



**Safety Data Sheet**  
**According to Regulation EC No.**  
**2020/87 to REACH**

Effective date: 25. Oct.2019

Revision date:26/4/2023

A-PPAS-HG

This SDS consists of 9 pages

**SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY / UNDERTAKING**

- 1.1 Product identifier: **A-PPAS-HG, absorption solution for mercury**  
**UFI: GU7F-AWK3-YCKS-XYNA**
- 1.2 Relevant identified uses of the substance or mixture and uses advised against:  
Designed for laboratory use - absorption solution for mercury – to be used for collecting air samples using an impinge
- 1.3 Details of the Supplier of the safety data sheet:  
ALS Czech Republic s. r. o., Na Harfě 336/9, 190 00 Praha 9  
Tel. : +420 284 081 600  
email: [info@alsglobal.com](mailto:info@alsglobal.com)  
Web: [www.alsglobal.cz](http://www.alsglobal.cz); [www.alsglobal.com](http://www.alsglobal.com)  
Contact person responsible for information in this SDS:  
[customer.support@alsglobal.com](mailto:customer.support@alsglobal.com)  
By Zbyněk Moravec
- 1.4 Emergency telephone number – Toxicological Information Centre  
**Na Bojišti 1, 128 08 Praha 2, tel.: 224915402; 224914575**

**SECTION 2. HAZARDS IDENTIFICATION**

- 2.1 Classification of the substance or mixture according to CLP  
Skin Corr. 1B, H314 Causes severe skin burns and eye damage.  
Muta. 1B H340 May cause genetic defects  
Carc. 1B H350 May cause cancer  
Repr. 1B H360FD May damage fertility or the unborn child  
Resp. Sens. 1 H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.  
Skin Sens. 1 H317 May cause an allergic skin reaction.  
Acute.Tox. 2 inhalations H330 Fatal if inhaled.  
Acute.Tox. 3 dermal H311 Toxic in contact with skin.
- 2.2 Label elements:



Signal word: Danger

**Hazard statements:**

H314 Causes severe skin burns and eye damage.  
H340 May cause genetic defects.  
H350 May cause cancer.  
H360FD May damage fertility or the unborn child.  
H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.  
H317 May cause an allergic skin reaction.  
H330 Fatal if inhaled.  
H311 Toxic in contact with skin.

**Precautionary statements:**

P261 Avoid breathing dust/fume/gas/mist/vapours/spray.  
P264 Wash with water thoroughly after handling.  
P270 Do not eat, drink or smoke when using this product.  
P280 Wear protective gloves/protective clothing/eye protection/face protection.  
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.  
P301+P330+P331 IF SWALLOWED: rinse mouth. Do NOT induce vomiting.  
P403+P233+P405 Store in a well-ventilated place. Keep container tightly closed. Store locked up.  
P501 Dispose of contents/container as dangerous waste.

*Note: the acute toxicity of the mixture is based on the safety sheet data and the following values:*

*LD<sub>50</sub>, oral, rat (mg.kg<sup>-1</sup>): 90,5 calculated ATE 2262.5*

*LD<sub>50</sub>, dermal, rabbit (mg.kg<sup>-1</sup>): 14 calculated ATE 350*

*LC<sub>50</sub>, inhalation, rat, aerosols or particles (mg.l<sup>-1</sup>): 0,088/4h, calculated ATE 0.22*

*Using tables 3.1.1 a 3.1.2 and section 3.1.3.6 reg. EC 1272/2008*

*Dangerous characteristics with respect to aquatic environment was calculated using the multiplication factor 1, final values using tables Nos. 4.1.1 a 4.1.2, The mixture has not been classified as acute or chronic toxic to aquatic environment.*

- 2.3 Other Hazards: none known. None of the components are in nanoform. None of the components, according to current knowledge, have the properties of an endocrine disruptor.  
CAS component 7778-50-9 Potassium dichromate is listed in Annex XIV EU 1907/2006 (REACH) - SVHC substance

## SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

- 3.1 Compounds – n/a  
3.2 Mixtures:



EC No.	Name	Content (%) general concentration limit; Specific concentration limit M-factor
CAS No.	Classification	
Index number	Classification CLP	
231-714-2	<b>Nitric acid</b>	20
7697-37-2	Skin Corr. 1A, H314;; Ox. Liq. 3 H272; Acute Tox. 3 H331	OCL: ≥5
007-004-00-1	GHS 03, GHS 05; GHS 06 Dgr ATE 700	Ox. Liq. 2; H272: C ≥ 99 % Ox. Liq. 3; H272: 70 % ≤C <99 %
231-906-6	<b>Potassium dichromate</b>	4
7778-50-9	O; R8; Carc.Cat.2 R45; Mut. Cat.2 R46	OCL: ≥0,1
024-002-00-6	Repr. Cat.2 R60-61; T+; R26, T R25, R48/23 Xn R21; C R34; R42/43; N R50/53  Ox. Sol. 2 H272 Carc. 1B H350 Muta. 1B H340 Repr. 1B H360FD Acute tox. 2 (inhalation) H330  Acute tox. 3 (oral): H301 Acute tox. 4 (dermal): H312 GHS 03; 05; 06; 08, 09; Dgr ATE (inhal) 100  STOT RE 1 H372 Skin Corr. 1B H314 Resp. Sens. 1 H334 Skin Sens. 1 H317  Aquatic Acute H400 Aquatic Chronic H410	STOT SE 3; H335: C ≥ 5 % M=1

Component CAS 7778-50-9, potassium dichromate is included in Annex XIV to Regulation No. 1907/2006 (REACH) – a substances of very high concern  
**A complete list of H-phrases is in Section 16**

## SECTION 4. FIRST AID MEASURES

- 4.1 Description of first aid measures
  - If breathed in, move person into fresh air.
  - If swallowed, consult a physician, and show them either the label or this SDS. Never induce vomiting. (the highest level of the toxicity category 2, i.e. toxic when inhaled, oral and dermal intoxication less significant; the mixture is strong corrosive).
  - if on clothing, take it off immediately all contaminated clothing and shoes. Wash skin with plenty of water. Get immediate medical advice/attention.
  - if in eyes, rinse cautiously with water for at least 15 minutes. Always consult a physician even if symptoms do not persist.
- 4.2 Most important symptoms and effects, both acute and delayed: severe damage to tissues. Carcinogen, mutagen, reproduction toxin (relevant in case of prolonged exposure)
- 4.3 Indication of any immediate medical attention and special treatment needed: medical attention always necessary after first aid has been administered



## SECTION 5. FIRE FIGHTING MEASURES

- 5.1 Extinguishing media: not applicable, the mixture is not combustible; adjust to other present materials.  
Non-suitable extinguishing media: water is not recommended in case of large quantity.
- 5.2 Special hazards arising from the substance or mixture: corrosive and toxic gasses and vapours released during fire; vapours are heavier than air, hydrogen is released in case of contact with metals and hydrogen can create an explosive mixture with air; it enhances combustion of other substances; nitrogen oxides.
- 5.3 Advice for firefighters: the mixture is not combustible; corrosive effects; wear self contained breathing apparatus and eye and skin protection equipment.

## SECTION 6. ACCIDENTAL RELEASE MEASURES

- 6.1 Personal precautions, protective equipment and emergency procedures: eye and skin protection – the mixture is corrosive.
- 6.2 Environmental precautions: prevent any contamination of surface and underground water and soil. Do not let it enter drains, surface and underground water and soil.
- 6.3 Methods and materials for containment and cleaning up: neutralize with diluted sodium hydroxide solution or cover with lime or lime sand or sodium carbonate, or an absorbent material. Collect into sealed containers and use services of a specialized provider to dispose of it.  
Warning: vapours and mist may gather below ground level. Adhesive vapours form above water surfaces.
- 6.4 Reference to other sections: Section 13

## SECTION 7. HANDLING AND STORAGE

- 7.1 Precautions for safe handling: Keep containers tightly closed and store away from alkalis. Work in well-ventilated premises, use personal protective equipment.
- 7.2 Conditions for safe storage, including any incompatibilities: do not expose to temperatures exceeding 25°C. Do not store together with alkalis. Prevent contact with metals and reducing agents.
- 7.3 Specific end use(s): see Section 1, no special requirements.

## SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

- 8.1 Control parameters: according to GR No. 361/2007, Coll.

	PEL [ $\text{mg.m}^{-3}$ ]	HPC [ $\text{mg.m}^{-3}$ ]
Nitric acid	1	2.5 (I)
Chromium <sup>VI</sup>	0.01	0.1 (I,S,P)



## DNEL

Workers/users	Route of exposure	Hodnota (mg.m <sup>-3</sup> )	Effects
<b>CAS 7697-37-2 Nitric acid... %</b>			
Workers	Inhalation	2.6	Local acute effects
Workers	Inhalation	1.3	Local systemic effects
Users	Inhalation	1.3	Local acute effects
Users	Inhalation	0.65	Local systemic effects
<b>CAS 7778-50-9 Potassium dichromate</b>			
Workers, prolonged exposure	Inhalation	0.028	Local acute effects
Workers, prolonged exposure	Inhalation	0.028	Local acute effects

## PNEC

Cr(VI)

Fresh water 0.0034 mg/l

Fresh water sediment 1.5 mg/kg

WWTP 0.21 mg/l

Acute poisoning: oral 17 mg/kg

## BET

0.030 mg/g creatinine

Biological material: urine

Collection time: The end of a work shift at the end of the week

Indicator: total chromium

Component CAS **7697-37-2 Nitric acid**

PNEC depends on the pH value - safe for pH 6 to 9

8.2 Exposure controls: always apply general safety rules for working with chemicals, do not eat, drink, smoke and inhale fumes and avoid contact with skin. It is necessary to ensure exhaust ventilation.

8.2.2 Individual safety measures, including personal protective equipment:

Eye/face protection: tightly fitting safety goggles or face-shield

Skin protection: acid-resistant protective clothing, apron, shoes

Hand protection: proper protective gloves (nitrile, neoprene, natural latex; acquire information on the retention time of the gloves material from their manufacturer).

Respiratory protection: respirator, mask equipped with a filter against acid gasses.

The used gloves shall meet specification requirements stipulated in Regulation EU 89/686/EEC and the sequent technical standard EN 374, for instance, KCl 741 Dermatril ®L (full contact), KCl 741 Dermatril ®L (splash contact).

Respiratory protection: respirator, mask equipped with an anti-dust filter, eventually self-contained breathing apparatus.

8.2.3 Environmental protection: prevent contamination of surface and ground water and soil, comply with emission limits.



## SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

- 9.1 Information on basic physical and chemical properties
- a) Physical state: liquid
  - b) Colour: yellow
  - c) Odour: odourless
  - d) Melting point/freezing point:  $< 0^{\circ}\text{C}$
  - e) Initial boiling point and boiling range:  $> 100^{\circ}\text{C}$
  - f) Flammability (solid, gas): not flammable
  - g) Upper/lower flammability or explosive limits: not applicable
  - h) Flash point: not applicable
  - i) Autoignition temperature: not applicable
  - j) Decomposition temperature: no data available
  - k) pH: ca 1
  - l) Kinematic viscosity: no data available
  - m) Solubility: soluble
  - n) N-octanol/water partition coefficient: no data available
  - o) Vapour pressure: no data available
  - p) Specific gravity: no data available
  - q) Vapour density: no data available
  - r) Particle characteristics: not applicable
- 9.2 Other safety information: no data available

## SECTION 10. STABILITY AND REACTIVITY

- 10.1 Reactivity: no adverse reactions under common conditions, it reacts violently with alkalis and light metals.
- 10.2 Chemical stability: Decomposition at temperatures exceeding  $25^{\circ}\text{C}$ . Do not store together with lyes. Rinse vessels with water before use.
- 10.3 Possibility of hazardous reactions: reacts violently with lyes and reducing agents.
- 10.4 Conditions to avoid: contact with lyes and reducing agents, higher temperatures
- 10.5 Incompatible materials: strong lyes and light metals
- 10.6 Hazardous decomposition products: nitrogen oxides

## SECTION 11. TOXICOLOGICAL INFORMATION

- 11.1 Information on toxicological effects (potassium dichromate):
- a) Acute toxicity:
    - LD<sub>50</sub>, oral, rat (mg.kg<sup>-1</sup>): 25
    - LD<sub>50</sub>, dermal, rabbit (mg.kg<sup>-1</sup>): 14
    - LC<sub>50</sub>, inhalation, rat, aerosols or particles (mg.l<sup>-1</sup>): 0.088 /4h
    - Acute toxicity calculated according to Annex1 to Reg. EU 1272/2008 (CLP), tables 3.1.1 and 3.1.2 and section 3.1.3.6 – ATE values calculated
    - Calculated ATE (oral) 2262.5
    - Calculated ATE (dermal) 350



Calculated ATE (inhalation) 0.22

- b) Skin corrosion/irritation; causes skin damage
  - c) Serious eye damage/eye irritation: may cause serious eye damage
  - d) Respiratory or skin sensitization: yes
  - e) Germ cell mutagenicity: mutagen cat. 2. (1B)
  - f) Carcinogenicity: carcinogen cat. 2 (1B)
  - g) Reproductive toxicity: reproductive toxic cat. 2 (1B)
  - h) Specific target organ toxicity - single exposure: no data available
  - i) Specific target organ toxicity - repeated exposure: it damages organs at repeated or prolonged exposure
  - j) Aspiration hazard: irritating to the mucous membranes and upper respiratory tract, caught, breathing difficulty (dyspnoea)
  - k) Chronic/sub-chronic toxicity: no data available
- If swallowed, serious symptoms in the gastrointestinal tract: bleeding – diarrhoea, nausea and vomiting, convulsions, heart failure, unconsciousness. Digestion may result in liver and kidney damages.

#### 11.2 Other Hazards

11.2.1 Endocrine disrupting properties: none of the components of the mixture have endocrine disruptor properties.

11.2.2 Further information Ingestion causes severe gastrointestinal symptoms: bloody diarrhea, vomiting, convulsions, circulatory failure, unconsciousness. Absorption may lead to liver and kidney damage

## SECTION 12. ECOLOGICAL INFORMATION

Potassium dichromate data:

### 12.1 Toxicity

LC50, 96 hrs., fish (mg.l-1): 0.131 (*Lepomis macrochirus*)

EC50, 48 hrs., daphnia (mg.l-1): 0,035 (*Daphnia magna* (water flea))

12.2 Persistence and degradability: no data available for inorganic substances

12.3 Bioaccumulative potential: it may accumulate in an organism

12.4 Mobility in soil: no data available

12.5 Results of PBT and vPvB assessment: no data available

12.6 Endocrine disrupting properties: none of the components of the mixture have endocrine disruptor properties.

12.7 Other adverse effects: very toxic to aquatic life with possible long lasting effects.

## SECTION 13. DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods: Follow local regulations on packaging and waste disposal. They may vary in different countries.

Residues of mixture and rinse water may not be let enter drains, soil or disposed near water resources or water streams.

Leakages shall be covered with absorbent materials (vapex, sand, soil), collected in



tightly sealed vessels and a licensed professional waste disposal service shall be contacted to dispose of this material.

European waste catalogue code, 06 04 05\* wastes containing other heavy metals

## SECTION 14. TRANSPORT INFORMATION

### 14. Transport information:

Land transport (ADR/RID)

**14.1 UN or ID number ADR/RID:** 2031

**14.2 UN proper shipping name**

ADR/RID: NITRIC ACID other than red fuming

UN number: 2031, Kemler Code 85

**14.3 Transport hazard class**

Class: 8 Number/letter: 2b Hazard sign: CORROSIVE

Packaging signs:



### 14.4 Packing group

II – medium danger Note: packing category – C

**14.5 Environmental hazards:**

None known

**14.6 Special precautions for user:**

Prevent leakage into environment

**14.7 14.7 Transport in bulk according to IMO Instruments:** unknown

**Sea transport IMDG**

Emergency Response Procedures F-A, S-Q

Marine Pollutant: no

**Air transport – ICAO/IATA**

Packing instructions passengers: 851

Packing instruction cargo: 855

## SECTION 15. REGULATORY INFORMATION

- 15.1 Safety, health, and environmental regulations/legislation specific for the substance or mixture:

Act No. 350/2011 Coll., act No. 258/2000 Coll. as amended, act No. 541/2020 Coll. as amended and relevant implementing regulations.

GR No. 361/2007 Coll. as amended, Reg. EC 1272/2008

- 15.2 Chemical Safety Assessment carried out for:

Component CAS **7697-37-2 Nitric acid**

Component CAS **7778-50-9 Potassium dichromate**

*note: data provided by the suppliers of components*





## SECTION 16. OTHER INFORMATION

The mixture shall be used only in compliance with directions for use and caution instructions shall be considered.

Only people qualified and trained in relevant method may use the mixture.

Calculation methods according to Annex 1 to Regulation EC and EP 1272/2008 (CLP) were used to create this document based on data on properties of individual components, list of harmonized classifications and data provided by their manufacturers or importers.

Revised version as of 5/2022 has been formally adjusted to Reg. (EU) 2020/878

Further H-phrases:

H272 May intensify fire; oxidiser.

H350 May cause cancer.

H340 May cause genetic defects.

H360FD May damage fertility or the unborn child.

H330 Fatal if inhaled.

H331 Toxic if inhaled.

H301 Toxic if swallowed.

H312 Harmful in contact with skin.

H372 Causes damage to organs prolonged or repeated exposure.

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.

H410 Very toxic to aquatic life with long lasting effects.

### Abbreviations

REACH: Regulation (EC) No 1907/2006

CLP: Regulation (EC) No 1272/2008

PEL: Permissible Exposure Limit

MPC: Maximum Permissible Concentration

BET: Biological Exposure Test

DNEL: Derived No-Effect Level

PNEC: Predicted No-Effect Concentration

GCL: Generic Concentration Limit