

Safety data sheet

according to 1907/2006/EC, Article 31

Revision: 01.05.2012

Printing date 01.07.2013

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

1.1 Product identifier

Trade name

Diamminepalladium(II) nitrite solution

Stock number:

11038

1.2 Relevant identified uses of the substance or mixture and uses advised against.

Identified use:

SU24 Scientific research and development

1.3 Details of the supplier of the safety data sheet

Manufacturer/Supplier:

Alfa Aesar GmbH & Co.KG
 A Johnson Matthey Company
 Zeppelinstr. 7b
 76185 Karlsruhe / Germany
 Tel: +49 (0) 721 84007 280
 Fax: +49 (0) 721 84007 300
 Email: tech@alfa.com
 www.alfa.com
 Product safety Tel + +049 (0) 7275 988687-0
 Carechem 24: +44 (0) 1235 239 670 (Multi-language emergency number)
 Poison Information Center Mainz
 www.giftinfo.uni-mainz.de Telephone: +49(0)6131/19240

Informing department:

1.4 Emergency telephone number:

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008



GHS05 corrosion

Eye Dam. 1 H318 Causes serious eye damage.



GHS07

Acute Tox. 4 H302 Harmful if swallowed.

Classification according to Directive 67/548/EEC or Directive 1999/45/EC

Xn; Harmful

R22: Harmful if swallowed.

Xi; Irritant

R41: Risk of serious damage to eyes.

Information concerning particular hazards for human and environment:

The product has to be labelled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version.

Other hazards that do not result in classification

No information known.

2.2 Label elements

Labelling according to Regulation (EC) No 1272/2008

Hazard pictograms

Signal word

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

GHS05, GHS07

Danger

Hazard-determining components of labelling:

Hazard statements

Ammonium hydroxide

H302 Harmful if swallowed.

H318 Causes serious eye damage.

P280

Wear protective gloves/protective clothing/eye protection/face protection.

P264

Wash thoroughly after handling.

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 or doctor/physician.

P301+P312 IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.

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

2.3 Other hazards

Results of PBT and vPvB assessment

PBT:

Not applicable.

vPvB:

Not applicable.

SECTION 3: Composition/information on ingredients

3.2 Mixtures

Dangerous components:

CAS: 28068-05-5	Diamminepalladium(II) nitrite	Xi R36; Xi R43; E R1	25,0%
CAS: 1336-21-6	Ammonium hydroxide	Eye Irrit. 2, H319; Skin Sens. 1, H317	10,0%
EINECS: 215-647-6		C R34; N R50	
		Skin Corr. 1B, H314; Aquatic Acute 1, H400; Acute Tox. 4, H302	

Additional information

None known.

Non-Hazardous Ingredients

CAS: 7732-18-5	Water	65,0%
EINECS: 231-791-2		

SECTION 4: First aid measures

4.1 Description of first aid measures

After inhalation

Supply fresh air. If required, provide artificial respiration. Keep patient warm. Consult doctor if symptoms persist.

After skin contact

Seek immediate medical advice.

Instantly wash with water and soap and rinse thoroughly.

Seek immediate medical advice.

Rinse opened eye for several minutes under running water. Then consult doctor.

Seek medical treatment.

After eye contact

After swallowing

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 fighting measures that suit the environment.

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5.2 Special hazards arising from the substance or mixture

If this product is involved in a fire, the following can be released:
Nitrogen oxides (NO_x)
Metal oxide
Ammonia

**5.3 Advice for firefighters
Protective equipment:**

Wear self-contained breathing apparatus.
Wear full protective suit.

SECTION 6: Accidental release measures**6.1 Personal precautions, protective equipment and emergency procedures**

Wear protective equipment. Keep unprotected persons away.
Ensure adequate ventilation

6.2 Environmental precautions:

Do not allow material to be released to the environment without proper governmental permits.
Do not allow product to reach sewage system or water bodies.
Do not allow to enter the ground/soil.

6.3 Methods and material for containment and cleaning up:

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Dispose of contaminated material as waste according to item 13.
Ensure adequate ventilation.

Prevention of secondary hazards:

No special measures required.

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 information on disposal.

SECTION 7: Handling and storage**7.1 Precautions for safe handling**

Keep containers tightly sealed.
Store in cool, dry place in tightly closed containers.
Ensure good ventilation/exhaustion at the workplace.

Information about protection against explosions and fires:

The product is not flammable

7.2 Conditions for safe storage, including any incompatibilities

Storage
Requirements to be met by storerooms and containers:
Information about storage in one common storage facility:
Further information about storage conditions:

No special requirements.

Do not store together with acids.

Keep container tightly sealed.
Store in cool, dry conditions in well sealed containers.
No further relevant information available.

7.3 Specific end use(s)**SECTION 8: Exposure controls/personal protection****Additional information about design of technical systems:**

Properly operating chemical fume hood designed for hazardous chemicals and having an average face velocity of at least 100 feet per minute.

8.1 Control parameters**Components with critical values that require monitoring at the workplace:**

The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.

Additional information:

No data

8.2 Exposure controls**Personal protective equipment****General protective and hygienic measures**

The usual precautionary measures should be adhered to in handling the chemicals.
Keep away from foodstuffs, beverages and food.
Instantly remove any soiled and impregnated garments.
Wash hands during breaks and at the end of the work.
Do not inhale dust / smoke / mist.
Avoid contact with the eyes.
Maintain an ergonomically appropriate working environment.
Use breathing protection with high concentrations.
Check protective gloves prior to each use for their proper condition.
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.

Breathing equipment:**Protection of hands:**

Impervious gloves

Not determined

Tightly sealed safety glasses.

Protective work clothing.

Material of gloves**Penetration time of glove material****Eye protection:****Body protection:****SECTION 9: Physical and chemical properties****9.1 Information on basic physical and chemical properties****General Information****Appearance:**

Liquid

Form:

Yellow

Colour:

Ammonia-like

Smell:

Not determined.

Odour threshold:

Not determined.

pH-value:

Not determined.

Change in condition**Melting point/Melting range:**

Not determined

Boiling point/Boiling range:

Not determined

Sublimation temperature / start:

Not determined

Inflammability (solid, gaseous)

Not determined.

Ignition temperature:

Not determined

Decomposition temperature:

Not determined

Self-inflammability:

Product is not selfigniting.

Critical values for explosion:

Not determined

Lower:

Not determined

Upper:

Not determined

Steam pressure at 20 °C:

500 hPa

Density

Not determined

Relative density

Not determined.

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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: Organic solvents: 0,0 %

Solids content: 35,0 %

9.2 Other information: No further relevant information available.

SECTION 10: Stability and reactivity

10.1 Reactivity: No information known.
10.2 Chemical stability: Stable under recommended storage conditions.
Thermal decomposition / conditions to be avoided: No decomposition if used and stored according to specifications.
10.3 Possibility of hazardous reactions: No dangerous reactions known
10.5 Incompatible materials: Acids
10.6 Hazardous decomposition products: Nitrogen oxides (NOx)
Metal oxide
Ammonia

SECTION 11: Toxicological information

11.1 Information on toxicological effects: Harmful if swallowed.
Acute toxicity: The Registry of Toxic Effects of Chemical Substances (RTECS) contains acute toxicity data for components in this product.

LD/LC50 values that are relevant for classification:

1336-21-6 Ammonium hydroxide

Oral LD50 350 mg/kg (rat)

Skin irritation or corrosion: May cause irritation
Eye irritation or corrosion: Causes serious eye damage.
Sensitization: No sensitizing effect known.
Germ cell mutagenicity: The Registry of Toxic Effects of Chemical Substances (RTECS) contains mutation data for components in this product.
Carcinogenicity: No classification data on carcinogenic properties of this material is available from the EPA, IARC, NTP, OSHA or ACGIH.
Reproductive toxicity: No effects known.
Specific target organ system toxicity - repeated exposure: No effects known.
Specific target organ system toxicity - single exposure: No effects known.
Aspiration hazard: No effects known.
Additional toxicological information: To the best of our knowledge the acute and chronic toxicity of this substance is not fully known.
The product shows the following dangers according to the calculation method of the General EC Classification Guidelines for Preparations as issued in the latest version:
Harmful
Irritant

SECTION 12: Ecological information

12.1 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: Do not allow product to reach ground water, water bodies or sewage system.
Do not allow material to be released to the environment without proper governmental permits.
Water hazard class 2 (Self-assessment): hazardous for water.
Danger to drinking water if even small quantities leak into soil.
Avoid transfer into the environment.

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: Hand over to disposers of hazardous waste.
Recommendation: Must be specially treated under adherence to official regulations.
Consult state, local or national regulations for proper disposal.

Uncleaned packagings: Disposal must be made according to official regulations.
Recommendation: Water, if necessary with cleaning agent.
Recommended cleaning agent:

SECTION 14: Transport information

UN-Number: UN2672
ADR, IMDG, IATA

14.2 UN proper shipping name: 2672 AMMONIA SOLUTION
ADR: AMMONIA SOLUTION
IMDG, IATA

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14.3 Transport hazard class(es)

ADR

Class
Label
IMDG, IATA

8 (C5) Corrosive substances.

8

Class
Label

8 Corrosive substances.

8

Packing group
ADR, IMDG, IATA

III

14.5 Environmental hazards:
Marine pollutant:

No

14.6 Special precautions for user
Kemler Number:
Segregation groups

Warning: Corrosive substances.

80

Alkalis

14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC
Code

Not applicable.

Transport/Additional information:

ADR

Excepted quantities (EQ):
Limited quantities (LQ)
Transport category
Tunnel restriction code

E1

5L

3

E

UN "Model Regulation":

UN2672, AMMONIA SOLUTION, 8, III

SECTION 15: Regulatory information**15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture****Australian Inventory of Chemical Substances**

All ingredients are listed.

Standard for the Uniform Scheduling of Drugs and Poisons

1336-21-6 Ammonium hydroxide

S5, S6

National regulations

Information about limitation of use:

Employment restrictions concerning young persons must be observed.

For use only by technically qualified individuals.

Classification according to VbF:

Not applicable

Water hazard class:

Water hazard class 2 (Self-assessment): hazardous for water.

Other regulations, limitations and prohibitive regulations

ELINCS (European List of Notified Chemical Substances)

None of the ingredients is listed.

Substances of very high concern (SVHC) according to REACH, Article 57

None of the ingredients are listed.

REACH - Pre-registered substances

All ingredients are listed.

15.2 Chemical safety assessment:

A Chemical Safety Assessment has not been carried out.

SECTION 16: Other information

Employers should use this information only as a supplement to other information gathered by them, and should make independent judgement of suitability of this information to ensure proper use and protect the health and safety of employees. This information is furnished without warranty, and any use of the product not in conformance with this Material Safety Data Sheet, or in combination with any other product or process, is the responsibility of the user.

Relevant phrases

H302 Harmful if swallowed.
H314 Causes severe skin burns and eye damage.
H317 May cause an allergic skin reaction.
H319 Causes serious eye irritation.
H400 Very toxic to aquatic life.

R1 Explosive when dry.
R34 Causes burns.
R36 Irritating to eyes.
R43 May cause sensitisation by skin contact.
R50 Very toxic to aquatic organisms.

Department issuing data specification sheet:
Abbreviations and acronyms:

Health, Safety and Environmental Department.
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 Harmonized System of Classification and Labelling of Chemicals
VbF: Verordnung über brennbare Flüssigkeiten, Österreich (Ordinance on the storage of combustible liquids, Austria)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent

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