

acc. to OSHA HCS

Printing date 07/10/2018

Review date 07/10/2018

1 Identification

- **Product identifier**
- **Trade name:** STD ICH PRECIOUS METALS IMP B 125 ML
- **Article number** N9304157
- **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
203-925-4600

- **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**



Skin Irrit. 2 H315 Causes skin irritation.
Eye Irrit. 2A H319 Causes serious eye irritation.
STOT SE 3 H335 May cause respiratory irritation.

- **Label elements**
- **GHS label elements** The product is classified and labeled according to the Globally Harmonized System (GHS).
- **Hazard pictograms** GHS07
- **Signal word** Warning

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

Hydrochloric Acid

- **Hazard statements**

H315 Causes skin irritation.
H319 Causes serious eye irritation.
H335 May cause respiratory irritation.

- **Precautionary statements**

P261 Avoid breathing dust/fume/gas/mist/vapors/spray
P264 Wash thoroughly after handling.
P271 Use only outdoors or in a well-ventilated area.
P280 Wear protective gloves / eye protection / face protection.
P302+P352 If on skin: Wash with plenty of water.
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.
P312 Call a poison center/doctor if you feel unwell.
P321 Specific treatment (see on this label).

(Contd. on page 2)

acc. to OSHA HCS

Printing date 07/10/2018

Review date 07/10/2018

Trade name: STD ICH PRECIOUS METALS IMP B 125 ML

(Contd. of page 1)

- P362+P364 Take off contaminated clothing and wash it before reuse.
- P332+P313 If skin irritation occurs: Get medical advice/attention.
- P337+P313 If eye irritation persists: Get medical advice/attention.
- P403+P233 Store in a well-ventilated place. Keep container tightly closed.
- 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**
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.

· **Hazardous components:**

7647-01-0	Hydrochloric Acid	Skin Corr. 1B, H314 STOT SE 3, H335	15.0%
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· **Additional Components**

7440-06-4	platinum		0.0001%
7440-16-6	rhodium		0.0001%
7440-18-8	ruthenium		0.0001%
7440-05-3	palladium	Ox. Sol. 2, H272	0.0001%
7439-88-5	iridium		0.0001%
7732-18-5	Water		84.9995%

4 First-aid measures

- **Description of first aid measures**
- **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.

(Contd. on page 3)

acc. to OSHA HCS

Printing date 07/10/2018

Review date 07/10/2018

Trade name: STD ICH PRECIOUS METALS IMP B 125 ML

(Contd. of page 2)

- **After eye contact:**
Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
- **After swallowing:** If symptoms persist consult 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** 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** Not required.
- **Environmental precautions:**
Inform respective authorities in case of seepage into water course or sewage system.
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).
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:**

7647-01-0	Hydrochloric Acid	1.8 ppm
7440-06-4	platinum	3 mg/m ³
7440-16-6	rhodium	3 mg/m ³
7440-18-8	ruthenium	30 mg/m ³
7440-05-3	palladium	6 mg/m ³
7439-88-5	iridium	4.7 mg/m ³

· **PAC-2:**

7647-01-0	Hydrochloric Acid	22 ppm
7440-06-4	platinum	33 mg/m ³
7440-16-6	rhodium	33 mg/m ³
7440-18-8	ruthenium	330 mg/m ³
7440-05-3	palladium	66 mg/m ³
7439-88-5	iridium	51 mg/m ³

(Contd. on page 4)

acc. to OSHA HCS

Printing date 07/10/2018

Review date 07/10/2018

Trade name: STD ICH PRECIOUS METALS IMP B 125 ML

(Contd. of page 3)

· PAC-3:		
7647-01-0	Hydrochloric Acid	100 ppm
7440-06-4	platinum	200 mg/m ³
7440-16-6	rhodium	200 mg/m ³
7440-18-8	ruthenium	2,000 mg/m ³
7440-05-3	palladium	400 mg/m ³
7439-88-5	iridium	310 mg/m ³

7 Handling and storage

- **Handling:**
- **Precautions for safe handling** No special precautions are necessary if used correctly.
- **Information about protection against explosions and fires:** No special measures required.
- **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:	
7647-01-0 Hydrochloric Acid	
PEL	Ceiling limit value: 7 mg/m ³ , 5 ppm
REL	Ceiling limit value: 7 mg/m ³ , 5 ppm
TLV	Ceiling limit value: 2.98 mg/m ³ , 2 ppm

- **Additional information:** The lists that were valid during the creation were used as basis.
- **Exposure controls**
- **Personal protective equipment:**
- **General protective and hygienic measures:**
Keep away from foodstuffs, beverages and feed.
Immediately remove all soiled and contaminated clothing.
Wash hands before breaks and at the end of work.
Avoid contact with the eyes 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.

(Contd. on page 5)

acc. to OSHA HCS

Printing date 07/10/2018

Review date 07/10/2018

Trade name: STD ICH PRECIOUS METALS IMP B 125 ML

(Contd. of page 4)

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

· Eye protection:



Tightly sealed goggles or safety glasses

9 Physical and chemical properties

· Information on basic physical and chemical properties

· General Information

· Appearance:

Form:	Liquid
Color:	Clear
· Odor:	Characteristic
· Odor threshold:	Not determined.

· pH-value: Not determined.

· Change in condition

Melting point/Melting range:	Undetermined.
Boiling point/Boiling range:	Undetermined.

· Flash point: Not applicable.

· Flammability (solid, gaseous): Not applicable.

· Decomposition temperature: Not determined.

· Auto igniting: Product is not selfigniting.

· Danger of explosion: Product does not present an explosion hazard.

· Explosion limits:

Lower:	Not determined.
Upper:	Not determined.

· Vapor pressure at 20 °C (68 °F): 23 hPa (17.3 mm Hg)

(Contd. on page 6)

acc. to OSHA HCS

Printing date 07/10/2018

Review date 07/10/2018

Trade name: STD ICH PRECIOUS METALS IMP B 125 ML

(Contd. of page 5)

- **Density:** *Not determined.*
 - **Relative density** *Not determined.*
 - **Vapor density** *Not determined.*
 - **Evaporation rate** *Not determined.*
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- **Solubility in / Miscibility with Water:** *Not miscible or difficult to mix.*
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- **Partition coefficient (n-octanol/water):** *Not determined.*
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- **Viscosity:**
 - Dynamic:** *Not determined.*
 - Kinematic:** *Not determined.*
-
- **Solvent content:**
 - Water:** *85.0 %*
 - VOC content:** *0.00 %*
 - **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:**

7647-01-0 Hydrochloric Acid

Oral | LD50 | 900 mg/kg (rabbit)

· **Primary irritant effect:**

· **on the skin:** *Irritant to skin and mucous membranes.*

· **on the eye:** *Irritating effect.*

· **Sensitization:** *No sensitizing effects known.*

· **Additional toxicological information:**

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

· **Carcinogenic categories**

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

7647-01-0 | Hydrochloric Acid

3

(Contd. on page 7)

acc. to OSHA HCS

Printing date 07/10/2018

Review date 07/10/2018

Trade name: STD ICH PRECIOUS METALS IMP B 125 ML

(Contd. of page 6)

· **NTP (National Toxicology Program)**

None of the ingredients is listed.

· **OSHA-Ca (Occupational Safety & Health Administration)**

None of the ingredients is listed.

12 Ecological information

- **Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **Persistence and degradability** No further relevant information available.
- **Behavior in environmental systems:**
- **Bioaccumulative potential** No further relevant information available.
- **Mobility in soil** No further relevant information available.
- **Additional ecological information:**
- **General notes:** Generally not hazardous for water
- **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.
- **Uncleaned packagings:**
- **Recommendation:** Disposal must be made according to official regulations.

14 Transport information

- **UN-Number**
- **DOT, ADR, IMDG, IATA** UN1789
- **UN proper shipping name**
- **DOT** Hydrochloric acid solution
- **ADR** 1789 Hydrochloric acid solution
- **IMDG, IATA** HYDROCHLORIC ACID solution

· **Transport hazard class(es)**

· **DOT**



- **Class** 8 Corrosive substances

(Contd. on page 8)



acc. to OSHA HCS

Printing date 07/10/2018

Review date 07/10/2018

Trade name: STD ICH PRECIOUS METALS IMP B 125 ML

(Contd. of page 7)

· Label	8
· ADR	
	
· Class	8 (C1) Corrosive substances
· Label	8
· IMDG, IATA	
	
· Class	8 Corrosive substances
· Label	8
· Packing group	
· DOT, ADR, IMDG, IATA	II
· Environmental hazards:	
· Marine pollutant:	No
· Special precautions for user	Warning: Corrosive substances
· Danger code (Kemler):	80
· EMS Number:	F-A,S-B
· Segregation groups	Acids
· Stowage Category	E
· 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: 1 L On cargo aircraft only: 30 L
· 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)	1L
· 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 1789 HYDROCHLORIC ACID SOLUTION, 8, II

USA

(Contd. on page 9)

acc. to OSHA HCS

Printing date 07/10/2018



Review date 07/10/2018

Trade name: STD ICH PRECIOUS METALS IMP B 125 ML

(Contd. of page 8)

15 Regulatory information

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

7732-18-5	Water		84.9995%
7647-01-0	Hydrochloric Acid	 Skin Corr. 1B, H314  STOT SE 3, H335	15.0%
7440-16-6	rhodium		0.0001%

· **Sara**

· **Section 355 (extremely hazardous substances):**

7647-01-0	Hydrochloric Acid		
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· **Section 313 (Specific toxic chemical listings):**

7647-01-0	Hydrochloric Acid		
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· **TSCA (Toxic Substances Control Act):**

All ingredients are listed.

7647-01-0	Hydrochloric Acid		
7440-06-4	platinum		
7440-16-6	rhodium		
7440-18-8	ruthenium		
7440-05-3	palladium		
7439-88-5	iridium		
7732-18-5	Water		

· **Proposition 65**

· **Chemicals known to cause cancer:**

None of the ingredients is listed.

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

None of the ingredients is listed.

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

None of the ingredients is listed.

· **Chemicals known to cause developmental toxicity:**

None of the ingredients is listed.

· **Carcinogenicity categories**

· **EPA (Environmental Protection Agency)**

None of the ingredients is listed.

· **TLV (Threshold Limit Value established by ACGIH)**

7647-01-0	Hydrochloric Acid		A4
7440-16-6	rhodium		A4

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

None of the ingredients is listed.

(Contd. on page 10)

acc. to OSHA HCS

Printing date 07/10/2018

Review date 07/10/2018

Trade name: STD ICH PRECIOUS METALS IMP B 125 ML

(Contd. of page 9)

- **National regulations:**
- **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.
- **Water hazard class:** *Generally not 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.

- **Department issuing SDS:** *Environmental, Health and Safety*

- **Contact:**

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

Outside the USA: 1-(203)-712-8488

- **Abbreviations and acronyms:**

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

ACGIH: American Conference of Governmental Industrial Hygienists

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

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

NFPA: National Fire Protection Association (USA)

HMIS: Hazardous Materials Identification System (USA)

VOC: Volatile Organic Compounds (USA, EU)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

NIOSH: National Institute for Occupational Safety

OSHA: Occupational Safety & Health

TLV: Threshold Limit Value

PEL: Permissible Exposure Limit

REL: Recommended Exposure Limit

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

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

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

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

- *** Data compared to the previous version altered.**