

## Safety Data Sheet

according to Regulation (EC) No 1907/2006 (REACH)  
Classifications according to Regulation (EC) No 1272/2008.  
Printdate 24 Feb 2025

## 1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

### 1.1. Product name:

D4-Diquat dibromide

### 1.1. Catalog No.:

676891

### 1.2. Relevant identified uses of the substance or mixture

Identified: Laboratory chemical  
uses: R&D

### 1.3. Uses advised against:

HPC Standards GmbH  
Am Wieseneck 7

04451 Cunnersdorf  
Deutschland

Tel. +49 34291 3372-36  
Fax. +49 34291 3372-39  
contact@hpc-standards.com

### 1.4. Emergency telephone number

HPC Standards Tel. +49 34291 3372-36  
This number is only available during office hours.

## 2. HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture  
Regulation (EC) No 1272/2008  
Acute toxicity - Oral Category 4 - (H302)  
Acute toxicity - Inhalation (Dusts/Mists) Category 2 - (H330)  
Skin corrosion/irritation Category 2 - (H315)  
Serious eye damage/eye irritation Category 2 - (H319)  
Skin sensitisation Category 1 - (H317)  
Specific target organ toxicity -- single exposure Category 3 - (H335)  
Specific target organ toxicity -- repeated exposure Category 1 - (H372)  
Acute aquatic toxicity Category 1 - (H400)  
Chronic aquatic toxicity Category 1 - (H410)

### 2.2. Label elements

#### 2.2.1. Pictogram



## 2.2.2.

### 2.2. Label elements

Contains diquat dibromide D4

Signal word

Danger

Hazard statements

H302 - Harmful if swallowed

H315 - Causes skin irritation

H317 - May cause an allergic skin reaction

H319 - Causes serious eye irritation

H330 - Fatal if inhaled

H335 - May cause respiratory irritation

H372 - Causes damage to organs through prolonged or repeated exposure

H410 - Very toxic to aquatic life with long lasting effects

Precautionary Statements - EU (§28, 1272/2008)

P260 - Do not breathe dust/fume/gas/mist/vapours/spray

P273 - Avoid release to the environment

P280 - Wear protective gloves and eye/face protection

P304 + P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing

P310 - Immediately call a POISON CENTER or doctor

P391 - Collect spillage

P403 + P233 - Store in a well-ventilated place. Keep container tightly closed

### 2.3. Other hazards

No information available.

This substance does not meet the PBT/vPvB criteria of REACH, annex XIII.

This product does not contain any known or suspected endocrine disruptors.

Chemical name diquat dibromide D4

EU - REACH (1907/2006) - Article 59(1)

- Candidate List of Substances of Very

High Concern (SVHC) for Authorisation

EU - REACH (1907/2006) - Endocrine

Disruptor Assessment List of

Substances

## 3. COMPOSITION/INFORMATION ON INGREDIENTS

### 3.1 Substances

Chemical name diquat dibromide D4

Weight-% 100

REACH registrationnumber: -

EC No (EU Index No): -

Classification according to Regulation (EC) No.1272/2008 [CLP]: Acute Tox. 2 (H330) Acute Tox. 4 (H302) Skin Irrit. 2

(H315) Eye Irrit. 2 (H319) Skin Sens. 1 (H317) STOT SE 3 (H335) STOT RE 1 (H372) Aquatic Acute 1 (H400) Aquatic

Chronic 1 (H410)

Specific concentration limit (SCL): -

M-Factor:-

M-Factor (long-term):-

Full text of H- and EUH-phrases: see section 16

Acute Toxicity Estimate

No information available

Additional information

This product contains a stable isotope.

This product does not contain candidate substances of very high concern at a concentration  $\geq 0.1\%$  (Regulation (EC) No. 1907/2006 (REACH), Article 59)

### 3.1.1. Formula

C12H8Br2D4N2

### 3.1.2. Molecular Weight (g/mol)

348.00

### 3.1.3. CAS-No.

## 4. FIRST AID MEASURES

### 4.1. Description of first aid measures

General advice Show this safety data sheet to the doctor in attendance. Immediate medical attention is required.

Inhalation If breathing has stopped, give artificial respiration. Get medical attention immediately.

Remove to fresh air. Do not breathe dust. Do not use mouth-to-mouth method if victim ingested or inhaled the substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. If breathing is difficult, (trained personnel should) give oxygen. IF exposed or concerned: Get medical advice/attention. Get medical attention immediately if symptoms occur.

Eye contact Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes.

Remove contact lenses, if present and easy to do. Continue rinsing. Keep eye wide open while rinsing. Do not rub affected area. Get medical attention if irritation develops and persists.

Skin contact May cause an allergic skin reaction. In the case of skin irritation or allergic reactions see a doctor. Wash off immediately with soap and plenty of water for at least 15 minutes.

Ingestion Do NOT induce vomiting. Rinse mouth. Never give anything by mouth to an unconscious person. Call a doctor or poison control centre immediately.

Self-protection of the first aider Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination. Do not breathe dust. Do not use mouth-to-mouth method if victim ingested or inhaled the substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Use personal protective equipment as required. See section 8 for more information. Avoid contact with skin, eyes or clothing.

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

Symptoms Coughing and/ or wheezing. Difficulty in breathing. Itching. Rashes. Hives. May cause redness and tearing of the eyes. Burning sensation.

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

Note to doctors May cause sensitisation in susceptible persons. Treat symptomatically.

## 5. FIRE-FIGHTING MEASURES

### 5.1. Extinguishing media

Suitable Extinguishing Media Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Large Fire CAUTION: Use of water spray when fighting fire may be inefficient.

Unsuitable extinguishing media Do not scatter spilled material with high pressure water streams.

### 5.2. Special hazards arising from the substance or mixture

Specific hazards arising from the chemical

Product is or contains a sensitiser. May cause sensitisation by skin contact.

### 5.3. Advice for firefighters

Special protective equipment and

precautions for fire-fighters  
Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear.  
Use personal protection equipment

## 6. ACCIDENTAL RELEASE MEASURES

### 6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions Ensure adequate ventilation. Avoid contact with skin, eyes or clothing. Avoid generation of dust. Do not breathe dust. Use personal protective equipment as required. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.

Other information Refer to protective measures listed in Sections 7 and 8.

For emergency responders Use personal protection recommended in Section 8.

### 6.2. Environmental precautions

Environmental precautions Prevent further leakage or spillage if safe to do so. Should not be released into the environment. Do not allow to enter into soil/subsoil. Prevent product from entering drains.

### 6.3. Methods and material for containment and cleaning up

Methods for containment Prevent further leakage or spillage if safe to do so.

Methods for cleaning up Take up mechanically, placing in appropriate containers for disposal.

Prevention of secondary hazards Clean contaminated objects and areas thoroughly observing environmental regulations.

### 6.4. Reference to other sections

Reference to other sections See section 8 for more information. See section 13 for more information.

## 7. HANDLING AND STORAGE

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### 8.1. Control parameters

Exposure Limits This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.

Biological occupational exposure limits

This product, as supplied, does not contain any hazardous materials with biological limits established by the region specific regulatory bodies

Derived No Effect Level (DNEL) No information available.

Predicted No Effect Concentration (PNEC)

No information available.

### 8.2. Exposure controls

Personal protective equipment

Eye/face protection Avoid contact with eyes. Wear safety glasses with side shields (or goggles).

Hand protection Wear suitable gloves. Impervious gloves. The protective gloves to be used must comply with the specifications of EC Directive 89/686/EEC and the related standard EN374. Wear protective Viton(TM) gloves.

Skin and body protection Wear suitable protective clothing. Long sleeved clothing.

Respiratory protection When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.

General hygiene considerations Avoid contact with skin, eyes or clothing. Do not eat, drink or smoke when using this product. Wash hands before breaks and after work. Wear suitable gloves and eye/face protection. Do not breathe dust. Take off contaminated clothing and wash it before reuse.

Contaminated work clothing should not be allowed out of the workplace. Regular cleaning of equipment, work area and clothing is recommended. Wash hands before breaks and immediately after handling the product.  
Environmental exposure controls Do not allow into any sewer, on the ground or into any body of water.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties  
Physical state Solid  
Appearance Solid  
Colour beige  
Odour Odourless.  
Odour threshold No information available  
Property Values Remarks o Method  
Melting point / freezing point No data available None known  
Initial boiling point and boiling range No data available None known  
Flammability No data available None known  
Flammability Limit in Air None known  
Upper flammability or explosive limits  
No data available  
Lower flammability or explosive limits  
No data available  
Flash point No data available None known  
Autoignition temperature No data available None known  
Decomposition temperature None known  
pH No data available None known  
pH (as aqueous solution) No data available No information available  
Kinematic viscosity No data available None known  
Dynamic viscosity No data available None known  
Water solubility Slightly soluble None known  
Solubility(ies) DMSO, Methanol, slightly soluble  
Partition coefficient No data available None known  
Vapour pressure No data available None known  
Relative density No data available None known  
Bulk density No data available  
Liquid Density No data available  
Relative vapour density No data available None known  
Particle characteristics  
Particle Size No information available  
Particle Size Distribution No information available  
9.2. Other information  
Molecular weight 365.07  
Molecular formula C<sub>12</sub> H<sub>9</sub> D<sub>3</sub> Br<sub>2</sub> N<sub>2</sub> · H<sub>2</sub>O  
9.2.1. Information with regards to physical hazard classes  
Not applicable  
9.2.2. Other safety characteristics  
No information available

## 10. STABILITY AND REACTIVITY

10.1. Reactivity  
Reactivity No information available.  
10.2. Chemical stability  
Stability Stable under normal conditions.  
Explosion data  
Sensitivity to mechanical impact None.  
Sensitivity to static discharge None.  
10.3. Possibility of hazardous reactions

Possibility of hazardous reactions None under normal processing.

10.4. Conditions to avoid

Conditions to avoid Excessive heat.

10.5. Incompatible materials

Incompatible materials Strong acids. Strong bases. Strong oxidising agents.

Hazardous decomposition products None known based on information supplied.

## 11. TOXICOLOGICAL INFORMATION

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

Information on likely routes of exposure

Product Information

Inhalation Specific test data for the substance or mixture is not available. Fatal if inhaled. (based on components). May cause irritation of respiratory tract.

Eye contact Specific test data for the substance or mixture is not available. Causes serious eye irritation. (based on components). May cause redness, itching, and pain.

Skin contact May cause sensitisation by skin contact. Specific test data for the substance or mixture is not available. Repeated or prolonged skin contact may cause allergic reactions with susceptible persons. (based on components). Causes skin irritation.

Ingestion Specific test data for the substance or mixture is not available. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhoea. Harmful if swallowed. (based on components).

Symptoms related to the physical, chemical and toxicological characteristics

Symptoms Coughing and/ or wheezing. Difficulty in breathing. Itching. Rashes. Hives. Redness. May cause redness and tearing of the eyes.

Numerical measures of toxicity

Acute toxicity

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Skin corrosion/irritation Classification based on data available for ingredients. Causes skin irritation. May cause skin irritation.

Serious eye damage/eye irritation Classification based on data available for ingredients. Causes serious eye irritation.

Respiratory or skin sensitisation May cause an allergic skin reaction.

Germ cell mutagenicity No information available.

Carcinogenicity No information available.

Reproductive toxicity No information available.

STOT - single exposure May cause respiratory irritation.

STOT - repeated exposure Causes damage to organs through prolonged or repeated exposure.

Aspiration hazard No information available.

11.2. Information on other hazards

11.2.1. Endocrine disrupting properties

Endocrine disrupting properties No information available.

11.2.2. Other information

Other adverse effects No information available.

## 12. ECOLOGICAL INFORMATION

12.1. Toxicity

Ecotoxicity Very toxic to aquatic life with long lasting effects.

12.2. Persistence and degradability

Persistence and degradability No information available.

12.3. Bioaccumulative potential

Bioaccumulation No information available.

12.4. Mobility in soil

Mobility in soil No information available.

12.5. Results of PBT and vPvB assessment

PBT and vPvB assessment This substance is not considered to be persistent, bioaccumulating nor toxic (PBT). This substance is not considered to be very persistent nor very bioaccumulating (vPvB).

12.6. Endocrine disrupting properties

Endocrine disrupting properties No information available.

12.7. Other adverse effects

No information available

### 13. DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods  
Waste from residues/unused  
products

Dispose of in accordance with local regulations. Dispose of waste in accordance with  
environmental legislation.

Contaminated packaging Do not reuse empty containers.

### 14. TRANSPORT INFORMATION

IATA

14.1 UN number or ID number UN2781

14.2 UN proper shipping name Bipyrilidium pesticide, solid, toxic (diquat dibromide D4)

14.3 Transport hazard class(es) 6.1

14.4 Packing group II

Description UN2781, Bipyrilidium pesticide, solid, toxic (diquat dibromide D4), 6.1, II

14.5 Environmental hazards Yes

14.6 Special precautions for user

Special Provisions A3, A5

ERG Code 6L

IMDG

14.1 UN number or ID number UN2781

14.2 UN proper shipping name Bipyrilidium pesticide, solid, toxic (diquat dibromide D4)

14.3 Transport hazard class(es) 6.1

14.4 Packing group II

Description UN2781, Bipyrilidium pesticide, solid, toxic, 6.1, II, Marine pollutant

14.5 Marine pollutant P

Environmental hazards Yes

14.6 Special precautions for user

Special Provisions 61, 274

EmS-No F-A, S-A No information available

14.7 Maritime transport in bulk

according to IMO instruments

No information available

RID

14.1 UN number or ID number UN2781

14.2 UN proper shipping name Bipyrilidium pesticide, solid, toxic (diquat dibromide D4)

14.3 Transport hazard class(es) 6.1

14.4 Packing group II

Description UN2781, Bipyrilidium pesticide, solid, toxic (diquat dibromide D4), 6.1, II, Environmentally  
Hazardous

14.5 Environmental hazards Yes

14.6 Special precautions for user

Special Provisions 61, 274, 648

Classification code T7

ADR

14.1 UN number or ID number UN2781

14.2 UN proper shipping name Bipyrilidium pesticide, solid, toxic (diquat dibromide D4)

14.3 Transport hazard class(es) 6.1

14.4 Packing group II

Description UN2781, Bipyrilidium pesticide, solid, toxic (diquat dibromide D4), 6.1, II, (D/E),  
Environmentally Hazardous

14.5 Environmental hazards Yes

14.6 Special precautions for user

Special Provisions 61, 274, 648

Classification code T7

Tunnel restriction code (D/E)



## 15. REGULATORY INFORMATION

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture  
Water hazard class (WGK) non-hazardous to water (nwg)

Poland SDS created according to the following Polish regulation: Act of February 25, 2011 on chemical substances and their mixtures (Journal of Laws of 2018, item 143, as amended). Regulation (EC) No 1907/2006 of the European Parliament and of the Council on the Registration, Evaluation, Authorization and Restriction of Chemicals (REACH), establishing the European Chemicals Agency (EC) as amended. Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labeling and packaging of substances and mixtures, as amended. Regulation of the Minister of Health of 10 August 2012 on the criteria and method of classifying chemical substances and their mixtures (Journal of Laws of 2012, item 1018). Regulation of the Minister of Health of 20 April 2012 on labeling packaging of hazardous substances and mixtures and some mixtures (Journal of Laws of 2012, item 445). Regulation of the Minister of Family, Labor and Social Policy of 12 June 2018 on the maximum allowable concentrations and intensities of factors harmful to health in the work environment (Journal of Laws of 2018, item 1286). Announcement of the Minister of Economy, Labor and Social Policy of August 28, 2003 on the publication of the unified text of the Ordinance of the Minister of Labor and Social Policy on general health and safety at work regulations (Journal of Laws of 2003, No. 169, item 1650). Regulation of the Minister of Health of 30 December 2004 on occupational safety and health related to the presence of chemical agents in the workplace (Journal of Laws of 2005, No. 11, item 86). Act of December 14, 2012 on waste (Journal of Laws of 2013, item 21). Regulation of the Minister of Health of December 30, 2004 on occupational health and safety related to the presence of chemical agents in the workplace (Journal U. of 2005, No. 11, item 86). Waste Act of December 14, 2012 (Journal of Laws of 2013, item 21). Act of 13 June 2013 on the management of packaging and packaging waste, Journal of Laws 2013, item 888). Government statement of September 24, 2002 - European Agreement on the International Carriage of Dangerous Goods by Road (ADR) (Journal of Laws No. 194, item 1629 and Journal of Laws of 2003, No. 207, item 2013 and 2014).

European Union

Take note of Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work.

Authorisations and/or restrictions on use:

This product does not contain substances subject to authorisation (Regulation (EC) No. 1907/2006 (REACH), Annex XIV)

This

product does not contain substances subject to restriction (Regulation (EC) No. 1907/2006 (REACH), Annex XVII)

DIRECTIVE (EU) 2021/1187 on the marketing and use of explosives precursors

Not applicable

Persistent Organic Pollutants

Not applicable

Dangerous substance category per Seveso Directive (2012/18/EU)

H2 - ACUTE TOXIC

E1 - Hazardous to the Aquatic Environment in Category Acute 1 or Chronic 1

Ozone-depleting substances (ODS) regulation (EC) 1005/2009

Not applicable

International Inventories

TSCA Complies under research and development exemption or is regulated by a different government agency.

DSL/NDL Contact supplier for inventory compliance status

EINECS/ELINCS Contact supplier for inventory compliance status

ENCS Contact supplier for inventory compliance status

IECSC Contact supplier for inventory compliance status

KECL Contact supplier for inventory compliance status

PICCS Contact supplier for inventory compliance status

AIC Contact supplier for inventory compliance status

Legend:

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

DSL/NDL - Canadian Domestic Substances List/Non-Domestic Substances List

EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances

ENCS - Japan Existing and New Chemical Substances

IECSC - China Inventory of Existing Chemical Substances

KECL - Korean Existing and Evaluated Chemical Substances

PICCS - Philippines Inventory of Chemicals and Chemical Substances

AICS - Australian Inventory of Chemical Substances

15.2. Chemical safety assessment

Chemical Safety Report A Chemical Safety Assessment is not required for this substance



## 16. OTHER INFORMATION

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. For lab use only!