

Printing date 27.07.2021 Revision: 27.07.2021

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

- · 1.1 Product identifier
- · Trade name: Std, PerkinElmer Pure IV
- · Article number: N9303941
- · 1.2 Relevant identified uses of the substance or mixture and uses advised against

No further relevant information available.

- · Application of the substance / the mixture Laboratory chemicals
- · 1.3 Details of the supplier of the safety data sheet
- · Manufacturer/Supplier:

PerkinElmer, Inc.

710 Bridgeport Avenue

Shelton, Connecticut 06484 USA

CustomerCareUS@perkinelmer.com

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PerkinElmer, Inc.

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P: 44 1443 234005

· 1.4 Emergency telephone number:

CHEMTREC (within US) 800-424-9300

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

CHEMTREC (within AU) +(61)-290372994

## SECTION 2: Hazards identification

- · 2.1 Classification of the substance or mixture
- · Classification according to Regulation (EC) No 1272/2008



GHS08 health hazard

Carc. 1B H350 May cause cancer.

Repr. 1A H360D May damage the unborn child.



GHS05 corrosion

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

Eye Dam. 1 H318 Causes serious eye damage.

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- · 2.2 Label elements
- · Labelling according to Regulation (EC) No 1272/2008

The product is classified and labelled according to the CLP regulation.

- · Hazard pictograms GHS05, GHS08
- · Signal word Danger

#### · Hazard-determining components of labelling:

Nitric Acid cadmium

lead

#### · Hazard statements

H314 Causes severe skin burns and eye damage.

H350 May cause cancer.

H360D May damage the unborn child.

## · Precautionary statements

P260 Do not breathe dusts or mists.

P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or 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.

Immediately call a POISON CENTER/doctor. P310

P321 Specific treatment (see on this label).

P405 Store locked up.

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

regulations.

#### · Additional information:

Contains cobalt, nickel. May produce an allergic reaction.

#### · 2.3 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.

## SECTION 3: Composition/information on ingredients

#### · 3.2 Chemical characterisation: Mixtures

· **Description:** Mixture of substances listed below with nonhazardous additions.

Dangerous components:					
CAS: 7697-37-2	Nitric Acid	10.0%			
EINECS: 231-714-2	© Ox. Liq. 2, H272 Skin Corr. 1A, H314				
CAS: 7439-89-6	iron	0.1%			
EINECS: 231-096-4	�� Acute Tox. 2, H300				
CAS: 7439-92-1	lead	0.1%			
EINECS: 231-100-4	😵 Repr. 1A, H360FD-H362				
CAS: 7440-02-0	nickel	0.1%			
EINECS: 231-111-4	& Carc. 2, H351; STOT RE 1, H372 Skin Sens. 1, H317				
(Contd. on page					



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CAS: 7440-28-0 EINECS: 231-138-1	thallium  Acute Tox. 2, H300; Acute Tox. 2, H330  STOT RE 2, H373  Aquatic Chronic 4, H413	0.19
CAS: 7440-43-9 EINECS: 231-152-8	cadmium Acute Tox. 3, H301; Acute Tox. 2, H330 Muta. 2, H341; Carc. 1B, H350; Repr. 2, H361fd; STOT RE 1, H372 Aquatic Acute 1, H400; Aquatic Chronic 1, H410	0.19
CAS: 7440-48-4 EINECS: 231-158-0	cobalt  Resp. Sens. 1, H334 Skin Sens. 1, H317 Aquatic Chronic 4, H413	0.19
CAS: 7440-66-6 EINECS: 231-175-3	zinc Pyr. Sol. 1, H250; Water-react. 1, H260 Aquatic Acute 1, H400; Aquatic Chronic 1, H410	0.19
· Additional Compon	ents	
CAS: 7732-18-5 EINECS: 231-791-2	Water	87.7
CAS: 7429-90-5 EINECS: 231-072-3	aluminium	0.19
CAS: 7439-93-2 EINECS: 231-102-5	lithium  Water-react. 1, H260 Skin Corr. 1B, H314	0.19
CAS: 7439-95-4 EINECS: 231-104-6	magnesium  Pyr. Sol. 1, H250; Water-react. 1, H260	0.19
CAS: 7439-96-5 EINECS: 231-105-1	manganese	0.19
CAS: 7440-09-7 EINECS: 231-119-8	potassium  Water-react. 1, H260 Skin Corr. 1B, H314	0.19
CAS: 7440-22-4 EINECS: 231-131-3	silver	0.19
CAS: 7440-23-5 EINECS: 231-132-9	sodium  Water-react. 1, H260 Skin Corr. 1B, H314	0.19
CAS: 7440-24-6 EINECS: 231-133-4	strontium  • Water-react. 1, H260	0.19
CAS: 7440-39-3 EINECS: 231-149-1	barium  • Water-react. 2, H261	0.19
CAS: 7440-42-8 EINECS: 231-151-2	boron	0.19
CAS: 7440-47-3 EINECS: 231-157-5	chromium	0.19



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CAS: 7440-50-8	copper	0.1%
EINECS: 231-159-6		
CAS: 7440-55-3	gallium	0.1%
EINECS: 231-163-8		
CAS: 7440-69-9	bismuth	0.1%
EINECS: 231-177-4		
CAS: 7440-70-2	calcium	0.1%
EINECS: 231-179-5	♦ Water-react. 2, H261	
CAS: 7440-74-6	Indium	0.1%
EINECS: 231-180-0		
· SVHC		
7439-92-1 lead		
7440-43-9 cadmiun		
· Additional informat	ion: For the wording of the listed hazard phrases refer to section 16.	

#### SECTION 4: First aid measures

- · 4.1 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 plenty of water and provide fresh air. Call for a doctor immediately.
- 4.2 Most important symptoms and effects, both acute and delayed No further relevant information available.
- · **4.3 Indication of any immediate medical attention and special treatment needed**No further relevant information available.

# SECTION 5: Firefighting measures

- · 5.1 Extinguishing media
- · Suitable extinguishing agents: Use fire extinguishing methods suitable to surrounding conditions.
- · 5.2 Special hazards arising from the substance or mixture

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

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

# SECTION 6: Accidental release measures

· 6.1 Personal precautions, protective equipment and emergency procedures

Mount respiratory protective device.

Wear protective equipment. Keep unprotected persons away.

· 6.2 Environmental precautions:

*Inform respective authorities in case of seepage into water course or sewage system.* 

Dilute with plenty of water.

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

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## · 6.3 Methods and material for containment and cleaning up:

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

Use neutralising agent.

Dispose contaminated material as waste according to item 13.

Ensure adequate ventilation.

· 6.4 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.

# SECTION 7: Handling and storage

· 7.1 Precautions for safe handling

Ensure good ventilation/exhaustion at the workplace.

Open and handle receptacle with care.

Prevent formation of aerosols.

- · Information about fire and explosion protection: Keep respiratory protective device available.
- · 7.2 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 container tightly sealed.
- · 7.3 Specific end use(s) No further relevant information available.

## SECTION 8: Exposure controls/personal protection

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

· Ingredients	with	limit va	ılues t	hat re	auire	monitoring	at ti	he work	nlace:

7697-37-2 Nitric Acid

WEL Short-term value: 2.6 mg/m³, 1 ppm

7440-02-0 nickel

WEL Long-term value: 0.5 mg/m<sup>3</sup>

as Ni; Sk; Carc

7440-43-9 cadmium

WEL Long-term value: 0.025 mg/m<sup>3</sup>

as Cd, Carc

7440-48-4 cobalt

WEL Long-term value: 0.1 mg/m<sup>3</sup>

as Co; Carc, Sen

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

Keep away from foodstuffs, beverages and feed.

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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 self-contained respiratory protective device.

· Protection of hands:



Protective gloves

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:



Tightly sealed goggles

# SECTION 9: Physical and chemical properties

- · 9.1 Information on basic physical and chemical properties
- · General Information
- · Appearance:

Form: Fluid
Colour: Dark brown
Odour: Characteristic
Odour threshold: Not determined.

· pH-value: Not determined.

· Change in condition

Melting point/freezing point: Undetermined. Initial boiling point and boiling range: 100 °C

· Flash point: Not applicable.

· Flammability (solid, gas): Not applicable.

· Decomposition temperature: Not determined.

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· Auto-ignition temperature:	Product is not selfigniting.
Explosive properties:	Product does not present an explosion hazard. Not determined.
Explosion limits:	
Lower:	Not determined.
Upper:	Not determined.
Vapour pressure at 20 °C:	23 hPa
Density:	Not determined.
Relative density	Not determined.
Vapour 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.
Kinematic:	Not determined.
Solvent content:	
Water:	87.7 %
Solids content:	2.3 %
9.2 Other information	No further relevant information available.

# SECTION 10: Stability and reactivity

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

# SECTION 11: Toxicological information

- · 11.1 Information on toxicological effects
- · Acute toxicity Based on available data, the classification criteria are not met.
- · LD/LC50 values relevant for classification:

7440-43-9 cadmium

Oral LD50 225 mg/kg (rat)

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- · Primary irritant effect:
- · Skin corrosion/irritation

Causes severe skin burns and eye damage.

· Serious eye damage/irritation

Causes serious eye damage.

- Respiratory or skin sensitisation Based on available data, the classification criteria are not met.
- · Additional toxicological information:
- · CMR effects (carcinogenity, mutagenicity and toxicity for reproduction)
- · Germ cell mutagenicity Based on available data, the classification criteria are not met.
- · Carcinogenicity

May cause cancer.

· Reproductive toxicity

May damage the unborn child.

- · STOT-single exposure Based on available data, the classification criteria are not met.
- · STOT-repeated exposure Based on available data, the classification criteria are not met.
- · Aspiration hazard Based on available data, the classification criteria are not met.

# SECTION 12: Ecological information

- · 12.1 Toxicity
- · Aquatic toxicity: No further relevant information available.
- · 12.2 Persistence and degradability No further relevant information available.
- · 12.3 Bioaccumulative potential No further relevant information available.
- · 12.4 Mobility in soil No further relevant information available.
- · Additional ecological information:
- · General notes:

Not hazardous for water.

Must not reach sewage water or drainage ditch undiluted or unneutralised.

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

## SECTION 13: Disposal considerations

- · 13.1 Waste treatment methods
- · Recommendation

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

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

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SECTION 14: Transport information	
14.1 UN-Number	A DIRECT I
ADR, IMDG, IATA	UN2031
14.2 UN proper shipping name	
ADR	2031 NITRIC ACID
IMDG, IATA	NITRIC ACID
14.3 Transport hazard class(es)	
ADR	
E TO SALL SALL SALL SALL SALL SALL SALL SAL	
Class	8 (C1) Corrosive substances.
Label	8
IMDG, IATA	
Class	8 Corrosive substances.
Label	8
14.4 Packing group ADR, IMDG, IATA	II
14.5 Environmental hazards: Marine pollutant:	No
14.6 Special precautions for user	Warning: Corrosive substances.
Hazard identification number (Kemler code):	80
EMS Number:	F- $A$ , $S$ - $B$
Segregation groups	Strong acids
Stowage Category	D
Segregation Code	SG36 Stow "separated from" SGG18-alkalis.
	SG49 Stow "separated from" SGG6-cyanides
14.7 Transport in bulk according to Annex II o	
Marpol and the IBC Code	Not applicable.
Transport/Additional information:	
ADR	
Limited quantities (LQ)	IL
Excepted quantities $(\widetilde{EQ})$	Code: E2
-	Maximum net quantity per inner packaging: 30 ml
	Maximum net quantity per outer packaging: 500 ml
Transport category	2_
Tunnel restriction code	E



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· IMDG	
· Limited quantities (LQ)	IL
· Excepted quantities (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

SECTION 15: Regulatory information						
· 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture						
CAS: 7732-18-5 EINECS: 231-791-2	Water		87.7%			
CAS: 7697-37-2 EINECS: 231-714-2	Nitric Acid	Ox. Liq. 2, H272 Skin Corr. 1A, H314	10.0%			
CAS: 7429-90-5 EINECS: 231-072-3	aluminium		0.1%			

- · Directive 2012/18/EU
- · Named dangerous substances ANNEX I None of the ingredients is listed.
- REGULATION (EC) No 1907/2006 ANNEX XVII Conditions of restriction: 3, 23, 27, 28, 30, 63, 72

· Regulation (EU) No 649/2012			
7440-43-9 cadmium			Annex I Part 1
DADE CHANGE AND A COURT OF	 0 .1		 

DIRECTIVE 2011/65/EU on the restriction of the use of certain hazardous substances in electrical and electronic equipment – Annex II

7439-92-1 lead 7440-43-9 cadmium

- · National regulations:
- · Additional classification according to Decree on Hazardous Materials, Annex II: Carcinogenic hazardous material group III (dangerous).

Caremogenie mazaraous material group III (aungerous

· 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.

- · Waterhazard class: Generally not hazardous for water.
- · Other regulations, limitations and prohibitive regulations

· Substances of very high concern (SVHC) according to REACH, Article 57			
7439-92-1	lead		
7440-43-9	cadmium		

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

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## SECTION 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 Life and Analytical Sciences shall not be held liable for any damage resulting from handling or from contact with the product.

#### Relevant phrases

- H250 Catches fire spontaneously if exposed to air.
- H260 In contact with water releases flammable gases which may ignite spontaneously.
- H261 In contact with water releases flammable gases.
- H272 May intensify fire; oxidiser.
- H300 Fatal if swallowed.
- H301 Toxic if swallowed.
- H302 Harmful if swallowed.
- H314 Causes severe skin burns and eye damage.
- H317 May cause an allergic skin reaction.
- H330 Fatal if inhaled.
- H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
- *H341* Suspected of causing genetic defects.
- H350 May cause cancer.
- H351 Suspected of causing cancer.
- H360FD May damage fertility. May damage the unborn child.
- H361fd Suspected of damaging fertility. Suspected of damaging the unborn child.
- H362 May cause harm to breast-fed children.
- H372 Causes damage to organs through prolonged or repeated exposure.
- H373 May cause damage to organs through prolonged or repeated exposure.
- *H400 Very toxic to aquatic life.*
- *H410 Very toxic to aquatic life with long lasting effects.*
- H413 May cause long lasting harmful effects to aquatic life.

#### Department issuing SDS:

Environmental, Health and Safety

PerkinElmer

Chalfont Road

Buckinghamshire

Seer Green

HP9 2FX

United Kingdom

Telephone: 0800-89 60 46 FAX: 0800-89 17 14

#### · Contact:

Within the USA: 1-(800)-762-4000 Outside 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)

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\* Data compared to the previous version altered.

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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
IATA: International Air Transport Association
GHS: Globally Harmonised System of Classification and Labelling of Chemicals
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)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
PBT: Persistent, Bioaccumulative and Toxic
SVHC: Substances of Very High Concern
vPvB: very Persistent and very Bioaccumulative
Pyr. Sol. 1: Pyrophoric solids – Category 1
Water-react. 1: Substances and mixtures which in contact with water emit flammable gases - Category 1
Ox. Liq. 2: Oxidizing liquids – Category 2
Acute Tox. 2: Acute toxicity - Category 2
Acute Tox. 3: Acute toxicity - Category 3
Skin Corr. 1A: Skin corrosion/irritation - Category 1A
Skin Corr. 1B: Skin corrosion/irritation - Category 1B
Eye Dam. 1: Serious eye damage/eye irritation - Category 1
Resp. Sens. 1: Respiratory sensitisation – Category 1
Skin Sens. 1: Skin sensitisation – Category 1
Muta. 2: Germ cell mutagenicity - Category 2
Carc. 1B: Carcinogenicity – Category 1B
Carc. 2: Carcinogenicity – Category 2
Repr. 1A: Reproductive toxicity - Category 1A
Repr. 1A: Reproductive toxicity - Category 1A
Repr. 2: Reproductive toxicity – Category 2
STOT RE 1: Specific target organ toxicity (repeated exposure) – Category 1
STOT RE 2: Specific target organ toxicity (repeated exposure) – Category 2
Aquatic Acute 1: Hazardous to the aquatic environment - acute aquatic hazard - Category 1
Aquatic Chronic 1: Hazardous to the aquatic environment - long-term aquatic hazard - Category 1
Aquatic Chronic 4: Hazardous to the aquatic environment - long-term aquatic hazard - Category 4
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