA	CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O (HYDROFLUORIC ACID, NITRIC ACID)
Transport hazard class(es)	
· DOT	
CORROSIVE	
· Class	8 Corrosive substances
· Label · ADR	8
No. of the second secon	
· Class	8 (C1) Corrosive substances
· Label	8
· IMDG, IATA	
· Class	8 Corrosive substances
· Label	8
· Packing group · DOT, ADR, IMDG, IATA	III
Environmental hazards:	Not applicable.

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	(Contd. of page 1
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
	Maximum net quantity per outer packaging: 1000 ml
· UN "Model Regulation":	UN 3264 CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O
3	(HYDROFLUORIC ACID, NITRIC ACID), 8, III

15 Regulatory information

- · Safety, health and environmental regulations/legislation specific for the substance or mixture No further relevant information available.
- · Sara

	5 (extremely hazardous substances):
7697-37-2	nitric acid
· Section 31.	3 (Specific toxic chemical listings):
7697-37-2	nitric acid
7440-02-0	nickel
7440-43-9	cadmium
7440-66-6	zinc
7440-36-0	antimony
513-77-9	barium carbonate
543-81-7	beryllium acetate
7440-47-3	chromium
7440-48-4	cobalt
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7440-50-8 copper	
7803-55-6 Ammonium Vanadate	
7440-22-4 silver	
7440-28-0 thallium	
7440-38-2 arsenic	
7439-92-1 lead	
7782-49-2 selenium	
TSCA (Toxic Substances Control Act):	
7732-18-5 water, distilled, conductivity or of similar purity	ACTI
7697-37-2 nitric acid	ACTI
7440-02-0 nickel	ACTI
7440-43-9 cadmium	ACTI
7440-66-6 zinc	ACTI
7440-36-0 antimony	ACTI
513-77-9 barium carbonate	ACTI
7440-47-3 chromium	ACTI
7440-48-4 cobalt	ACTI
7440-50-8 copper	ACTI
7803-55-6 Ammonium Vanadate	ACTI
7440-22-4 silver	ACTI
7440-28-0 thallium	ACTI
7440-38-2 arsenic	ACTI
7439-92-1 lead	ACTI
7782-49-2 selenium	ACTI
Hazardous Air Pollutants	
7440-48-4 cobalt	
7439-92-1 lead	
Proposition 65	
Chemicals known to cause cancer:	
7440-02-0 nickel	
7440-43-9 cadmium	
543-81-7 beryllium acetate	
7440-48-4 cobalt	
7440-38-2 arsenic	
7439-92-1 lead	
Chemicals known to cause reproductive toxicity for females:	
7439-92-1 lead	





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	known to cause reproductive toxicity for males:	
7440-43-9		
7439-92-1	lead	
Chemicals	known to cause developmental toxicity:	
7440-43-9	cadmium	
7439-92-1	lead	
_	nic categories	
EPA (Envi	ronmental Protection Agency)	
7440-43-9	cadmium	BI
7440-66-6	zinc	D, I, II
513-77-9	barium carbonate	D, CBD(inh), NL(ora
7440-47-3	chromium	D
7440-50-8	copper	D
7440-22-4	silver	D
7440-38-2	arsenic	A
7439-92-1	lead	B2
7782-49-2	selenium	D
TLV (Thre	shold Limit Value)	
7440-02-0	nickel	A
7440-43-9	cadmium	
513-77-9	barium carbonate	
7440-47-3	chromium	
7440-48-4	cobalt	
7440-38-2	arsenic	
7439-92-1	lead	
	(National Institute for Occupational Safety and Hea	ulth)
7440-02-0		
7440-43-9		
	beryllium acetate	
7440-38-2	arsenic	

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





GHS05 GHS07



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· Signal word Danger

· Hazard-determining components of labeling:

nitric acid

hydrofluoric acid

· Hazard statements

H290 May be corrosive to metals.

H302+H312 Harmful if swallowed or 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.

Do not eat, drink or smoke when using this product.

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

If swallowed: Call a poison center/doctor if you feel unwell.

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

- · Date of preparation / last revision 02/27/2023
- · Abbreviations and acronyms:

ADR: Accord relatif au transport international 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

EINECS: European Inventory of Existing Commercial Chemical Substances

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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, ÉU) 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 BEI: Biological Exposure Limit

Corrosive to Metals 1: Corrosive to metals – Category 1 Acute Toxicity - Oral 4: Acute toxicity – Category 4 Skin Corrosion 1A: Skin corrosion/irritation – Category 1A Eye Damage 1: Serious eye damage/eye irritation – Category 1

US -