

SAFETY DATA SHEET

Palladium Bath JE42

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

1.1. Product identifier

<i>Trade name:</i>	Palladium Bath JE42
<i>Product no.:</i>	KE42100
<i>Unique formula identifier (UFI):</i>	G91P-FVWS-PV8F-AWDU

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

<i>Relevant identified uses of the substance or mixture:</i>	Liquid for galvanic processes Restricted to professional users.
<i>Uses advised against :</i>	None known.

1.3. Details of the supplier of the safety data sheet

<i>Company and address:</i>	Aktiv Guld A/S Vallensbækvej 46 2625 Vallensbæk Denmark +45 43 66 20 00 https://www.aktivguld.com/
<i>E-mail:</i>	ag@aktivguld.com
<i>Revision:</i>	03/09/2025
<i>SDS Version:</i>	7.0
<i>Date of previous version:</i>	08/08/2025 (7.0)

1.4. Emergency telephone number

Contact the poison hotline: +45 82 12 12 12 (24 hour service)
See section 4 "First aid measures".

SECTION 2: HAZARDS IDENTIFICATION

Classified according to Regulation (EC) No. 1272/2008 (CLP).

2.1. Classification of the substance or mixture

Skin Sens. 1; H317, May cause an allergic skin reaction.
Eye Irrit. 2; H319, Causes serious eye irritation.
Aquatic Acute 1; H400, Very toxic to aquatic life.

Aquatic Chronic 2; H411, Toxic to aquatic life with long lasting effects.

2.2. Label elements

Hazard pictogram(s):



Signal word:

Warning

Hazard statement(s):

May cause an allergic skin reaction. (H317)
Causes serious eye irritation. (H319)
Very toxic to aquatic life with long lasting effects. (H410)

Precautionary statement(s):

General:

Not applicable.

Prevention:

Avoid breathing mist/vapour. (P261)
Contaminated work clothing should not be allowed out of the workplace. (P272)
Wear face protection/protective gloves/protective clothing. (P280)

Response:

If skin irritation or rash occurs: Get medical advice/attention. (P333+P313)
Take off contaminated clothing and wash it before reuse. (P362+P364)

Storage:

Not applicable.

Disposal:

Dispose of contents/container in accordance with local regulation. (P501)

Hazardous substances:

ammonium chloride
Palladium dichloride

Additional labelling:

UFI: G91P-FWWS-PV8F-AWDU

2.3. Other hazards

Additional warnings:

This mixture/product does not contain any substances known to fulfil the criteria for PBT and vPvB classification.
This product does not contain any substances considered to be endocrine disruptors in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2023/707.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1. Substances

Not applicable. This product is a mixture.

3.2. Mixtures

Product/substance	Identifiers	% w/w	Classification	Note
ammonium chloride	CAS No.: 12125-02-9 EC No.: 235-186-4 REACH: 01-2119487950-27-XXXX Index No.: 017-014-00-8	1-<5%	Acute Tox. 4, H302 Eye Irrit. 2, H319	
Palladium dichloride	CAS No.: 7647-10-1 EC No.: 231-596-2 REACH: 01-2120139168-54-XXXX Index No.:	<1%	Met. Corr. 1, H290 Acute Tox. 4, H302 Skin Sens. 1, H317 Eye Dam. 1, H318 Aquatic Acute 1, H400 (M=100) Aquatic Chronic 1, H410 (M=10)	

See full text of H-phrases in section 16. Occupational exposure limits are listed in section 8, if these are available.

Other information

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SECTION 4: FIRST AID MEASURES

4.1. Description of first aid measures

General information:

In the case of accident: Contact a doctor or casualty department – take the label or this safety data sheet. Contact a doctor if in doubt about the injured person's condition or if the symptoms persist. Never give an unconscious person water or other drink.

Inhalation:

Upon breathing difficulties or irritation of the respiratory tract: Bring the person into fresh air and stay with him/her.

Skin contact:

IF ON SKIN: Wash with plenty of water and soap. Remove contaminated clothing and shoes. Ensure to wash exposed skin thoroughly with water and soap. DO NOT use solvents or thinners. If skin irritation occurs: Get medical advice/attention.

Eye contact:

If in eyes: Flush eyes immediately with plenty of water or isotonic water (20-30 °C) for at least 5 minutes and continue until irritation stops. Remove

contact lenses. Make sure to flush under upper and lower eyelids. If irritation continues, contact a doctor. Continue flushing during transport.

Ingestion:

If the person is conscious, rinse the mouth with water and stay with the person. Never give the person anything to drink.

In case of malaise, seek medical advice immediately and bring the safety data sheet or label from the product. Do not induce vomiting, unless recommended by the doctor. Have the person lean forward with head down to avoid inhalation of or choking on vomited material.

Burns:

Not applicable.

4.2. Most important symptoms and effects, both acute and delayed

Sensitisation: This product contains substances, which may trigger allergic reaction upon dermal contact. Manifestation of allergic reactions typically takes place within 12-72 hours after exposure.

4.3. Indication of any immediate medical attention and special treatment needed

If eye irritation persists: Get medical advice/attention.

If skin irritation or rash occurs: Get medical advice/attention.

Information to medics

Bring this safety data sheet or the label from this product.

SECTION 5: FIREFIGHTING MEASURES

5.1. Extinguishing media

Not applicable.

5.2. Special hazards arising from the substance or mixture

Fire will result in dense smoke. Exposure to combustion products may harm your health. Closed containers, which are exposed to fire, should be cooled with water. Do not allow fire-extinguishing water to enter the sewage system and nearby surface waters.

If the product is exposed to high temperatures, e.g. in the event of fire, dangerous decomposition compounds are produced. These are:

Halogenated compounds

Nitrogen oxides (NO_x)

5.3. Advice for firefighters

Wear self-contained breathing apparatus and protective clothing to prevent contact. Upon direct exposure contact the chemical emergency services on 72 85 20 00 (24 h service) in order to obtain further advice.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

Avoid direct contact with spilled substances.
 Ensure adequate ventilation, especially in confined areas.
 Contaminated areas may be slippery.

6.2. Environmental precautions

Avoid discharge to lakes, streams, sewers, etc. In the event of leakage to the surroundings, contact local environmental authorities.

6.3. Methods and material for containment and cleaning up

Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations.

Wherever possible cleaning should be performed with normal cleaning agents. Avoid use of solvents.

6.4. Reference to other sections

See section 13 "Disposal considerations" on handling of waste.

See section 8 "Exposure controls/personal protection" for protective measures.

SECTION 7: HANDLING AND STORAGE

7.1. Precautions for safe handling

It is recommended to install waste collection trays in order to prevent emissions to the waste water system and surrounding environment.

Smoking, drinking and consumption of food is not allowed in the work area.

See section 8 "Exposure controls/personal protection" for information on personal protection.

7.2. Conditions for safe storage, including any incompatibilities

Containers that have been opened must be carefully resealed and kept upright to prevent leakage.

Recommended storage material: Always store in containers of the same material as the original container.

Storage conditions: No specific requirements.

Incompatible materials: Strong acids, strong bases, strong oxidizing agents, and strong reducing agents.

7.3. Specific end use(s)

This product should only be used for applications quoted in section 1.2.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control parameters

ammonium chloride

Long term exposure limit (8 hours) (mg/m³): 10

Short term exposure limit (15 minutes) (mg/m³): 20

Statutory order 1619 on exposure limits for substances and mixtures (19/12/2024)

DNEL

ammonium chloride

Duration:	Route of exposure:	DNEL:
Long term – Systemic effects - General population	Dermal	55.2 mg/kg bw/day
Long term – Systemic effects - Workers	Dermal	128.9 mg/kg bw/day
Long term – Systemic effects - General population	Inhalation	9.4 mg/m ³
Long term – Systemic effects - Workers	Inhalation	33.5 mg/m ³
Long term – Systemic effects - General population	Oral	11.4 mg/kg bw/day
Short term – Systemic effects - General population	Oral	55.2 mg/kg bw/day

Palladium dichloride

Duration:	Route of exposure:	DNEL:
Long term – Systemic effects - Workers	Dermal	16.84 mg/kg bw/day
Long term – Systemic effects - Workers	Inhalation	59.37 mg/m ³

PNEC

ammonium chloride

Route of exposure:	Duration of Exposure:	PNEC:
Freshwater		250-1200 µg/L
Intermittent release (freshwater)		430-1200 µg/L
Marine water		25-11200 µg/L
Sewage treatment plant		16.2 mg/L
Soil		163-50700 µg/kg

Palladium dichloride

Route of exposure:	Duration of Exposure:	PNEC:
Freshwater		45 ng/L
Freshwater sediment		274 µg/kg
Marine water		4.5 ng/L
Marine water sediment		27.4 µg/kg
Sewage treatment plant		526 µg/L
Soil		19.7 µg/kg

8.2. Exposure controls


Compliance with the given occupational exposure limits values should be controlled on a regular basis.

<i>General recommendations:</i>	Smoking, drinking and consumption of food is not allowed in the work area.
<i>Exposure scenarios:</i>	There are no exposure scenarios implemented for this product.
<i>Exposure limits:</i>	Professional users are subjected to the legally set maximum concentrations for occupational exposure. See occupational hygiene limit values above.
<i>Appropriate technical measures:</i>	The formation of vapours must be kept at a minimum and below current limit values (see above). Installation of a local exhaust system if normal air flow in the work room is not sufficient is recommended. Ensure eyewash and emergency showers are clearly marked. Apply standard precautions during use of the product. Avoid inhalation of vapours.
<i>Hygiene measures:</i>	In between use of the product and at the end of the working day all exposed areas of the body must be washed thoroughly. Pay special attention to hands, forearms and face.
<i>Measures to avoid environmental exposure:</i>	Keep damming materials near the workplace. If possible, collect spillage during work.


Individual protection measures, such as personal protective equipment

Generally: Use only CE marked protective equipment.


Respiratory Equipment:

Work situation	Type	Class	Colour	Standards	
In case of inadequate ventilation	Combination filter A1B1E1K1-P3	Class 1/3	Brown/Gray/Yellow/Green/White	EN14387	


Skin protection:

Recommended	Type/Category	Standards	
Dedicated work clothing should be worn.	-	-	

Hand protection:

Material	Glove thickness (mm)	Breakthrough time (min.)	Standards	
Nitrile	0,3	> 480	EN374-2, EN16523-1, EN388	

Eye protection:

Type	Standards	
Face shield alternatively safety glasses with side shields.	EN166	

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

<i>Physical state:</i>	Liquid
<i>Colour:</i>	Green, Yellowish
<i>Odour / Odour threshold:</i>	Ammonia odor
<i>pH:</i>	7-8
<i>Density (g/cm³):</i>	1.06 (20 °C)
<i>Kinematic viscosity:</i>	No data available.
<i>Particle characteristics:</i>	Does not apply to liquids.

Phase changes

<i>Melting point/Freezing point (°C):</i>	No data available.
<i>Softening point/range (°C):</i>	Does not apply to liquids.
<i>Boiling point (°C):</i>	No data available.
<i>Vapour pressure:</i>	No data available.
<i>Relative vapour density:</i>	No data available.
<i>Decomposition temperature (°C):</i>	No data available.

Data on fire and explosion hazards

<i>Flash point (°C):</i>	No data available.
<i>Flammability (°C):</i>	No data available.
<i>Auto-ignition temperature (°C):</i>	No data available.
<i>Lower and upper explosion limit (% v/v):</i>	No data available.

Solubility

<i>Solubility in water:</i>	Completely soluble
<i>n-octanol/water coefficient (LogKow):</i>	No data available.
<i>Solubility in fat (g/L):</i>	No data available.

9.2. Other information

<i>Other physical and chemical parameters:</i>	No data available.
<i>Oxidizing properties:</i>	No data available.

SECTION 10: STABILITY AND REACTIVITY

10.1. Reactivity

No data available.

10.2. Chemical stability

The product is stable under the conditions, noted in section 7 "Handling and storage".

10.3. Possibility of hazardous reactions

None known.

10.4. Conditions to avoid

None known.

10.5. Incompatible materials

Strong acids, strong bases, strong oxidizing agents, and strong reducing agents.

10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

Acute toxicity

Based on available data, the classification criteria are not met.

Skin corrosion/irritation

Based on available data, the classification criteria are not met.

Serious eye damage/irritation

Causes serious eye irritation.

Respiratory sensitisation

Based on available data, the classification criteria are not met.

Skin sensitisation

May cause an allergic skin reaction.

Germ cell mutagenicity

Based on available data, the classification criteria are not met.

Carcinogenicity

Based on available data, the classification criteria are not met.

Reproductive toxicity

Based on available data, the classification criteria are not met.

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.

11.2. Information on other hazards

Long term effects

Irritation effects: This product contains substances, which may cause irritation upon exposure to skin, eyes or lungs. Exposure may result in an increased absorption potential of other hazardous substances at the area of exposure.

Endocrine disrupting properties

This mixture/product does not contain any substances known to have hormone-disrupting properties in relation to health.

Other information

None known.

SECTION 12: ECOLOGICAL INFORMATION

12.1. ▼ Toxicity

Very toxic to aquatic life with long lasting effects.

12.2. Persistence and degradability

Based on available data, the classification criteria are not met.

12.3. Bioaccumulative potential

Based on available data, the classification criteria are not met.

12.4. Mobility in soil

No data available.

12.5. Results of PBT and vPvB assessment

This mixture/product does not contain any substances known to fulfil the criteria for PBT and vPvB classification.

12.6. Endocrine disrupting properties

This mixture/product does not contain any substances considered to have endocrine-disrupting properties in relation to the environment.

12.7. Other adverse effects

This product contains substances that are toxic to the environment. May result in adverse effects to aquatic organisms.

This product contains substances, which may cause adverse long-term effects to the aquatic environment.

SECTION 13: DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods

Product is covered by the regulations on hazardous waste. (*)

HP 14 – Ecotoxic

Dispose of contents/container to an approved waste disposal plant.
Commission Regulation (EU) No 1357/2014 of 18 December 2014 on waste.

EWC code: 11
WASTES FROM CHEMICAL SURFACE TREATMENT AND COATING OF METALS AND OTHER MATERIALS; NON-FERROUS HYDRO-METALLURGY
11 01
Wastes from chemical surface treatment and coating of metals and other materials (for example galvanic processes, zinc coating processes, pickling processes, etching, phosphating, alkaline degreasing, anodising)
11 01 12
Aqueous rinsing liquids other than those mentioned in 11 01 11

Specific labelling

Not applicable.

Contaminated packing

Packaging containing residues of the product must be disposed of similarly to the product.

SECTION 14: TRANSPORT INFORMATION

	14.1 UN / ID	14.2 UN proper shipping name	14.3 Hazard class(es)	14.4 PG*	14.5 Env**	Other informat ion:
ADR	-	-	-	-	-	-
IMDG	-	-	-	-	-	-
IATA	-	-	-	-	-	-

* Packing group

** Environmental hazards

Additional information

This product is within scope of the regulations of transport of dangerous goods.

14.6. Special precautions for user

Not applicable.

14.7. Maritime transport in bulk according to IMO instruments

No data available.

SECTION 15: REGULATORY INFORMATION

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

Restrictions for application: Restricted to professional users.

<i>Demands for specific education:</i>	People under the age of 18 shall not be exposed to this product.
<i>SEVESO - Categories / dangerous substances:</i>	No specific requirements.
<i>Additional information:</i>	E1 - ENVIRONMENTAL HAZARDS, Qualifying quantity (lower-tier): 100 tonnes / (upper-tier): 200 tonnes
<i>Sources:</i>	Not applicable.
	The Danish Working Environment Authority's executive order no. 1049 of 30 May 2021 on young people's work. Based on Council Directive 94/33 / EC of 22 June 1994 on the protection of young people at work.
	Executive Order no. 372 of 25 April 2016 on control of the risk of major accidents with dangerous substances.
	Commission Regulation (EU) No 1357/2014 of 18 December 2014 on waste.
	Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures (CLP).
	Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH).

15.2. Chemical safety assessment

No

SECTION 16: OTHER INFORMATION

Full text of H-phrases as mentioned in section 3

- H290, May be corrosive to metals.
- H302, Harmful if swallowed.
- H317, May cause an allergic skin reaction.
- H318, Causes serious eye damage.
- H319, Causes serious eye irritation.
- H400, Very toxic to aquatic life.
- H410, Very toxic to aquatic life with long lasting effects.

Abbreviations and acronyms

- ADN = European Provisions concerning the International Carriage of Dangerous Goods by Inland Waterway
- ADR = The European Agreement concerning the International Carriage of Dangerous Goods by Road
- ATE = Acute Toxicity Estimate

BCF = Bioconcentration Factor
CAS = Chemical Abstracts Service
CE = Conformité Européenne (European conformity)
CLP = Classification, Labelling and Packaging Regulation [Regulation (EC) No. 1272/2008]
CSA = Chemical Safety Assessment
CSR = Chemical Safety Report
DMEL = Derived Minimal Effect Level
DNEL = Derived No Effect Level
EINECS = European Inventory of Existing Commercial chemical Substances
ES = Exposure Scenario
EUH statement = CLP-specific Hazard statement
EuPCS = European Product Categorisation System
EWC = European Waste Catalogue
GHS = Globally Harmonized System of Classification and Labelling of Chemicals
GWP = Global warming potential
IARC = International Agency for Research on Cancer (IARC)
IATA = International Air Transport Association
IBC = Intermediate Bulk Container
IMDG = International Maritime Dangerous Goods
LogPow = logarithm of the octanol/water partition coefficient
MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)
OECD = Organisation for Economic Co-operation and Development
PBT = Persistent, Bioaccumulative and Toxic
PNEC = Predicted No Effect Concentration
RID = The Regulations concerning the International Carriage of Dangerous Goods by Rail
RRN = REACH Registration Number
SCL = A specific concentration limit
SVHC = Substances of Very High Concern
STOT-RE = Specific Target Organ Toxicity - Repeated Exposure
STOT-SE = Specific Target Organ Toxicity - Single Exposure
TWA = Time weighted average
UN = United Nations
UVBC = Unknown or variable composition, complex reaction products or of biological materials
VOC = Volatile Organic Compound
vPvB = Very Persistent and Very Bioaccumulative

Additional information

The classification of the mixture in regard of health hazards is in accordance with the calculation methods given by Regulation (EC) No. 1272/2008 (CLP).
The classification of the substance/mixture in regard of environmental hazards are in accordance with the calculation methods given by Regulation (EC) No. 1272/2008 (CLP).

The safety data sheet is validated by

Aktiv Guld A/S

Other



According to EC-Regulation 1907/2006 (REACH), annex II, including changes implemented by EC-Regulation 2020/878

A change (in proportion to the last essential change (first cipher in SDS version, see section 1)) is marked with a triangle.

The information in this safety data sheet applies only to this specific product (mentioned in section 1) and is not necessarily correct for use with other chemicals/products.

It is recommended to hand over this safety data sheet to the actual user of the product.

Information in this safety data sheet cannot be used as a product specification.

Country-language: DK-en