

## 1 Identification

- **Product identifier**
- **Product Name:** Quality Control Standard 23
- **Part Name:** QC-23
- **Application of the substance / the mixture** Certified Reference Material
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**  
Spex CertiPrep, LLC.  
203 Norcross Ave, Metuchen,  
NJ 08840 USA  
732-549-7144  
USMet-CRMSales@antylia.com
- **Information department:** product safety department
- **Emergency telephone number:**  
Emergency Phone Number (24 hours)  
CHEMTREC (800-424-9300)  
Outside US: 703-527-3887

## 2 Hazard(s) identification

- **Classification of the substance or mixture**



GHS08 Health hazard

Sensitization - Respiratory 1 H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.  
Carcinogenicity 1B H350 May cause cancer.  
Toxic to Reproduction 1A H360 May damage fertility or the unborn child.



GHS05 Corrosion

Skin Corrosion 1B H314 Causes severe skin burns and eye damage.  
Eye Damage 1 H318 Causes serious eye damage.



GHS07

Acute Toxicity - Inhalation 4 H332 Harmful if inhaled.  
Sensitization - Skin 1 H317 May cause an allergic skin reaction.

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



GHS05



GHS07



GHS08

- **Signal word** Danger
- **Hazard-determining components of labeling:**  
nitric acid  
cadmium  
cobalt  
lead  
nickel
- **Hazard statements**  
H332 Harmful if inhaled.  
H314 Causes severe skin burns and eye damage.  
H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.  
H317 May cause an allergic skin reaction.  
H350 May cause cancer.  
H360 May damage fertility or the unborn child.
- **Precautionary statements**  
P260 Do not breathe dusts or mists.

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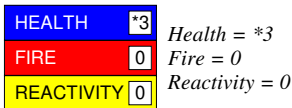
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- P264 Wash thoroughly after handling.
- P280 Wear protective gloves/protective clothing/eye protection/face protection.
- P284 [In case of inadequate ventilation] wear respiratory protection.
- P303+P361+P353 If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
- P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
- P305+P351+P338 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- P310 Immediately call a poison center/doctor.
- P308+P313 IF exposed or concerned: Get medical advice/attention.
- P321 Specific treatment (see on this label).
- P333+P313 If skin irritation or rash occurs: Get medical advice/attention.
- P342+P311 If experiencing respiratory symptoms: Call a poison center/doctor.
- P363 Wash contaminated clothing before reuse.
- P405 Store locked up.
- P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

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



- **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	10.0%
7439-92-1	lead	0.1%
7440-02-0	nickel	0.1%
7440-28-0	thallium	0.1%
7440-43-9	cadmium	0.1%
7440-48-4	cobalt	0.1%

· **Chemical identification of the substance/preparation**

7732-18-5	water, distilled, conductivity or of similar purity	87.7%
7429-90-5	aluminium	0.1%
7439-89-6	iron	0.1%
7439-93-2	lithium	0.1%
7439-95-4	magnesium	0.1%
7439-96-5	manganese	0.1%
7440-09-7	potassium	0.1%
7440-22-4	silver	0.1%
7440-23-5	sodium	0.1%
7440-24-6	strontium	0.1%
7440-39-3	barium	0.1%
7440-42-8	boron	0.1%
7440-47-3	chromium	0.1%
7440-50-8	copper	0.1%
7440-55-3	gallium	0.1%
7440-66-6	zinc powder- zinc dust (pyrophoric)	0.1%
7440-69-9	bismuth	0.1%
7440-70-2	calcium	0.1%

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7440-74-6	indium	0.1%
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#### 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:**  
Supply fresh air and to be sure call for a doctor.  
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:** Do not give anything to eat or drink - Do not induce vomiting
- **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-I:		
7439-89-6	iron	3.2 mg/m <sup>3</sup>
7439-92-1	lead	0.15 mg/m <sup>3</sup>
7439-93-2	lithium	3.3 mg/m <sup>3</sup>
7439-95-4	magnesium	18 mg/m <sup>3</sup>
7439-96-5	manganese	3 mg/m <sup>3</sup>
7440-02-0	nickel	4.5 mg/m <sup>3</sup>
7440-09-7	potassium	2.3 mg/m <sup>3</sup>
7440-22-4	silver	0.3 mg/m <sup>3</sup>
7440-23-5	sodium	13 mg/m <sup>3</sup>
7440-24-6	strontium	30 mg/m <sup>3</sup>
7440-28-0	thallium	0.06 mg/m <sup>3</sup>
7440-39-3	barium	1.5 mg/m <sup>3</sup>
7440-42-8	boron	1.9 mg/m <sup>3</sup>
7440-43-9	cadmium	0.10 mg/m <sup>3</sup>
7440-47-3	chromium	1.5 mg/m <sup>3</sup>
7440-48-4	cobalt	0.18 mg/m <sup>3</sup>
7440-50-8	copper	3 mg/m <sup>3</sup>
7440-55-3	gallium	30 mg/m <sup>3</sup>
7440-69-9	bismuth	15 mg/m <sup>3</sup>

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7440-74-6	indium	0.3 mg/m <sup>3</sup>
<b>· PAC-2:</b>		
7439-89-6	iron	35 mg/m <sup>3</sup>
7439-92-1	lead	120 mg/m <sup>3</sup>
7439-93-2	lithium	36 mg/m <sup>3</sup>
7439-95-4	magnesium	200 mg/m <sup>3</sup>
7439-96-5	manganese	5 mg/m <sup>3</sup>
7440-02-0	nickel	50 mg/m <sup>3</sup>
7440-09-7	potassium	25 mg/m <sup>3</sup>
7440-22-4	silver	170 mg/m <sup>3</sup>
7440-23-5	sodium	140 mg/m <sup>3</sup>
7440-24-6	strontium	330 mg/m <sup>3</sup>
7440-28-0	thallium	3.3 mg/m <sup>3</sup>
7440-39-3	barium	180 mg/m <sup>3</sup>
7440-42-8	boron	21 mg/m <sup>3</sup>
7440-43-9	cadmium	0.76 mg/m <sup>3</sup>
7440-47-3	chromium	17 mg/m <sup>3</sup>
7440-48-4	cobalt	2 mg/m <sup>3</sup>
7440-50-8	copper	33 mg/m <sup>3</sup>
7440-55-3	gallium	330 mg/m <sup>3</sup>
7440-69-9	bismuth	170 mg/m <sup>3</sup>
7440-74-6	indium	3.3 mg/m <sup>3</sup>
<b>· PAC-3:</b>		
7439-89-6	iron	150 mg/m <sup>3</sup>
7439-92-1	lead	700 mg/m <sup>3</sup>
7439-93-2	lithium	220 mg/m <sup>3</sup>
7439-95-4	magnesium	1,200 mg/m <sup>3</sup>
7439-96-5	manganese	1,800 mg/m <sup>3</sup>
7440-02-0	nickel	99 mg/m <sup>3</sup>
7440-09-7	potassium	150 mg/m <sup>3</sup>
7440-22-4	silver	990 mg/m <sup>3</sup>
7440-23-5	sodium	870 mg/m <sup>3</sup>
7440-24-6	strontium	2,000 mg/m <sup>3</sup>
7440-28-0	thallium	20 mg/m <sup>3</sup>
7440-39-3	barium	1,100 mg/m <sup>3</sup>
7440-42-8	boron	130 mg/m <sup>3</sup>
7440-43-9	cadmium	4.7 mg/m <sup>3</sup>
7440-47-3	chromium	99 mg/m <sup>3</sup>
7440-48-4	cobalt	20 mg/m <sup>3</sup>
7440-50-8	copper	200 mg/m <sup>3</sup>
7440-55-3	gallium	2,000 mg/m <sup>3</sup>
7440-69-9	bismuth	990 mg/m <sup>3</sup>
7440-74-6	indium	20 mg/m <sup>3</sup>

## 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.

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· **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:**

The following constituents are the only constituents of the product which have a PEL, TLV or other recommended exposure limit. At this time, the remaining constituent has no known exposure limits.

<b>7439-92-1 lead</b>	
PEL	Long-term value: 0.05* mg/m <sup>3</sup> *see 29 CFR 1910.1025
REL	Long-term value: 0.05* mg/m <sup>3</sup> *8-hr TWA ;See PocketGuide App.C
TLV	Long-term value: 0.05* mg/m <sup>3</sup> *and inorganic compds., as Pb; BEI, A3
<b>7440-02-0 nickel</b>	
PEL	Long-term value: 1 mg/m <sup>3</sup>
REL	Long-term value: 0.015 mg/m <sup>3</sup> as Ni; See Pocket Guide App. A
TLV	Long-term value: 1.5* mg/m <sup>3</sup> elemental, *inhalable fraction, A5, BEI
<b>7440-28-0 thallium</b>	
PEL	Long-term value: 0.1 mg/m <sup>3</sup> as Tl; Skin
REL	Long-term value: 0.1 mg/m <sup>3</sup> as Tl; Skin
TLV	Long-term value: 0.02* mg/m <sup>3</sup> as Tl; *inhalable fraction; Skin
<b>7440-43-9 cadmium</b>	
PEL	Long-term value: 0.005 mg/m <sup>3</sup> as Cd; see 29 CFR 1910.1027
REL	See Pocket Guide App. A
TLV	Long-term value: 0.01 0.002* mg/m <sup>3</sup> as Cd; A2; *respirable fraction; BEI
<b>7440-48-4 cobalt</b>	
PEL	Long-term value: 0.1* mg/m <sup>3</sup> as Co; *for metal dust and fume
REL	Long-term value: 0.05 mg/m <sup>3</sup> as Co; metal dust & fume
TLV	Long-term value: 0.02* mg/m <sup>3</sup> *inh. fraction; DSEN, RSEN, BEI, A3
· <b>Ingredients with biological limit values:</b>	
<b>7439-92-1 lead</b>	
BEI	200 µg/L Medium: blood Time: not critical Parameter: Lead
<b>7440-02-0 nickel</b>	
BEI	5 µg/L Medium: urine Time: post-shift at end of workweek Parameter: Nickel (background)
	30 µg/L Medium: urine Time: post-shift at end of workweek Parameter: Nickel (background)

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<b>7440-43-9 cadmium</b>	
BEI	5 µg/g creatinine Medium: urine Time: not critical Parameter: Cadmium (background)
	5 µg/L Medium: blood Time: not critical Parameter: Cadmium (background)
<b>7440-48-4 cobalt</b>	
BEI	15 µg/L Medium: urine Time: end of shift at end of workweek Parameter: Cobalt (nonspecific)

· **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.

· **Respiratory protection:**

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.

· **Eye protection:**



Tightly sealed goggles

**9 Physical and chemical properties**

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

· **General Information**

· **Appearance:**

**Form:** Liquid  
**Color:** According to product specification

· **Odor:** Characteristic

· **Odour Threshold:** Not applicable.

· **pH-value:** Not applicable.

· **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.

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· <b>Decomposition temperature:</b>	Not applicable.
· <b>Auto igniting:</b>	Product is not selfigniting.
· <b>Danger of explosion:</b>	Product does not present an explosion hazard.
· <b>Explosion limits:</b> <b>Lower:</b> <b>Upper:</b>	Not applicable. Not applicable.
· <b>Vapor pressure at 20 °C (68 °F):</b>	23 hPa (17.3 mm Hg)
· <b>Density</b>	Not applicable.
· <b>Relative density</b>	Not applicable.
· <b>Vapor density</b>	Not applicable.
· <b>Evaporation rate</b>	Not applicable.
· <b>Solubility in / Miscibility with Water:</b>	Fully miscible.
· <b>Partition coefficient (n-octanol/water):</b>	Not applicable.
· <b>Viscosity:</b> <b>Dynamic:</b> <b>Kinematic:</b>	Not applicable. Not applicable.
· <b>Solvent content:</b> <b>Water:</b> <b>VOC content:</b>	87.7 % 0.00 %
<b>Solids content:</b>	2.1 %
· <b>Other information</b>	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:**

· **LD/LC50 values that are relevant for classification:**

7697-37-2 nitric acid

Inhalative	LC50/4 h	2.65 mg/l (ATE)
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· **Primary irritant effect:**

· **on the skin:** Caustic effect on skin and mucous membranes.

· **on the eye:**

Strong caustic effect.

Strong irritant with the danger of severe eye injury.

· **Sensitization:**

Sensitization possible through inhalation.

Sensitization possible through skin contact.

· **Additional toxicological information:**

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

Harmful

Corrosive

Irritant

Product is suspected to cause damage to fertility.

Product is suspected to cause birth defects.

· **Carcinogenic categories**

· **IARC (International Agency for Research on Cancer)**

7439-92-1	lead	2B
7440-02-0	nickel	2B
7440-43-9	cadmium	1

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7440-47-3	chromium	3
7440-48-4	cobalt	2B
<b>· NTP (National Toxicology Program)</b>		
7439-92-1	lead	R
7440-02-0	nickel	R
7440-43-9	cadmium	K
7440-48-4	cobalt	R
<b>· OSHA-Ca (Occupational Safety &amp; Health Administration)</b>		
7440-43-9	cadmium	



## 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 3 (Self-assessment): extremely hazardous for water  
Do not allow product to reach ground water, water course or sewage system, even in small quantities.  
Must not reach bodies of water or drainage ditch undiluted or unneutralized.  
Danger to drinking water if even extremely small quantities leak into the ground.
- **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.

## 14 Transport information

· <b>UN-Number</b> · <b>DOT, ADR, IMDG, IATA</b>	UN2031
· <b>UN proper shipping name</b> · <b>DOT</b> · <b>ADR</b> · <b>IMDG, IATA</b>	Nitric acid solution 2031 NITRIC ACID solution NITRIC ACID solution
· <b>Transport hazard class(es)</b> · <b>DOT</b>	
	
· <b>Class</b> · <b>Label</b>	8 Corrosive substances 8
· <b>ADR, IMDG, IATA</b>	
	
· <b>Class</b> · <b>Label</b>	8 Corrosive substances 8

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· <b>Packing group</b> · <b>DOT, ADR, IMDG, IATA</b>	II
· <b>Environmental hazards:</b>	Not applicable.
· <b>Special precautions for user</b> · <b>Hazard identification number (Kemler code):</b> · <b>EMS Number:</b> · <b>Segregation groups</b> · <b>Stowage Category</b> · <b>Segregation Code</b>	Warning: Corrosive substances 80 F-A,S-B (SGG1a) Strong acids D SG36 Stow "separated from" SGG18-alkalis. SG49 Stow "separated from" SGG6-cyanides
· <b>Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code</b>	Not applicable.
· <b>Transport/Additional information:</b>	
· <b>ADR</b> · <b>Excepted quantities (EQ)</b>	Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml
· <b>IMDG</b> · <b>Limited quantities (LQ)</b> · <b>Excepted quantities (EQ)</b>	1L Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml
· <b>UN "Model Regulation":</b>	UN 2031 NITRIC ACID SOLUTION, 8, II

### 15 Regulatory information

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

· <b>Section 313 (Specific toxic chemical listings):</b>		
7697-37-2	nitric acid	
7429-90-5	aluminium	
7439-92-1	lead	
7439-93-2	lithium	
7439-96-5	manganese	
7440-02-0	nickel	
7440-22-4	silver	
7440-28-0	thallium	
7440-39-3	barium	
7440-43-9	cadmium	
7440-47-3	chromium	
7440-48-4	cobalt	
7440-50-8	copper	
7440-66-6	zinc powder- zinc dust (pyrophoric)	
· <b>TSCA (Toxic Substances Control Act):</b>		
7732-18-5	water, distilled, conductivity or of similar purity	ACTIVE
7429-90-5	aluminium	ACTIVE
7439-89-6	iron	ACTIVE
7439-92-1	lead	ACTIVE
7439-93-2	lithium	ACTIVE
7439-95-4	magnesium	ACTIVE
7439-96-5	manganese	ACTIVE
7440-02-0	nickel	ACTIVE
7440-09-7	potassium	ACTIVE
7440-22-4	silver	ACTIVE
7440-23-5	sodium	ACTIVE
7440-24-6	strontium	ACTIVE
7440-28-0	thallium	ACTIVE
7440-39-3	barium	ACTIVE

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7440-42-8	boron	ACTIVE
7440-43-9	cadmium	ACTIVE
7440-47-3	chromium	ACTIVE
7440-48-4	cobalt	ACTIVE
7440-50-8	copper	ACTIVE
7440-55-3	gallium	ACTIVE
7440-69-9	bismuth	ACTIVE
7440-70-2	calcium	ACTIVE
7440-74-6	indium	ACTIVE

**· Hazardous Air Pollutants**

7439-92-1	lead
7439-96-5	manganese
7440-48-4	cobalt

**· Proposition 65**

**· Chemicals known to cause cancer:**

7439-92-1	lead
7440-02-0	nickel
7440-43-9	cadmium
7440-48-4	cobalt

**· Chemicals known to cause reproductive toxicity for females:**

None of the ingredients is listed.

**· Chemicals known to cause reproductive toxicity for males:**

7440-43-9	cadmium
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**· Chemicals known to cause developmental toxicity:**

7439-93-2	lithium
7440-43-9	cadmium

**· Carcinogenic categories**

**· EPA (Environmental Protection Agency)**

7439-92-1	lead	B2
7439-96-5	manganese	D
7440-22-4	silver	D
7440-39-3	barium	D, CBD(inh), NL(oral)
7440-42-8	boron	I (oral)
7440-43-9	cadmium	B1
7440-50-8	copper	D
7440-66-6	zinc powder- zinc dust (pyrophoric)	II

**· TLV (Threshold Limit Value)**

7429-90-5	aluminium	A4
7439-92-1	lead	A3
7440-02-0	nickel	A5
7440-39-3	barium	A4
7440-43-9	cadmium	A2
7440-48-4	cobalt	A3

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

7440-02-0	nickel
7440-43-9	cadmium

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

**· Hazard pictograms**



**· Signal word** Danger

**· Hazard-determining components of labeling:**

nitric acid  
cadmium

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cobalt  
lead  
nickel

**Hazard statements**

H332 Harmful if inhaled.  
H314 Causes severe skin burns and eye damage.  
H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.  
H317 May cause an allergic skin reaction.  
H350 May cause cancer.  
H360 May damage fertility or the unborn child.

**Precautionary statements**

P260 Do not breathe dusts or mists.  
P264 Wash thoroughly after handling.  
P280 Wear protective gloves/protective clothing/eye protection/face protection.  
P284 [In case of inadequate ventilation] wear respiratory protection.  
P303+P361+P353 If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.  
P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.  
P305+P351+P338 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
P310 Immediately call a poison center/doctor.  
P308+P313 IF exposed or concerned: Get medical advice/attention.  
P321 Specific treatment (see on this label).  
P333+P313 If skin irritation or rash occurs: Get medical advice/attention.  
P342+P311 If experiencing respiratory symptoms: Call a poison center/doctor.  
P363 Wash contaminated clothing before reuse.  
P405 Store locked up.  
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

**National regulations:**

**Information about limitation of use:**

Workers are not allowed to be exposed to the hazardous carcinogenic materials contained in this preparation. Exceptions can be made by the authorities in certain cases.

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

**I6 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:** product safety department

**Contact:**

Spex CertiPrep, LLC.  
1-732-549-7144

**Date of preparation / last revision** 07/12/2022 / -

**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  
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  
BEL: Biological Exposure Limit  
Acute Toxicity - Inhalation 4: Acute toxicity – Category 4  
Skin Corrosion 1B: Skin corrosion/irritation – Category 1B  
Eye Damage 1: Serious eye damage/eye irritation – Category 1  
Sensitization - Respiratory 1: Respiratory sensitisation – Category 1  
Sensitization - Skin 1: Skin sensitisation – Category 1  
Carcinogenicity 1B: Carcinogenicity – Category 1B  
Toxic to Reproduction 1A: Reproductive toxicity – Category 1A