

Printing date 10/27/2017 Review date 10/27/2017

1 Identification

- · Product identifier
- · Trade name: Standard Quality Control 1B
- · Article number N9304131
- · Application of the substance / the mixture Laboratory chemicals
- · Details of the supplier of the safety data sheet
- · Manufacturer/Supplier:

PerkinElmer, Inc.

710 Bridgeport Avenue

Shelton, Connecticut 06484 USA

CustomerCareUS@perkinelmer.com

· Emergency telephone number:

CHEMTREC (within US) 800-424-9300

CHEMTREC (from outside US) +1 703-527-3887 (call collect)

CHEMTREC (within AU) +(61)-290372994

2 Hazard(s) identification

· Classification of the substance or mixture



Health hazard

Resp. Sens. 1 H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.

Carc. 1A H350 May cause cancer.

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



Corrosion

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

Eye Dam. 1 H318 Causes serious eye damage.



Skin Sens. 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, GHS08
- · Signal word Danger
- · Hazard-determining components of labeling:

Nitric Acid

beryllium

lead

Arsenic

cobalt

nickel

· Hazard statements

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.

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H350 May cause cancer.

H360 May damage fertility or the unborn child.

· Precautionary statements

P260 Do not breathe dusts or mists.

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.

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.

P405 Store locked up.

P501 Dispose of contents/container in accordance with local/regional/national/international

regulations.

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



Health = 3 Fire = 0Reactivity = 0

· HMIS-ratings (scale 0 - 4)



· Other hazards

The product does not contain any organic halogen compounds (AOX), nitrates, heavy metal compounds or formaldehydes.

- · 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.

| | Nitric Acid | 10.0% |
|-----------|-----------------------------------------------------------------------------------------------------------|-------|
| | Ox. Liq. 2, H272 Skin Corr. 1A, H314 | |
| | cadmium (non-pyrophoric) Acute Tox. 2, H330 Muta. 2, H341; Carc. 1B, H350; Repr. 2, H361; STOT RE 1, H372 | 0.1% |
| 7440-48-4 | cobalt ♦ Resp. Sens. 1, H334; Carc. 2, H351 ♦ Skin Sens. 1, H317 | 0.1% |

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| | | (Cont | d. of pa |
|------------|-------------------------------------------------------|-----------------------------------------------------------|----------|
| 7440-02-0 | | | 0.1 |
| | Carc. 2, H351; STOT RE 1, | H372 | |
| | 🔖 Skin Sens. 1, H317 | | |
| 7439-92-1 | | | 0.1 |
| | Acute Tox. 3, H301 | 260 GEOTERE 2 11272 | |
| | & Carc. 2, H351; Repr. 1A, H3 Acute Tox. 4, H332 | 360; STOT RE 2, H3/3 | |
| 7440 41.7 | V | | 0 |
| 7440-41-7 | L ´ | 2 11220 | 0 |
| | Acute Tox. 3, H301; Acute T Carc. 1B, H350; STOT RE 1 | | |
| | | 2. 2A, H319; Skin Sens. 1, H317; STOT SE 3, H335 | |
| 7440-38-2 | V | ,, , | 0. |
| 7110 30 2 | Acute Tox. 3, H301; Acute T | Cor 3 H331 | |
| | & Carc. 1A, H350 | ow. 5, 11551 | |
| Additional | Components | | |
| 7440-70-2 | calcium | ♦ Water-react. 2, H261 | 0. |
| 7440-47-3 | chromium | | 0. |
| 7440-50-8 | copper | | 0. |
| 7439-89-6 | iron | | 0. |
| 7439-93-2 | lithium | ♦ Water-react. 1, H260 | 0. |
| | | Skin Corr. 1B, H314 | |
| 7439-95-4 | magnesium | ② Pyr. Sol. 1, H250; Water-react. 1, H260 | 0. |
| 7439-96-5 | manganese | | 0. |
| 7439-98-7 | molybdenum | | 0. |
| 7782-49-2 | selenium | ♦ Acute Tox. 3, H301; Acute Tox. 3, H331 | 0. |
| | | ♦ STOT RE 2, H373 | |
| 7440-24-6 | strontium | ♦ Water-react. 1, H260 | 0. |
| 7440-28-0 | thallium | Acute Tox. 2, H300; Acute Tox. 2, H330 STOT RE 2, H373 | 0. |
| 7440-62-2 | vanadium | | 0. |
| 7440-66-6 | zinc | № Water-react. 2, H261 | 0. |
| | Water | | 88. |

4 First-aid measures

- · Description of first aid measures
- · General information: Immediately remove any clothing soiled by the product.
- · 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: Drink copious amounts of water and provide fresh air. Immediately call a 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.

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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 No further relevant information available.
- · Advice for firefighters
- · Protective equipment: No special measures required.

6 Accidental release measures

· Personal precautions, protective equipment and emergency procedures

Wear protective equipment. Keep unprotected persons away.

- · Environmental precautions: Inform respective authorities in case of seepage into water course or sewage system.
- · 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

| 7697-37-2 Nitric Acid | 0.16 ppm |
|------------------------------------|-----------------------|
| 7440-43-9 cadmium (non-pyrophoric) | 0.10 mg/m^3 |
| 7440-48-4 cobalt | 0.18 mg/m^3 |
| 7440-47-3 chromium | 1.5 mg/m^3 |
| 7440-50-8 copper | 3 mg/m^3 |
| 7439-89-6 iron | 3.2 mg/m^3 |
| 7439-93-2 lithium | 3.3 mg/m^3 |
| 7439-95-4 magnesium | 18 mg/m³ |
| 7439-96-5 manganese | $3 mg/m^3$ |
| 7439-98-7 molybdenum | 30 mg/m^3 |
| 7440-02-0 nickel | 4.5 mg/m^3 |
| 7439-92-1 lead | 0.15 mg/m^3 |
| 7782-49-2 selenium | 0.6 mg/m^3 |
| 7440-24-6 strontium | 30 mg/m^3 |
| 7440-28-0 thallium | $0.06 \ mg/m^3$ |
| 7440-62-2 vanadium | 3 mg/m^3 |
| 7440-66-6 zinc | 6 mg/m³ |
| 7440-41-7 beryllium | 0.0023 mg/m |
| 7440-38-2 Arsenic | 1.5 mg/m^3 |
| PAC-2: | |
| 7697-37-2 Nitric Acid | 24 ppm |
| 7440-43-9 cadmium (non-pyrophoric) | $0.76 mg/m^3$ |

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| 7440-48-4 cobalt | $2 mg/m^3$ |
|------------------------------------|-------------------------------------------------|
| 7440-47-3 chromium | $\frac{2 m_0 m^3}{17 mg/m^3}$ |
| 7440-50-8 copper | 33 mg/m^3 |
| 7439-89-6 iron | $35 mg/m^3$ |
| 7439-93-2 lithium | 36 mg/m ³ |
| 7439-95-4 magnesium | $\frac{30 \text{ mg/m}^3}{200 \text{ mg/m}^3}$ |
| 7439-96-5 manganese | $\frac{5 mg/m^3}{$ |
| 7439-98-7 molybdenum | 330 mg/m^3 |
| 7440-02-0 nickel | 50 mg/m^3 |
| 7439-92-1 lead | $\frac{30 \text{ mg/m}^3}{120 \text{ mg/m}^3}$ |
| 7782-49-2 selenium | 6.6 mg/m ³ |
| 7440-24-6 strontium | 330 mg/m^3 |
| 7440-28-0 thallium | 3.3 mg/m ³ |
| 7440-62-2 vanadium | 5.8 mg/m³ |
| 7440-66-6 zinc | 21 mg/m³ |
| 7440-41-7 beryllium | 0.025 mg/m |
| 7440-38-2 Arsenic | 17 mg/m^3 |
| PAC-3: | |
| 7697-37-2 Nitric Acid | 92 ppm |
| 7440-43-9 cadmium (non-pyrophoric) | 4.7 mg/m^3 |
| 7440-48-4 cobalt | $\frac{4.7 \text{ mg/m}}{20 \text{ mg/m}^3}$ |
| 7440-47-3 chromium | 99 mg/m ³ |
| 7440-50-8 copper | 200 mg/m ³ |
| 7439-89-6 iron | $\frac{250 \text{ mg/m}^3}{150 \text{ mg/m}^3}$ |
| 7439-93-2 lithium | $\frac{150 \text{ mg/m}^3}{220 \text{ mg/m}^3}$ |
| 7439-95-4 magnesium | 1,200 mg/m |
| 7439-96-5 manganese | 1,800 mg/m |
| 7439-98-7 molybdenum | 2,000 mg/m |
| 7440-02-0 nickel | 99 mg/m ³ |
| 7439-92-1 lead | 700 mg/m^3 |
| 7782-49-2 selenium | 40 mg/m^3 |
| 7/40-24-6 strontium | 2,000 mg/m |
| 7440-28-0 thallium | $2,000 \text{ mg/m}^3$ 20 mg/m^3 |
| 7440-62-2 vanadium | $\frac{20 \text{ mg/m}^3}{35 \text{ mg/m}^3}$ |
| 7440-66-6 zinc | $\frac{33 \text{ mg/m}^3}{120 \text{ mg/m}^3}$ |
| 7440-41-7 beryllium | 0.1 mg/m^3 |
| 7440-38-2 Arsenic | $\frac{0.1 \text{ mg/m}^3}{100 \text{ mg/m}^3}$ |

7 Handling and storage

- · Handling:
- · Precautions for safe handling Ensure good ventilation/exhaustion at the workplace.
- · Information about protection against explosions and fires: No special measures required.

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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:

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.

| | is time, the remaining constituent has no known exposure limits37-2 Nitric Acid |
|------|----------------------------------------------------------------------------------------------------------|
| | Long-term value: 5 mg/m³, 2 ppm |
| | 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 |
| 7440 | -43-9 cadmium (non-pyrophoric) |
| PEL | Long-term value: 0.005 mg/m³ as Cd; see 29 CFR 1910.1027 |
| REL | See Pocket Guide App. A |
| TLV | Long-term value: $0.01\ 0.002*\ mg/m^3$ as Cd; *respirable fraction; BEI |
| 7440 | -48-4 cobalt |
| PEL | Long-term value: 0.1* mg/m³ as Co; *for metal dust and fume |
| REL | Long-term value: 0.05 mg/m^3 as Co ; metal dust & fume |
| TLV | Long-term value: (0.02) NIC-0.02* mg/m³ *inh. fraction; NIC-Skin, DSEN, RSEN (BEI) |
| 7440 | -02-0 nickel |
| PEL | Long-term value: 1 mg/m³ |
| REL | Long-term value: 0.015 mg/m³ as Ni; See Pocket Guide App. A |
| TLV | Long-term value: $1.5* mg/m^3$ elemental, *inhalable fraction |
| 7440 | -41-7 beryllium |
| PEL | Long-term value: 0.002 mg/m³ Ceiling limit value: 0.005; 0.025* mg/m³ as Be; *30 min peak per 8-hr shift |
| REL | Ceiling limit value: 0.0005 mg/m³ as Be; See Pocket Guide App. A |

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TLV Long-term value: 0.00005 mg/m³
as Be; inhalable; RSEN; soluble comp.: Skin, DSEN

7440-38-2 Arsenic

PEL Long-term value: 0.5* 0.01** mg/m³
as As; *organic**inorg. compds.; 29 CFR 1910.1018

REL Ceiling limit value: 0.002 mg/m³
as As; 15min; See Pocket Guide App. A

TLV Long-term value: 0.01 mg/m³
as As; BEI

· Ingredients with biological limit values:

7440-43-9 cadmium (non-pyrophoric)

BEI 5 μg/g creatinine

Medium: urine Time: not critical

Parameter: Cadmium (background)

 $5 \mu g/L$

Medium: blood Time: not critical

Parameter: Cadmium (background)

7440-48-4 cobalt

BEI 15 μg/L

Medium: urine

Time: end of shift at end of workweek Parameter: Cobalt (background)

 $1 \mu g/L$

Medium: blood

Time: end of shift at end of workweek

Parameter: Cobalt (background, semi-quantitative)

7440-38-2 Arsenic

BEI 35 μg As/L

Medium: urine

Time: end of workweek

Parameter: Inorganic arsenic plus methylated metabolites (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.

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ISO 11014:2009 and GHS 2007

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· Protection of hands:



The glove material has to be impermeable and resistant to the product/ the substance/ the preparation. 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 trough time has to be found out by the manufacturer of the protective gloves and has to be observed.

· Eye protection:



· Vapor density

Tightly sealed goggles or safety glasses

9 Physical and chemical properties

| Information on basic physical and co | hemical properties |
|--------------------------------------|-----------------------------------------------|
| · General Information | |
| · Appearance: Form: | Liquid |
| Form: Color: | Liquid Clear |
| · Odor: | Characteristic |
| · Odor threshold: | Not determined. |
| | 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. |
| · Ignition temperature: | |
| 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. |

Not determined.

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| | | (Contd. of page |
|------------------------------------|--------------------------------------------|-----------------|
| · Evaporation rate | Not determined. | |
| · Solubility in / Miscibility with | | |
| Water: | Not miscible or difficult to mix. | |
| · Partition coefficient (n-octan | ol/water): Not determined. | |
| · Viscosity: | | |
| Dynamic: | Not determined. | |
| Kinematic: | Not determined. | |
| · Solvent content: | | |
| Water: | 88.1 % | |
| VOC content: | 0.00 % | |
| Solids content: | 1.8 % | |
| · 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:
- · LD/LC50 values that are relevant for classification:

7440-43-9 cadmium (non-pyrophoric)

Oral LD50 225 mg/kg (rat)

- · 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

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

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- USA



For the Better

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| IARC (Inte | ernational Agency for Research on Cancer) | |
|------------|-----------------------------------------------|----|
| 7440-43-9 | cadmium (non-pyrophoric) | |
| 7440-48-4 | cobalt | 2 |
| 7440-47-3 | chromium | : |
| 7440-02-0 | nickel | 2 |
| 7439-92-1 | lead | 2 |
| 7782-49-2 | selenium | |
| 7440-41-7 | beryllium | j. |
| 7440-38-2 | Arsenic | |
| NTP (Nati | onal Toxicology Program) | |
| 7440-43-9 | cadmium (non-pyrophoric) | |
| 7440-48-4 | cobalt | |
| 7440-02-0 | nickel | |
| 7439-92-1 | lead | |
| 7440-41-7 | beryllium | |
| 7440-38-2 | Arsenic | |
| 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:

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:

Dispose of container and materials in accordance with local, regional and national regulations.

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

| UN-Number DOT, ADR, IMDG, IATA | UN2031 | |
|----------------------------------------------------------------------------------------------------|--------------------------------------------------------------|--|
| UN proper shipping name DOT, ADR IMDG, IATA | Nitric acid NITRIC ACID | |
| Transport hazard class(es) | | |
| DOT CORRESSIVE 8 | | |
| · Class · Label | 8 Corrosive substances 8 | |
| · Class · Label | 8 (C1) Corrosive substances 8 | |
| IMDG, IATA | 0 | |
| · Class · Label | 8 Corrosive substances 8 | |
| Packing group DOT, ADR, IMDG, IATA | II | |
| Environmental hazards: Marine pollutant: | No | |
| Special precautions for user Danger code (Kemler): EMS Number: Segregation groups Stowage Category | Warning: Corrosive substances 80 F-A,S-B Acids D | |

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| | (Contd. of page |
|------------------------------------------------|--------------------------------------------------|
| · Transport/Additional information: | |
| $\cdot DOT$ | |
| · Quantity limitations | On passenger aircraft/rail: 1 L |
| | On cargo aircraft only: 30 L |
| $\cdot ADR$ | |
| · Excepted quantities (EQ) | Code: E2 |
| | Maximum net quantity per inner packaging: 30 ml |
| | Maximum net quantity per outer packaging: 500 ml |
| ·IMDG | |
| · Limited quantities (LQ) | IL |
| \cdot Excepted quantities (\widetilde{EQ}) | Code: E2 |
| | Maximum net quantity per inner packaging: 30 ml |
| | Maximum net quantity per outer packaging: 500 ml |
| · UN "Model Regulation": | UN 2031 NITRIC ACID, 8, II |

| · Safety, health and environmental regulations/legislation specific for the substance or mixture | | |
|--------------------------------------------------------------------------------------------------|---------------------------------------------------------------|-------|
| 7732-18-5 | - · · · · · · · · · · · · · · · · · · · | 88.1% |
| | Nitric Acid | 10.0% |
| ,0,, 5, 2 | © Ox. Liq. 2, H272 Skin Corr. 1A, H314 | |
| 7440-43-9 | cadmium (non-pyrophoric) | 0.1% |
| | Acute Tox. 2, H330 | |
| | Muta. 2, H341; Carc. 1B, H350; Repr. 2, H361; STOT RE 1, H372 | |
| Sara | | • |
| Section 35 | 55 (extremely hazardous substances): | |
| 7697-37-2 | Nitric Acid | |
| Section 31 | 3 (Specific toxic chemical listings): | |
| 7697-37-2 | Nitric Acid | |
| 7440-43-9 | cadmium (non-pyrophoric) | |
| 7440-48-4 | cobalt | |
| 7440-47-3 | chromium | |
| 7440-50-8 | copper | |
| 7439-96-5 | manganese | |
| 7440-02-0 | nickel | |
| 7439-92-1 | lead | |
| 7782-49-2 | selenium | |
| 7440-28-0 | thallium | |
| 7440-62-2 | vanadium | |
| = | zinc | |
| 7440-66-6 | | |
| | beryllium | |



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| . TSCA (Toxic | Substances Control Act): | (Contd. of page |
|------------------------------------|------------------------------------------------|-----------------|
| All ingredients | | |
| 7697-37-2 Nit | | |
| 7440-70-2 cal | | |
| | lmium (non-pyrophoric) | |
| 7440-48-4 col | | |
| 7440-47-3 chi | | |
| 7440-50-8 coj | | |
| 7439-89-6 iro | | |
| 7439-93-2 lith | ium | |
| 7439-95-4 ma | gnesium | |
| 7439-96-5 ma | | |
| 7439-98-7 mo | v . | |
| 7440-02-0 nic | • | |
| 7439-92-1 lea | \overline{d} | |
| 7782-49-2 sel | enium | |
| 7440-24-6 str | ontium | |
| 7440-28-0 tha | llium | |
| 7440-62-2 vai | nadium | |
| 7440-66-6 zin | | |
| 7440-41-7 bei | yllium | |
| 7440-38-2 Ar. | enic | |
| 7732-18-5 Wa | ter | |
| · TSCA new (21 · Proposition 65 | st Century Act) (Substances not listed) | |
| · Chemicals kno | wn to cause cancer: | |
| 7440-43-9 cad | lmium (non-pyrophoric) | |
| 7440-48-4 col | | |
| 7440-02-0 nic | kel | |
| 7439-92-1 lea | d | |
| 7440-41-7 bei | yllium | |
| 7440-38-2 Ar. | enic | |
| · Chemicals kno | wn to cause reproductive toxicity for females: | |
| 7439-92-1 lea | | |
| · Chemicals kno | wn to cause reproductive toxicity for males: | |
| 7440-43-9 cad | lmium (non-pyrophoric) | |
| 7439-92-1 lea | d | |
| · Chemicals kno | wn to cause developmental toxicity: | |
| 7440-43-9 cad | lmium (non-pyrophoric) | |
| 7439-92-1 lea | d | |
| · Cancerogenity | categories | |
| · EPA (Environ | mental Protection Agency) | |
| 7440-43-9 cad | lmium (non-pyrophoric) B1 | |



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| | | (Contd. of page |
|-----------|-----------------------------------------------------------|-----------------------|
| 7440-47-3 | chromium | D |
| 7440-50-8 | copper | D |
| 7439-96-5 | manganese | D |
| 7439-92-1 | lead | B2 |
| 7782-49-2 | selenium | D |
| 7440-66-6 | zinc | D, I, II |
| 7440-41-7 | beryllium | B1, K/L(inh), CBD(ord |
| 7440-38-2 | Arsenic | A |
| TLV (Thre | eshold Limit Value established by ACGIH) | |
| 7440-43-9 | cadmium (non-pyrophoric) | 4 |
| 7440-48-4 | cobalt | 4 |
| 7440-47-3 | chromium | 4 |
| 7439-98-7 | molybdenum | |
| 7440-02-0 | nickel | 4 |
| 7439-92-1 | lead | |
| 7440-41-7 | beryllium | 4 |
| 7440-38-2 | Arsenic | 4 |
| NIOSH-C | a (National Institute for Occupational Safety and Health) | |
| 7440-43-9 | cadmium (non-pyrophoric) | |
| 7440-02-0 | nickel | |
| 7440-41-7 | beryllium | |
| 7440-38-2 | Arsenic | |

- · 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

beryllium

lead

Arsenic

cobalt

nickel

· Hazard statements

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.

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.

P305+P351+P338 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

and easy to do. Commue rinsing.

P310 Immediately call a poison center/doctor.

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P405 Store locked up.

P501 Dispose of contents/container in accordance with local/regional/national/international

regulations.

· National regulations:

· Additional classification according to Decree on Hazardous Materials:

Carcinogenic hazardous material group III (dangerous).

· Information about limitation of use:

Workers are not allowed to be exposed to this hazardous material. Exceptions can be made by the authorities in certain cases

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.

- · Water hazard class: Water hazard class 3 (Self-assessment): extremely hazardous for water.
- · Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

16 Other information

Disclaimer

The information provided in this Material Safety Data Sheet is based on our present knowledge, and believed to be correct at the date of publication. However, no representation is made concerning its accuracy and completeness. It is intended as guidance only, and is not to be considered a warranty or quality specification. All materials may present unknown hazards, and should be used with caution. Although certain hazards are described, we cannot guarantee that these are the only hazards which exist. PerkinElmer shall not be held liable for any damage resulting from handling or from contact with the product.

· Contact:

With in the USA: 1-(800)-762-4000 Out side the USA: 1-(203)-712-8488

Abbreviations and acronyms:

RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)

ICAO: International Civil Aviation Organisation

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

BEI: Biological Exposure Limit

Ox. Liq. 2: Oxidizing liquids - Category 2

Acute Tox. 3: Acute toxicity – Category 3

Acute Tox. 2: Acute toxicity - Category 2

Acute Tox. 4: Acute toxicity - Category 4

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

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Skin Corr. 1B: Skin corrosion/irritation – Category 1B

Skin Irrit. 2: Skin corrosion/irritation – Category 2

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

Eye Irrit. 2A: Serious eye damage/eye irritation – Category 2A

Resp. Sens. 1: Respiratory sensitisation – Category 1

Skin Sens. 1: Skin sensitisation – Category 1

Muta. 2: Germ cell mutagenicity – Category 2

Carc. 1A: Carcinogenicity - Category 1A

Carc. 1B: Carcinogenicity - Category 1B

Carc. 2: Carcinogenicity – Category 2 Carc. 2: Carcinogenicity – Category 2

Repr. 1: Reproductive toxicity – Category 1

Repr. 1A: Reproductive toxicity - Category 1A

Repr. 2: Reproductive toxicity – Category 2

STOT SE 3: Specific target organ toxicity (single exposure) – Category 3

STOT RE 1: Specific target organ toxicity (repeated exposure) – Category 1

STOT RE 2: Specific target organ toxicity (repeated exposure) – Category 2

* * Data compared to the previous version altered.