

SAFETY DATA SHEET

Create Date: 2020-07-14

SECTION 1: COMPANY AND PRODUCT INFORMATION

1.1 Product identifiers

Product name : DAB Tetrahydrochloride
Cat. Number : ZXB-09-300
CAS number : 7411-49-6
Synonyms : 3,3'-Diaminobenzidine Tetrahydrochloride,
Diaminobenzidine

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

Identified uses : Laboratory chemicals, manufacture of substances

1.3 Details of the supplier of the safety data sheet

Address : Hinter den Gärten 56
89173 Lonsee
Germany

Email : info@zellx.de
Phone : +49(0)731 55211521
Fax : +49(0)731 55211719

1.4 Emergency telephone number

Emergency phone : +49(0)731 55211521

SECTION 2: HAZARDS IDENTIFICATION

2.1 Classification of substance or mixture

Acute toxicity, Oral (Category 4), H302.
Eye irritation (Category 2A), H319.
Germ cell mutagenicity (Category 2), H341.
Carcinogenicity (Category 1B), H350.

2.2 GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)

Acute toxicity, Oral (Category 4), H302.
Eye irritation (Category 2A), H319.
Germ cell mutagenicity (Category 2), H341.
Carcinogenicity (Category 1B), H350.

2.3 Label elements and precautionary statements

Pictogram : 

Signal word : Danger, Health Hazard

Hazard statement(s) : H302 Harmful if swallowed.
H319 Causes serious eye irritation.
H341 Suspected of causing genetic defects.
H350 May cause cancer.

Precautionary statement(s) : P201 Obtain special instructions before use.
P202 Do not handle until all safety precautions have been read and understood.
P264 Wash skin thoroughly after handling.
P270 Do not eat, drink or smoke when using this product.
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.
P301 + P312 + P330 IF SWALLOWED: Call a POISON CENTER or doctor/ physician if you feel unwell. Rinse mouth.
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P308 + P313 IF exposed or concerned: Get medical advice/ attention.
P337 + P313 If eye irritation persists: Get medical advice/ attention.
P405 Store locked up.
P501 Dispose of contents/ container to an approved waste disposal plant

2.4 Hazards not otherwise classified (HNOC) or not covered by GHS

No unclassified hazards known.

2.5 NFPA Rating

Health hazard : 2
Fire hazard : 0
Reactivity hazard : 0

2.6 HMIS Rating

Health hazard : 2
Chronic health hazard : *
Reactivity hazard : 0
Flammability : 0
Physical hazard : 0

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances

Substance	CAS#	EC#	Concentration
DAB Tetrahydrochloride M.F: C ₁₂ H ₁₄ N ₄ · 4HCl M.W: 360.11 g/mol	7411-49-6	231-018-9	100%

3.2 Hazardous components & classification

Acute Tox. 4; Eye Irrit. 2A; Muta. 2; Carc. 1B; H302, H319, H341, H350

SECTION 4: FIRST AID MEASURES

4.1 Description of first aid measures

General advice

Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

In case of inhalation

If inhaled, move person to fresh air and monitor breathing. If not breathing, give artificial ventilation. Consult a physician if symptoms are severe or persistent.

In case of skin contact

Immediately wash with excess soap and water. If spilled on clothing, remove all affected clothing. Consult a physician if symptoms are severe or persistent.

In case of eye contact

Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

In case of ingestion

Only induce vomiting if recommended by medical personnel. If subject is unconscious, do not give anything by mouth. If conscious, rinse mouth with water. Consult a physician if symptoms are severe or persistent.

4.2 Most important symptoms and effects, both acute and delayed

All known important symptoms are described in Section 2 and/or Section 11. No other important symptoms to report.

4.3 Indication of any immediate medical attention and special treatment needed

No special treatment indicated. Provide treatment in accordance with exhibited systems.

SECTION 5: FIREFIGHTING MEASURES

5.1 Suitable extinguishing media

Water spray, alcohol-resistant foam, dry chemical, and carbon dioxide are suitable

5.2 Unsuitable extinguishing media

Not available

5.3 Special hazards arising from the substance

No special hazards are known to exist regarding combustion of this product.

5.4 Advice for firefighters

Wear protective gear, such as self-contained breathing apparatus, if necessary

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Use personal protective equipment. Avoid dust formation. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid breathing dust.

For personal protection see section 8

6.2 Environmental precautions

Prevent product from entering public sewers and waterways.

6.3 Methods and material for containment and cleaning up

Sweep up any spilled product. Keep in suitable, closed containers for disposal.

For proper disposal see section 13

SECTION 7: HANDLING AND STORAGE

7.1 Precautions for safe handling

Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Further processing of solid materials may result in the formation of combustible dusts. The potential for combustible dust formation should be taken into consideration before additional processing occurs. Provide appropriate exhaust ventilation at places where dust is formed.

For precautions see section 2

7.2 Conditions for safe storage, including any incompatibilities

Storage conditions : Store in cool, well ventilated area. Keep container tightly closed. Light Sensitive. Product is hygroscopic. Take precautions to avoid contact with atmospheric moisture. Store under Argon. Store at -20 °C

Incompatible materials : Not available

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

Contains no substances with occupational exposure limit values.

8.2 Engineering controls

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

8.3 Personal protective equipment

Eye/face protection : Safety glasses with side-shields conforming to EN166 Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin protection : Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

Body protection : Complete suit protecting against chemicals, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Respiratory protection : Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type N100 (US) or type P3 (EN 143) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Control of environmental exposure : Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

General hygiene considerations : When using do not eat, drink or smoke. Regular cleaning of equipment, work area and clothing is recommended. Avoid contact with skin, eyes or clothing. Wash hands thoroughly after handling. Keep away from food, drink and animal feeding stuffs.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

- a) Appearance : Grey
- b) Physical states : Powder
- c) Odor : Not available
- d) Odor threshold : Not available
- e) Melting point : 300 °C (572 °F)
- f) Boiling point range : Not available
- g) pH : Not available
- h) Density : Not available
- i) Flash point : Not available
- j) Evaporation rate : Not available
- k) Flammability : Not available
- l) Upper/lower flammability or explosive limits: : Not available
- m) Vapor pressure : Not available
- n) Vapor density : Not available
- o) Relative density : Not available
- p) Water solubility : Soluble
- q) Partition coefficient:n-octanol/water : Not available
- r) Autoignition temperature : Not available
- s) Decomposition temperature : Not available
- t) Kinematic viscosity : Not available
- u) Explosive properties : Not available
- v) Oxidizing properties : Not available
- w) Solubility in other solvents : Not available
- x) Surface tension : Not available

SECTION 10: STABILITY AND REACTIVITY

10.1 Reactivity

No special reactivity is known. Non-reactive under normal use.

10.2 Chemical stability

Product is stable when stored as recommended.

10.3 Stability note(s)

No special or unusual instability known.

10.4 Polymerization

No known polymerization possible.

10.5 Possibility of hazardous reactions

No known hazardous reactions are possible.

10.6 Incompatible materials

Strong oxidizing agents.

10.7 Hazardous decomposition products

Carbon oxides, Nitrogen oxides (NO_x)

SECTION 11: TOXICOLOGICAL INFORMATION

11.1 Acute toxicity

LD50 Oral : No toxicity data available.

LD50 Dermal : No toxicity data available.

LC50 Inhalation : No toxicity data available.

11.2 Skin corrosion/irritation

No skin/corrosion irritation data available.

11.3 Serious eye damage/eye irritation

No eye damage/irritation data available.

11.4 Respiratory or skin sensitization

No sensitization data available.

11.5 Germ cell mutagenicity

No mutagenicity data available.

11.6 Carcinogenicity

IARC : Product and components are not regulated by the IARC.

ACGIH : Product and components are not regulated by the ACGIH.

NTP : Product and components are not regulated by the NTP.

OSHA : Product and components are not regulated by OSHA.

11.7 Reproductive toxicity

No reproductive toxicity data available.

11.8 Specific target organ toxicity – single exposure

No specific organ toxicity data available.

11.9 Specific target organ toxicity – repeated exposure

No specific organ toxicity data available.

11.10 Aspiration hazard

No aspiration hazard data available.

11.11 Additional Information

RTECS: No RTECS data available.

SECTION 12: ECOLOGICAL INFORMATION

12.1 Toxicity

No ecological toxicity data available.

12.2 Aquatic toxicity

No aquatic toxicity data available.

12.3 Persistence and degradability

No persistence/degradability data available.

12.4 Bioaccumulative potential

No bioaccumulation data available.

12.5 Mobility in soil

No soil mobility data available.

12.6 Results of PBT and vPvB assessment

PBT/vPvB assessment not available as chemical safety assessment is not required/was not conducted.

12.7 Other adverse effect

No other adverse effect data available.

SECTION 13: DISPOSAL CONSIDERATIONS

13.1 Product

Disposal should be in accordance with applicable regional, national and local laws and regulations.

13.2 Packaging

Do not reuse container.

13.3 Recommendation

Waste codes should be assigned by the user based on the application for which the product was used.

SECTION 14: TRANSPORTATION INFORMATION

14.1 DOT (US)

Not a dangerous good under DOT(US) regulations.

14.2 IMDG

Not a dangerous good under IMDG regulations.

14.3 IATA

Not a dangerous good under IATA regulations.

SECTION 15: REGULATORY INFORMATION

15.1 SARA

SSARA 302: This product and components are not subject to the reporting requirements of SARA Title III, Section 302.

SARA 313: This product does not contain any components with known CAS numbers that exceed the threshold reporting levels established by SARA Title III, Section 313.

SARA 311/312: No SARA Hazard

15.2 Clean water act (CWA)

No chemicals are present in this product that are subject to regulation under the Clean Water Act.

15.3 Right to know components

Massachusetts : No chemicals are present which require disclosure under the Massachusetts Right to Know Act.

Pennsylvania : No chemicals are present which require disclosure under the Pennsylvania Right to Know Act.

New Jersey : No chemicals are present which require disclosure under the New Jersey Right to Know Act.

California : This product contains no chemicals which are known to the State of
proposition 65 California to cause cancer, or birth defects or other reproductive harm.
components

SECTION 16: OTHER INFORMATION

16.1 Disclaimer

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16.2 Preparation Information

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