Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH)

(This safety data sheet is for information only as it does not comply with the official language requirements of Article 31 (5) of REACH nor does it provide the national information in sections 8 and 15 as specified in Annex II of REACH.)

DS500 palladium activator

Version number: 1.0 First version: 2025-10-31

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

1.1 Product identifier

Trade name **DS500 palladium activator**

Unique formula identifier **(UFI)** M270-P0CN-H00K-28JH

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

Relevant identified uses

Palladium activator
Professional use
Industrial use

Uses advised against

Do not use for squirting or spraying
Do not use for products which come into direct contact with the skin
Do not use for private purposes (household)

1.3 Details of the supplier of the safety data sheet

Bungard Elektronik GmbH & CO KG
Rilke Str. 1
51570 Windeck
Germany

Telephone: +49 2292928280
Telefax: +49 22929282829

e-mail (competent person) info@bungard.de

1.4 Emergency telephone number

Emergency information +49 6764 303 178 19

As above or nearest toxicological information centre.

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008 (CLP)

Classification				
Section	**Hazard class**	**Category**	**Hazard class and category**	**Hazard statement**
2.16	substance or mixture corrosive to metals	1	Met. Corr. 1	H290
3.1O	acute toxicity (oral)	4	Acute Tox. 4	H302
3.1I	acute toxicity (inhal.)	4	Acute Tox. 4	H332
3.2	skin corrosion/irritation	1B	Skin Corr. 1B	H314
3.3	serious eye damage/eye irritation	1	Eye Dam. 1	H318
3.4S	skin sensitisation	1	Skin Sens. 1	H317
3.8R	specific target organ toxicity - single exposure (respiratory tract irritation)	3	STOT SE 3	H335
3.9	specific target organ toxicity - repeated exposure	2	STOT RE 2	H373
4.1A	hazardous to the aquatic environment - acute hazard	1	Aquatic Acute 1	H400
4.1C	hazardous to the aquatic environment - chronic hazard	2	Aquatic Chronic 2	H411

For full text of abbreviations: see SECTION 16

The most important adverse physicochemical, human health and environmental effects

Skin corrosion produces an irreversible damage to the skin; namely, visible necrosis through the epidermis and into the dermis.
Delayed or immediate effects can be expected after short or long-term exposure.
Spillage and fire water can cause pollution of watercourses.

2.2 Label elements

Labelling according to Regulation (EC) No 1272/2008 (CLP)

Signal word danger

Pictograms

GHS05, GHS07, GHS08, GHS09

Hazard statements

H290 May be corrosive to metals.
H302+H332 Harmful if swallowed or if inhaled.
H314 Causes severe skin burns and eye damage.
H317 May cause an allergic skin reaction.
H335 May cause respiratory irritation.
H373 May cause damage to organs through prolonged or repeated exposure.
H410 Very toxic to aquatic life with long lasting effects.

Precautionary statements

P260	Do not breathe mist/vapours/spray.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P301+P330+P331	IF SWALLOWED: rinse mouth. Do NOT induce vomiting.
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.
P310	Immediately call a POISON CENTER/doctor.

Hazardous ingredients for labelling

tin(II) chloride dihydrate
hydrochloric acid
palladium dichloride

2.3 Other hazards

Results of PBT and vPvB assessment

Does not contain a PBT-/vPvB-substance at a concentration of ≥ 0,1%.

Endocrine disrupting properties

Does not contain an endocrine disruptor (ED) at a concentration of ≥ 0,1%.

SECTION 3: Composition/information on ingredients

3.1 Substances

Not relevant (mixture).

3.2 Mixtures

Description of the mixture

Hazardous ingredients

Name of substance	Identifier	Wt%	Classification acc. to GHS	Pictograms	Notes
hydrochloric acid	CAS No 7647-01-0 EC No 231-595-7 Index No 017-002-01-X REACH Reg. No 01-2119484862-27-xxxx	12 – 50	Met. Corr. 1 / H290 Skin Corr. 1B / H314 Eye Dam. 1 / H318 STOT SE 3 / H335		B GHS-HC IOELV
tin(II) chloride dihydrate	CAS No 10025-69-1 EC No 231-868-0	< 45	Met. Corr. 1 / H290 Acute Tox. 4 / H302 Acute Tox. 4 / H332 Skin Corr. 1B / H314 Eye Dam. 1 / H318		IOELV

Hazardous ingredients

Name of sub-stance	Identifier	Wt%	Classification acc. to GHS	Pictograms	Notes
	REACH Reg. No 01-2119971277-28-0000		Skin Sens. 1 / H317 STOT SE 3 / H335 STOT RE 2 / H373 Aquatic Chronic 3 / H412		
palladium dichloride	CAS No 7647-10-1 EC No 231-596-2 REACH Reg. No 01-2120139168-54-0001	< 1.5	Met. Corr. 1 / H290 Acute Tox. 4 / H302 Eye Dam. 1 / H318 Skin Sens. 1 / H317 Aquatic Acute 1 / H400 Aquatic Chronic 1 / H410		-

Notes

B: Some substances (acids, bases, etc.) are placed on the market in aqueous solutions at various concentrations and, therefore, these solutions require different classification and labelling since the hazards vary at different concentrations. In Part 3 entries with Note B have a general designation of the following type: 'nitric acid ... %'. In this case the supplier must state the percentage concentration of the solution on the label. Unless otherwise stated, it is assumed that the percentage concentration is calculated on a weight/weight basis.

GHS-HC: Harmonised classification (the classification of the substance corresponds to the entry in the list according to 1272/2008/EC, Annex VI)

IOELV: Substance with a community indicative occupational exposure limit value

Name of substance	Specific Conc. Limits	M-Factors	ATE	Exposure route
tin(II) chloride dihydrate	-	-	500 $^{mg}/_{kg}$ 2 $^{mg}/_{l}$/4h	oral inhalation: dust/mist
hydrochloric acid	Met. Corr. 1; H290: C ≥ 0.1 % Skin Corr. 1B; H314: C ≥ 25 % Skin Irrit. 2; H315: 10 % ≤ C < 25 % Eye Dam. 1; H318: C ≥ 25 % Eye Irrit. 2; H319: 10 % ≤ C < 25 % STOT SE 3; H335: C ≥ 10 %	-	-	-
palladium dichloride	-	M-factor (acute) = 100 M-factor (chronic) = 10	576 $^{mg}/_{kg}$	oral

Remarks

For full text of H-phrases: see SECTION 16

SECTION 4: First aid measures

4.1 Description of first aid measures

General notes

Self-protection of the first aider.
Remove affected person from the danger area and lay down.
Do not leave affected person unattended.
Take off immediately all contaminated clothing.
In all cases of doubt, or when symptoms persist, seek medical advice.

Following inhalation

Provide fresh air.
If breathing is irregular or stopped, immediately seek medical assistance and start first aid actions.
In case of respiratory tract irritation, consult a physician.

Following skin contact

After contact with skin, take off immediately all contaminated clothing, and wash immediately with plenty of water.
Call a physician immediately. Causes poorly healing wounds.

Following eye contact

Rinse cautiously with water for several minutes.
In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
Remove contact lenses, if present and easy to do. Continue rinsing.

Following ingestion

Rinse mouth. Do not induce vomiting.
Get medical advice/attention if you feel unwell.

Notes for the doctor

None.

4.2 Most important symptoms and effects, both acute and delayed

Cough, pain, choking, and breathing difficulties.

4.3 Indication of any immediate medical attention and special treatment needed

None.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media

water spray, alcohol resistant foam, fire extinguishing powder, carbon dioxide (CO_2), co-ordinate fire-fighting measures to the fire surroundings

Unsuitable extinguishing media

water jet

5.2 Special hazards arising from the substance or mixture

Hazardous decomposition products: Section 10.
Substance or mixture corrosive to metals.

Hazardous combustion products

hydrogen chloride (HCl)

5.3 Advice for firefighters

Non-combustible.
Keep containers cool with water spray.
In case of fire and/or explosion do not breathe fumes.
Co-ordinate firefighting measures to the fire surroundings.
Do not allow firefighting water to enter drains or water courses.
Collect contaminated firefighting water separately.
Fight fire with normal precautions from a reasonable distance.

Special protective equipment for firefighters

chemical protection suit, Self-contained breathing apparatus (EN 133)

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel

Remove persons to safety.
Ventilate affected area.
Wearing of suitable protective equipment (including personal protective equipment referred to under Section 8 of the safety data sheet) to prevent any contamination of skin, eyes and personal clothing.

For emergency responders

Wear breathing apparatus if exposed to vapours/dust/spray/gases.

6.2 Environmental precautions

Keep away from drains, surface and ground water.
Retain contaminated washing water and dispose of it.
If substance has entered a water course or sewer, inform the responsible authority.

6.3 Methods and material for containment and cleaning up

Advice on how to contain a spill

Bunding.
Covering of drains.

Advice on how to clean up a spill

Collect spillage.
Absorbent material (e.g. sand, diatomaceous earth, acid binder, universal binder, sawdust, etc.).

Appropriate containment techniques

Use of adsorbent materials.

Other information relating to spills and releases

Place in appropriate containers for disposal.
Ventilate affected area.

6.4 Reference to other sections

Hazardous combustion products: see section 5.
Personal protective equipment: see section 8.
Incompatible materials: see section 10.
Disposal considerations: see section 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Do not get in eyes, on skin, or on clothing.
Do not breathe vapour/spray.

Measures to prevent fire as well as aerosol and dust generation

Use local and general ventilation.

Handling of incompatible substances or mixtures

Do not mix with alkali.

Measures to protect the environment

Avoid release to the environment.
Do not empty into drains; dispose of this material and its container at hazardous or special waste collection point.

Advice on general occupational hygiene

Do not eat, drink and smoke in work areas.
Wash hands after use.
Preventive skin protection (barrier creams/ointments) is recommended.
Remove contaminated clothing and protective equipment before entering eating areas.

7.2 Conditions for safe storage, including any incompatibilities

Flammability hazards

None.

Incompatible substances or mixtures

Incompatible materials: see section 10.

Protect against external exposure, such as

frost, contact with air/oxygen

Consideration of other advice

Keep away from food, drink and animal feedingstuffs.

Ventilation requirements

Keep any substance that emits harmful vapours or gases in a place that allows these to be permanently extracted.
Provision of sufficient ventilation.

Specific designs for storage rooms or vessels

Keep container tightly closed and in a well-ventilated place.
Store locked up.
Store in corrosive resistant container with a resistant inner liner.

Packaging compatibilities

Only packagings which are approved (e.g. acc. to ADR) may be used.

7.3 Specific end use(s)

No information available.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational exposure limit values (Workplace Exposure Limits)

Country	Name of agent	CAS No	Identifier	TWA [ppm]	TWA [mg/m³]	STEL [ppm]	STEL [mg/m³]	Notation	Source
EU	tin, inorganic compounds	10025-69-1	IOELV	-	2	-	-	Sn	91/322/EEC
EU	hydrogen chloride	7647-01-0	IOELV	5	8	10	15	-	2000/39/EC

Notation

Sn	calculated as Sn (tin)
STEL	short-term exposure limit: a limit value above which exposure should not occur and which is related to a 15-minute period (unless otherwise specified)
TWA	time-weighted average (long-term exposure limit): measured or calculated in relation to a reference period of 8 hours time-weighted average (unless otherwise specified)

Human health values

Relevant DNELs of components

Name of substance	CAS No	End-point	Threshold level	Protection goal, route of exposure	Used in	Exposure time
tin(II) chloride dihydrate	10025-69-1	DNEL	8 mg/m³	human, inhalatory	worker (industry)	chronic - systemic effects
tin(II) chloride dihydrate	10025-69-1	DNEL	8 mg/m³	human, inhalatory	worker (industry)	chronic - local effects
tin(II) chloride dihydrate	10025-69-1	DNEL	0.11 mg/kg bw/day	human, dermal	worker (industry)	chronic - systemic effects
hydrochloric acid	7647-01-0	DNEL	8 mg/m³	human, inhalatory	worker (industry)	chronic - local effects

Environmental values

Relevant PNECs of components

Name of substance	CAS No	Endpoint	Threshold level	Environmental compartment
tin(II) chloride dihydrate	10025-69-1	PNEC	3 µg/l	freshwater
tin(II) chloride dihydrate	10025-69-1	PNEC	0.035 mg/l	marine water
tin(II) chloride dihydrate	10025-69-1	PNEC	5 µg/l	water
tin(II) chloride dihydrate	10025-69-1	PNEC	1.04 mg/l	sewage treatment plant

Relevant PNECs of components				
Name of substance	**CAS No**	**Endpoint**	**Threshold level**	**Environmental compartment**
				(STP)
tin(II) chloride dihydrate	10025-69-1	PNEC	58 $^{mg}/_{kg}$	freshwater sediment
tin(II) chloride dihydrate	10025-69-1	PNEC	5.8 $^{mg}/_{kg}$	marine sediment
tin(II) chloride dihydrate	10025-69-1	PNEC	68 $^{µg}/_{kg}$	soil

8.2 Exposure controls

Appropriate engineering controls

Use local and general ventilation.

Individual protection measures (personal protective equipment)

Eye/face protection

Wear eye/face protection. (EN 166)

Hand protection

Protective gloves		
Material	**Material thickness**	**Breakthrough times of the glove material**
no information available	no information available	no information available

Wear suitable gloves.
Chemical protection gloves are suitable, which are tested according to EN 374.
Check leak-tightness/impermeability prior to use.
For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves.

Body protection

Protective clothing against liquid chemicals.
(EN 13832, EN 340, EN 13034, EN 14605).

Respiratory protection

In case of inadequate ventilation wear respiratory protection.
During spraying wear suitable respiratory equipment.
Type: E (against acidic gases like sulphur dioxide or hydrogen chloride, colour code: Yellow).
(EN 136, EN 140, EN 14387, EN 143, EN 149).

Environmental exposure controls

Use appropriate container to avoid environmental contamination.
Keep away from drains, surface and ground water.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical state	liquid
Colour	black
Odour	characteristic
Melting point/freezing point	not determined
Boiling point or initial boiling point and boiling range	not determined
Flammability	non-combustible
Lower and upper explosion limit	not determined
Flash point	not determined
Auto-ignition temperature	not determined
Decomposition temperature	not relevant
pH (value)	<1
Kinematic viscosity	not determined
Dynamic viscosity	not determined
Solubility(ies)	
Water solubility	miscible in any proportion
Partition coefficient n-octanol/water (log value)	not relevant (inorganic)
Vapour pressure	not determined
Density and/or relative density	
Density	1.42 $^{g}/_{cm^3}$ at 20 °C
Relative vapour density	information on this property is not available
Particle characteristics	not relevant (liquid)

9.2 Other information

Information with regard to physical hazard classes	there is no additional information
Other safety characteristics	there is no additional information

SECTION 10: Stability and reactivity

10.1 Reactivity

Substance or mixture corrosive to metals.

10.2 Chemical stability

The material is stable under normal ambient and anticipated storage and handling conditions of temperature and pressure.
See below "Conditions to avoid".

10.3 Possibility of hazardous reactions

Do not mix with alkali.

10.4 Conditions to avoid

Contact with air/oxygen.

10.5 Incompatible materials

bases, oxidisers, metals

Release of flammable materials with:

light metals (due to the release of hydrogen in an acid/alkaline medium)

10.6 Hazardous decomposition products

Hydrogen chloride (HCl).
Hazardous combustion products: see section 5.

SECTION 11: Toxicological information

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

Classification procedure

If not otherwise specified the classification is based on:
Ingredients of the mixture (additivity formula).

Classification according to GHS (1272/2008/EC, CLP)

Acute toxicity

Test data are not available for the complete mixture.
Harmful if swallowed.
Harmful if inhaled.

Acute toxicity of components

Name of substance	CAS No	Exposure route	End-point	Value	Species	Method	Source
tin(II) chloride dihydrate	10025-69-1	oral	LD50	2,275 $^{mg}/_{kg}$	rat, male	OECD 423	ECHA
tin(II) chloride dihydrate	10025-69-1	inhalation: dust/mist	LC50	2 $^{mg}/_{l}$/4h	rat	OECD 436	ECHA
palladium dichloride	7647-10-1	oral	LD50	576 $^{mg}/_{kg}$	rat	-	ECHA Chem

Skin corrosion/irritation

Causes severe burns.

Serious eye damage/eye irritation

Causes serious eye damage.

Respiratory or skin sensitisation
Skin sensitisation

May cause an allergic skin reaction.

Respiratory sensitisation

Classification could not be established because:
Data are lacking, inconclusive, or conclusive but not sufficient for classification.

Germ cell mutagenicity

Classification could not be established because:
Data are lacking, inconclusive, or conclusive but not sufficient for classification.

Carcinogenicity

Classification could not be established because:
Data are lacking, inconclusive, or conclusive but not sufficient for classification.

Reproductive toxicity

Classification could not be established because:
Data are lacking, inconclusive, or conclusive but not sufficient for classification.

Specific target organ toxicity - single exposure

May cause respiratory irritation.

Specific target organ toxicity - repeated exposure

May cause damage to organs through prolonged or repeated exposure.

Aspiration hazard

Shall not be classified as presenting an aspiration hazard.

11.2 Information on other hazards

Endocrine disrupting properties

Does not contain an endocrine disruptor (ED) at a concentration of ≥ 0,1%.

SECTION 12: Ecological information

12.1 Toxicity

Aquatic toxicity (acute)

Very toxic to aquatic organisms.

Aquatic toxicity (acute) of components

Name of substance	CAS No	Endpoint	Exposure time	Value	Species	Method	Source
tin(II) chloride dihydrate	10025-69-1	LC50	48 h	55 $^{mg}/_{l}$	daphnia magna	OECD 202	ECHA

Name of substance	CAS No	Endpoint	Exposure time	Value	Species	Method	Source
tin(II) chloride dihydrate	10025-69-1	ErC50	48 h	0.5 mg/l	algae (Scenedesmus quadricauda)	-	ECHA
tin(II) chloride dihydrate	10025-69-1	ErC50	72 h	0.21 mg/l	algae (Scelletonema costatum)	-	ECHA
hydrochloric acid	7647-01-0	LC50	48 h	240 – 260 mg/l	aquatic invertebrates	-	GESTIS
hydrochloric acid	7647-01-0	LC50	96 h	11.5 – 20.4 mg/l	bluegill (Lepomis macrochirus)	-	ECHA
palladium dichloride	7647-10-1	LC50	96 h	306 µg/l	rainbow trout (Oncorhynchus mykiss)	OECD Guideline 203	ECHA Chem
palladium dichloride	7647-10-1	EC50	48 h	35.19 µg/l	daphnia magna	OECD Guideline 202	ECHA Chem

Aquatic toxicity (chronic)

Toxic to aquatic life with long lasting effects.

Aquatic toxicity (chronic) of components

Name of substance	CAS No	Endpoint	Exposure time	Value	Species	Method	Source
tin(II) chloride dihydrate	10025-69-1	NOEC	21 d	0.18 mg/l	daphnia magna	OECD 211	ECHA
tin(II) chloride dihydrate	10025-69-1	NOEC	120 h	5.64 mg/l	zebra fish	OECD 212	ECHA
tin(II) chloride dihydrate	10025-69-1	NOEC	8 d	0.053 mg/l	algae (Scenedesmus quadricauda)	-	ECHA
tin(II) chloride dihydrate	10025-69-1	LOEC	120 h	11.28 mg/l	zebra fish	OECD 212	ECHA
tin(II) chloride dihydrate	10025-69-1	reproductive output 16%	21 d	0.35 mg/l	daphnia magna	OECD 211	ECHA
tin(II) chloride dihydrate	10025-69-1	growth rate (ErCx) 10%	96 h	0.03 mg/l	cyanobacterium Anaboena doilium	-	ECHA
palladium dichloride	7647-10-1	EC50	3 h	61 mg/l	microorganisms	OECD Guideline 209	ECHA Chem

12.2 Persistence and degradability

Biodegradation

The study does not need to be conducted, the relevant substances in the mixture are inorganic.

Persistence

The study does not need to be conducted, the relevant substances in the mixture are inorganic.

12.3 Bioaccumulative potential

n-octanol/water (log KOW)	not relevant (inorganic)

12.4 Mobility in soil

No data available.

12.5 Results of PBT and vPvB assessment

Does not contain a PBT-/vPvB-substance at a concentration of ≥ 0,1%.

12.6 Endocrine disrupting properties

Does not contain an endocrine disruptor (ED) at a concentration of ≥ 0,1%.

12.7 Other adverse effects

No data available.

Remarks

Wassergefährdungsklasse, WGK (water hazard class): 3.
Keep away from drains, surface and ground water.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

This material and its container must be disposed of as hazardous waste.

Sewage disposal-relevant information

Do not empty into drains.

Waste treatment of containers/packagings

Completely emptied packages can be recycled.
Handle contaminated packages in the same way as the substance itself.

Remarks

Please consider the relevant national or regional provisions.

SECTION 14: Transport information

14.1 UN number or ID number

ADR/RID/ADN	UN3264
IMDG-Code	UN3264
ICAO-TI	UN3264

14.2 UN proper shipping name

	ADR/RID/ADN	CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S.
	IMDG-Code	CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S.
	ICAO-TI	Corrosive liquid, acidic, inorganic, n.o.s.
	Technical name (hazardous ingredients)	hydrochloric acid, palladium dichloride
14.3	**Transport hazard class(es)**	
	ADR/RID/ADN	8
	IMDG-Code	8
	ICAO-TI	8
14.4	**Packing group**	
	ADR/RID/ADN	II
	IMDG-Code	II
	ICAO-TI	II
14.5	**Environmental hazards**	hazardous to the aquatic environment
	Environmentally hazardous substance (aquatic environment)	palladium dichloride
14.6	**Special precautions for user**	-
14.7	**Maritime transport in bulk according to IMO instruments**	-

14.8 **Information for each of the UN Model Regulations**

Transport of dangerous goods by road, rail and inland waterway (ADR/RID/ADN)
Additional information

Particulars in the transport document	UN3264, CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S., (hydrochloric acid, palladium dichloride), 8, II, (E), environmentally hazardous
Classification code	C1
Danger label(s)	8, fish and tree

Environmental hazards	yes (hazardous to the aquatic environment)
Special provisions (SP)	274
Excepted quantities (EQ)	E2
Limited quantities (LQ)	1 L

Transport category (TC)	2
Tunnel restriction code (TRC)	E
Hazard identification No	80

European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways (ADN) Additional information

Number of cones/blue lights	0

International Maritime Dangerous Goods Code (IMDG) Additional information

Marine pollutant	yes (hazardous to the aquatic environment) (palladium dichloride)
Danger label(s)	8, fish and tree

Special provisions (SP)	274
Excepted quantities (EQ)	E2
Limited quantities (LQ)	1 L
EmS	F-A, S-B
Stowage category	B
Segregation group	1 - Acids.

International Civil Aviation Organization (ICAO-IATA/DGR) Additional information

Environmental hazards	yes (hazardous to the aquatic environment)
Danger label(s)	8

Special provisions (SP)	A3
Excepted quantities (EQ)	E2
Limited quantities (LQ)	0,5 L

SECTION 15: Regulatory information

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

Relevant provisions of the European Union (EU)

Restrictions according to REACH, Annex XVII

Name	Name acc. to inventory	CAS No	Restriction
DS500 palladium activator	this product meets the criteria for classification in accordance with Regulation No 1272/2008/EC	-	R3
hydrochloric acid	substances in tattoo inks and permanent make-up	-	R75

Legend

R3 1. Shall not be used in:
- ornamental articles intended to produce light or colour effects by means of different phases, for example in ornamental lamps and ashtrays,
- tricks and jokes,
- games for one or more participants, or any article intended to be used as such, even with ornamental aspects,
2. Articles not complying with paragraph 1 shall not be placed on the market.
3. Shall not be placed on the market if they contain a colouring agent, unless required for fiscal reasons, or perfume, or both, if they:
— can be used as fuel in decorative oil lamps for supply to the general public, and
— present an aspiration hazard and are labelled with H304.
4. Decorative oil lamps for supply to the general public shall not be placed on the market unless they conform to the European Standard on Decorative oil lamps (EN 14059) adopted by the European Committee for Standardisation (CEN).
5. Without prejudice to the implementation of other Union provisions relating to the classification, labelling and packaging of substances and mixtures, suppliers shall ensure, before the placing on the market, that the following requirements are met:
(a) lamp oils, labelled with H304, intended for supply to the general public are visibly, legibly and indelibly marked as follows: “Keep lamps filled with this liquid out of the reach of children”; and, by 1 December 2010, “Just a sip of lamp oil – or even sucking the wick of lamps – may lead to life-threatening lung damage”;
(b) grill lighter fluids, labelled with H304, intended for supply to the general public are legibly and indelibly marked by 1 December 2010 as follows: ‘Just a sip of grill lighter fluid may lead to life threatening lung damage’;
(c) lamps oils and grill lighters, labelled with H304, intended for supply to the general public are packaged in black opaque containers not exceeding 1 litre by 1 December 2010.’;

R75 1. Shall not be placed on the market in mixtures for use for tattooing purposes, and mixtures containing any such substances shall not be used for tattooing purposes, after 4 January 2022 if the substance or substances in question is or are present in the following circumstances:
(a) in the case of a substance classified in Part 3 of Annex VI to Regulation (EC) No 1272/2008 as carcinogen category 1A, 1B or 2, or germ cell mutagen category 1A, 1B or 2, the substance is present in the mixture in a concentration equal to or greater than 0,00005 % by weight;
(b) in the case of a substance classified in Part 3 of Annex VI to Regulation (EC) No 1272/2008 as reproductive toxicant category 1A, 1B or 2, the substance is present in the mixture in a concentration equal to or greater than 0,001 % by weight;
(c) in the case of a substance classified in Part 3 of Annex VI to Regulation (EC) No 1272/2008 as skin sensitiser category 1, 1A or 1B, the substance is present in the mixture in a concentration equal to or greater than 0,001 % by weight;
(d) in the case of a substance classified in Part 3 of Annex VI to Regulation (EC) No 1272/2008 as skin corrosive category 1, 1A, 1B or 1C or skin irritant category 2, or as serious eye damage category 1 or eye irritant category 2, the substance is present in the mixture in a concentration equal to or greater than:
(i) 0,1 % by weight, if the substance is used solely as a pH regulator;
(ii) 0,01 % by weight, in all other cases;
(e) in the case of a substance listed in Annex II to Regulation (EC) No 1223/2009 (*1), the substance is present in the mixture in a concentration equal to or greater than 0,00005 % by weight;
(f) in the case of a substance for which a condition of one or more of the following kinds is specified in column g (Product type, Body parts) of the table in Annex IV to Regulation (EC) No 1223/2009, the substance is present in the mixture in a concentration equal to or greater than 0,00005 % by weight:

Legend

(i) “Rinse-off products”;
(ii) “Not to be used in products applied on mucous membranes”;
(iii) “Not to be used in eye products”;
(g) in the case of a substance for which a condition is specified in column h (Maximum concentration in ready for use preparation) or column i (Other) of the table in Annex IV to Regulation (EC) No 1223/2009, the substance is present in the mixture in a concentration, or in some other way, that does not accord with the condition specified in that column;
(h) in the case of a substance listed in Appendix 13 to this Annex, the substance is present in the mixture in a concentration equal to or greater than the concentration limit specified for that substance in that Appendix.
2. For the purposes of this entry use of a mixture “for tattooing purposes” means injection or introduction of the mixture into a person’s skin, mucous membrane or eyeball, by any process or procedure (including procedures commonly referred to as permanent make-up, cosmetic tattooing, micro-blading and micro-pigmentation), with the aim of making a mark or design on his or her body.
3. If a substance not listed in Appendix 13 falls within more than one of points (a) to (g) of paragraph 1, the strictest concentration limit laid down in the points in question shall apply to that substance. If a substance listed in Appendix 13 also falls within one or more of points (a) to (g) of paragraph 1, the concentration limit laid down in point (h) of paragraph 1 shall apply to that substance.
4. By way of derogation, paragraph 1 shall not apply to the following substances until 4 January 2023:
(a) Pigment Blue 15:3 (CI 74160, EC No 205-685-1, CAS No 147-14-8);
(b) Pigment Green 7 (CI 74260, EC No 215-524-7, CAS No 1328-53-6).
5. If Part 3 of Annex VI to Regulation (EC) No 1272/2008 is amended after 4 January 2021 to classify or re-classify a substance such that the substance then becomes caught by point (a), (b), (c) or (d) of paragraph 1 of this entry, or such that it then falls within a different one of those points from the one within which it fell previously, and the date of application of that new or revised classification is after the date referred to in paragraph 1 or, as the case may be, paragraph 4 of this entry, that amendment shall, for the purposes of applying this entry to that substance, be treated as taking effect on the date of application of that new or revised classification.
6. If Annex II or Annex IV to Regulation (EC) No 1223/2009 is amended after 4 January 2021 to list or change the listing of a substance such that the substance then becomes caught by point (e), (f) or (g) of paragraph 1 of this entry, or such that it then falls within a different one of those points from the one within which it fell previously, and the amendment takes effect after the date referred to in paragraph 1 or, as the case may be, paragraph 4 of this entry, that amendment shall, for the purposes of applying this entry to that substance, be treated as taking effect from the date falling 18 months after entry into force of the act by which that amendment was made.
7. Suppliers placing a mixture on the market for use for tattooing purposes shall ensure that, after 4 January 2022, the mixture is marked with the following information:
(a) the statement “Mixture for use in tattoos or permanent make-up”;
(b) a reference number to uniquely identify the batch;
(c) the list of ingredients in accordance with the nomenclature established in the glossary of common ingredient names pursuant to Article 33 of Regulation (EC) No 1223/2009, or in the absence of a common ingredient name, the IUPAC name. In the absence of a common ingredient name or IUPAC name, the CAS and EC number. Ingredients shall be listed in descending order by weight or volume of the ingredients at the time of formulation. “Ingredient” means any substance added during the process of formulation and present in the mixture for use for tattooing purposes. Impurities shall not be regarded as ingredients. If the name of a substance, used as ingredient within the meaning of this entry, is already required to be stated on the label in accordance with Regulation (EC) No 1272/2008, that ingredient does not need to be marked in accordance with this Regulation;
(d) the additional statement “pH regulator” for substances falling under point (d)(i) of paragraph 1;
(e) the statement "Contains nickel. Can cause allergic reactions." if the mixture contains nickel below the concentration limit specified in Appendix 13;
(f) the statement "Contains chromium (VI). Can cause allergic reactions." if the mixture contains chromium (VI) below the concentration limit specified in Appendix 13;
(g) safety instructions for use insofar as they are not already required to be stated on the label by Regulation (EC) No 1272/2008.
The information shall be clearly visible, easily legible and marked in a way that is indelible.
The information shall be written in the official language(s) of the Member State(s) where the mixture is placed on the market, unless the Member State(s) concerned provide(s) otherwise.
Where necessary because of the size of the package, the information listed in the first subparagraph, except for point (a), shall be included instead in the instructions for use.

Legend

Before using a mixture for tattooing purposes, the person using the mixture shall provide the person undergoing the procedure with the information marked on the package or included in the instructions for use pursuant to this paragraph.
8. Mixtures that do not contain the statement “Mixture for use in tattoos or permanent make-up” shall not be used for tattooing purposes.
9. This entry does not apply to substances that are gases at temperature of 20 °C and pressure of 101,3 kPa, or generate a vapour pressure of more than 300 kPa at temperature of 50 °C, with the exception of formaldehyde (CAS No 50-00-0, EC No 200-001-8).
10. This entry does not apply to the placing on the market of a mixture for use for tattooing purposes, or to the use of a mixture for tattooing purposes, when placed on the market exclusively as a medical device or an accessory to a medical device, within the meaning of Regulation (EU) 2017/745, or when used exclusively as a medical device or an accessory to a medical device, within the same meaning. Where the placing on the market or use may not be exclusively as a medical device or an accessory to a medical device, the requirements of Regulation (EU) 2017/745 and of this Regulation shall apply cumulatively.

List of substances subject to authorisation (REACH, Annex XIV) / SVHC - candidate list

None of the ingredients are listed.

Seveso Directive

2012/18/EU (Seveso III)				
No	**Dangerous substance/hazard categories**	**Qualifying quantity (tonnes) for the application of lower and upper-tier requirements**		**Notes**
E1	environmental hazards (hazardous to the aquatic environment, cat. 1)	100	200	56)

Notation

56) hazardous to the Aquatic Environment in category Acute 1 or Chronic 1

Directive on the restriction of the use of certain hazardous substances in electrical and electronic equipment (RoHS)

None of the ingredients are listed.

Regulation on the marketing and use of explosives precursors

None of the ingredients are listed.

Regulation on drug precursors

Name of substance	CAS No	Classification	CN Code	Threshold level
hydrochloric acid	7647-01-0	Category 3	2806 10 00	-

Regulation on substances that deplete the ozone layer (ODS)

None of the ingredients are listed.

Regulation concerning the export and import of hazardous chemicals (PIC)

None of the ingredients are listed.

Regulation on persistent organic pollutants (POP)

None of the ingredients are listed.

15.2 Chemical Safety Assessment

No Chemical Safety Assessment has been carried out for this mixture by the supplier.

SECTION 16: Other information

Abbreviations and acronyms

Abbr.	Descriptions of used abbreviations
2000/39/EC	Commission Directive establishing a first list of indicative occupational exposure limit values in implementation of Council Directive 98/24/EC
91/322/EEC	Commission Directive on establishing indicative limit values by implementing Council Directive 80/1107/EEC
Acute Tox.	Acute toxicity
ADN	Accord européen relatif au transport international des marchandises dangereuses par voies de navigation intérieures (European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways)
ADR	Accord relatif au transport international des marchandises dangereuses par route (Agreement concerning the International Carriage of Dangerous Goods by Road)
ADR/RID/ADN	Agreements concerning the International Carriage of Dangerous Goods by Road/Rail/Inland Waterways (ADR/RID/ADN)
Aquatic Acute	Hazardous to the aquatic environment - acute hazard
Aquatic Chronic	Hazardous to the aquatic environment - chronic hazard
ATE	Acute Toxicity Estimate
CAS	Chemical Abstracts Service (service that maintains the most comprehensive list of chemical substances)
CLP	Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures
CN Code	Combined Nomenclature
DGR	Dangerous Goods Regulations (see IATA/DGR)
DNEL	Derived No-Effect Level
EC50	Effective Concentration 50 %. The EC50 corresponds to the concentration of a tested substance causing 50 % changes in response (e.g. on growth) during a specified time interval
EC No	The EC Inventory (EINECS, ELINCS and the NLP-list) is the source for the seven-digit EC number, an identifier of substances commercially available within the EU (European Union)
ED	Endocrine disruptor
EINECS	European Inventory of Existing Commercial Chemical Substances
ELINCS	European List of Notified Chemical Substances
EmS	Emergency Schedule
ErC50	≡ EC50: in this method, that concentration of test substance which results in a 50 % reduction in either growth (EbC50) or growth rate (ErC50) relative to the control
Eye Dam.	Seriously damaging to the eye

Abbr.	Descriptions of used abbreviations
Eye Irrit.	Irritant to the eye
GHS	"Globally Harmonized System of Classification and Labelling of Chemicals" developed by the United Nations
IATA	International Air Transport Association
IATA/DGR	Dangerous Goods Regulations (DGR) for the air transport (IATA)
ICAO	International Civil Aviation Organization
ICAO-TI	Technical instructions for the safe transport of dangerous goods by air
IMDG	International Maritime Dangerous Goods Code
IMDG-Code	International Maritime Dangerous Goods Code
index No	The Index number is the identification code given to the substance in Part 3 of Annex VI to Regulation (EC) No 1272/2008
IOELV	Indicative occupational exposure limit value
LC50	Lethal Concentration 50%: the LC50 corresponds to the concentration of a tested substance causing 50 % lethality during a specified time interval
LD50	Lethal Dose 50 %: the LD50 corresponds to the dose of a tested substance causing 50 % lethality during a specified time interval
LOEC	Lowest Observed Effect Concentration
Met. Corr.	Substance or mixture corrosive to metals
M-factor	Means a multiplying factor. It is applied to the concentration of a substance classified as hazardous to the aquatic environment acute category 1 or chronic category 1, and is used to derive by the summation method the classification of a mixture in which the substance is present
NLP	No-Longer Polymer
NOEC	No Observed Effect Concentration
PBT	Persistent, Bioaccumulative and Toxic
PNEC	Predicted No-Effect Concentration
ppm	Parts per million
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals
RID	Règlement concernant le transport International ferroviaire des marchandises Dangereuses (Regulations concerning the International carriage of Dangerous goods by Rail)
Skin Corr.	Corrosive to skin
Skin Irrit.	Irritant to skin
Skin Sens.	Skin sensitisation
STEL	Short-term exposure limit
STOT RE	Specific target organ toxicity - repeated exposure
STOT SE	Specific target organ toxicity - single exposure
SVHC	Substance of Very High Concern
TWA	Time-weighted average

Abbr.	Descriptions of used abbreviations
vPvB	Very Persistent and very Bioaccumulative

Key literature references and sources for data

Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures, Version 2023/707/EU.
Regulation (EC) No. 1907/2006 (REACH), amended by 2020/878/EU
Transport of dangerous goods by road, rail and inland waterway (ADR/RID/ADN).
International Maritime Dangerous Goods Code (IMDG).
Dangerous Goods Regulations (DGR) for the air transport (IATA).

Classification procedure

Physical and chemical properties.
Health hazards.
Environmental hazards.
The method for classification of the mixture is based on ingredients of the mixture (additivity formula).

List of relevant phrases (code and full text as stated in section 2 and 3)

Code	Text
H290	May be corrosive to metals.
H302	Harmful if swallowed.
H314	Causes severe skin burns and eye damage.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H332	Harmful if inhaled.
H335	May cause respiratory irritation.
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.
H411	Toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.

Responsible for the safety data sheet

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Disclaimer

This information is based upon the present state of our knowledge.
This SDS has been compiled and is solely intended for this product.