



**Leinco
Technologies, Inc.**

www.leinco.com

Date Revised: 02/10/2026
Version: 3.0

Material Safety Data Sheet

Product and Information

Product Description: 3,3'-Diaminobenzidine (DAB) Substrate Kit

Product Identification Number: D100

Manufacturer: Leinco Technologies, Inc
410 Axminster Drive
St. Louis, MO 63026
USA

Emergency Telephone: 800-538-1145
636-230-9477

Section 1 – Component 1 Identification

Component Name: DAB Solution (3,3'-Diaminobenzidine)

CAS #: 91-95-2

Formula: C₁₂H₁₄N₄

Synonyms:

(1,1'-Biphenyl)-3,3',4,4'-tetramine (9CI) *

3,3'-Diaminobenzidene *

3,3',4,4'-Diphenyltetramine *

3,3',4,4'-Tetraaminobiphenyl *

3,3',4,4'-Tetraaminodiphenyl

Section 2 – Hazards Identification

Emergency Overview: Harmful
Skin, eye and respiratory tract irritant.
Harmful if swallowed.

Potential Health Effects Summary:

Exposure may cause skin, eye, and respiratory irritation. Inhalation may cause difficulty in breathing and lung congestion.



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Product Hazard:

HMIS RATING

HEALTH: 2
FLAMMABILITY: 0
REACTIVITY: 1

NFPA RATING

HEALTH: 2
FLAMMABILITY: 0
REACTIVITY: 1

Section 3 – First Aid Measures

Inhalation: If inhaled, remove to fresh air. If not breathing give artificial respiration. If breathing is difficult, give oxygen.

Eye Contact: In case of contact with eyes, flush with copious amounts of water for at least 15 minutes. Assure adequate flushing by separating the eyelids with fingers. Call a physician.

Skin Contact: In case of skin contact, flush with copious amounts of water for at least 15 minutes. Remove contaminated clothing and shoes. Call a physician.

Ingestion: If ingested, wash mouth out with water. If irritation or discomfort occurs, seek medical attention.

Section 4 – Storage, Handling, Disposal and Safety Measures

Fire/Combustion Hazards: No combustion or flammability issues are expected from this product. In the event this product accidentally comes in contact with flame it is recommended to wear self-contained breathing apparatus while extinguishing the fire.

Storage and Stability: This product is stable under normal temperatures and pressures, but should be stored at -20°C. Keep away from incompatible chemicals. Do not mix with materials not suggested in data sheet.

Handling: Gloves, eyewear, cotton filter mask and standard laboratory protective clothing are recommended. *Always use safe laboratory practices.*

Disposal: Dissolve or mix with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber.



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Personal Protection: Safety glasses or chemical goggles should be worn to prevent eye contact. Impervious gloves, such as latex or equivalent, should be worn to prevent skin contact.

Section 1 – Component 2 Identification

Component Name: Hydrogen Peroxide solution

CAS#: 7722-84-1

Formula: H₂O₂

Section 2 – Hazards Identification

Emergency Overview: Target Organ(s): Eyes. Skin

Route of Exposure:

Skin Contact: May cause skin irritation

Skin Absorption: May be harmful if absorbed through the skin.

Eye Contact: May cause eye irritation.

Inhalation

HMIS RATING

HEALTH: 0

FLAMMABILITY: 0

REACTIVITY: 1

NFPA RATING

HEALTH: 0

FLAMMABILITY: 0

REACTIVITY: 1

Section 3 – First Aid Measures

Inhalation: If product is inhaled, move exposed individual to fresh air. If breathing becomes difficult, call a physician.

Eye Contact: If product enters eyes, wash eyes gently under running water for 15 minutes or longer making sure that the eye lids are held open. If pain or irritation occurs, obtain medical attention.

Skin Contact: In case of skin contact, immediately wash skin with soap and copious amounts of water.

Ingestion: If ingested, wash mouth out with water provided person is conscious. Call a physician.



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Section 4 – Storage, Handling, Disposal and Safety Measures

Fire/Combustion Hazards: No combustion or flammability issues are expected from this product.

Protective Equipment: Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes. **Specific Hazard(s):** Emits toxic fumes under fire conditions.

Storage and Stability: Suitable: Keep tightly closed. Store at 2-8°C

Handling: User Exposure: Avoid inhalation. Avoid contact with eyes, skin and clothing. Avoid prolonged or repeat exposure.

Disposal: Absorb with sand or vermiculite and place in closed containers for disposal. Ventilate area and wash spill site after material pickup is complete.

Personal Protection: Respiratory: Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU). Respiratory protection is not required. Where protection is desired, use multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges

Hand: Protective gloves.

Eye: Chemical safety goggles.

Section 1 – Component 3 Identification

Component Name: Buffer Stock Solution

CAS No.: Not applicable

Chemical Formula: Not applicable to mixtures
Trade secret formulation

Section 2 – Hazards Identification

Emergency Overview: Caution: Avoid contact and inhalation.

HMIS RATING

HEALTH: 1

FLAMMABILITY: 0



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REACTIVITY: 1

NFPA RATING

HEALTH: 1

FLAMMABILITY: 0

Route of Exposure:

Skin Contact: May cause skin irritation.

Skin Absorption: May be harmful if absorbed through the skin.

Eye Contact: May cause eye irritation.

Inhalation: May be harmful if inhaled. Material may be irritating to mucous membranes and upper respiratory tract.

Ingestion: May be harmful if swallowed.

Section 3 – First Aid Measures

Inhalation: If inhaled, remove to fresh air. If breathing becomes difficult, call a physician.

Eye Contact: In case of contact with eyes, flush with copious amounts of water for at least 15 minutes. Assure adequate flushing by separating the eyelids with fingers. Call a physician.

Skin Contact: In case of contact, immediately wash skin with soap and copious amounts of water.

Ingestion: If swallowed, wash out mouth with water provided person is conscious. Call a physician.

Section 4 – Storage, Handling, Disposal and Safety Measures

Fire/Combustion Hazards: Protective Equipment: Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes. Specific Hazard(s): Emits toxic fumes under fire conditions.

Storage and Stability: Keep tightly sealed and store at 2-8°C. Keep away from incompatible chemicals. Do not mix with materials not suggested in data sheet.

Handling: User Exposure: Avoid inhalation. Avoid contact with eyes, skin, and clothing. Avoid prolonged or repeated exposure.

Disposal: Contact a licensed professional waste disposal service to dispose of this material. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber. Observe all federal, state, and local environmental regulations.

Personal Protection:

Respiratory: Use respirators and components tested and approved under appropriate government



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standards such as NIOSH (US) or CEN (EU). Respiratory protection is not required. Where protection from nuisance levels of dusts are desired, use type N95 (US) or type P1 (EN 143) dust masks.

Hand: Protective gloves.

Eye: Chemical safety goggles.

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