

## Section 1. Product and Company Identification

**Product Name:** TMB (3,3', 5,5' tetramethylbenzidine dihydrochloride) Peroxidase Substrate Kit

**Catalog No.:** SK-4400 – Reagent 1

*Any additional components in this kit are considered non-hazardous and, therefore, non-classifiable in accordance with the GHS Safety Data Sheet guidelines.*

### Manufacturer/Supplier USA:

Vector Laboratories, Inc.

30 Ingold Road

Burlingame, CA 94010

United States

Tel: (650) 697-3600 Fax: (650) 697-0339

Email: [vector@vectorlabs.com](mailto:vector@vectorlabs.com)

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## Section 2. Hazards Identification

### GHS Classification:

Flammable Liquids - Category 3, H226

Acute Toxicity, Inhalation - Category 4, H332

Acute Toxicity, Dermal - Category 4, H312

Eye Irritation – Category 2A, H312

Reproductive Toxicity – Category 1B, H360

### GHS Label:



**Signal Word:** Danger

### Hazard Statements:

H226 - Flammable liquid and vapor.

H312 + H332 - Harmful in contact with skin or if inhaled.

H319 – Causes serious eye irritation.

H360 – May damage fertility or unborn child.

### Precautionary Statements:

Keep away from heat/sparks/open flames/hot surfaces- No smoking. Wear protective gloves/protective clothing/eye protection/face protection. Wash skin thoroughly after handling. IF ON SKIN (or hair):

Date of Issue: 08/03/20

Version 1.0

Previous Date of Issue: 04/15/15

Previous Version: N/A

Immediately, take off all contaminated clothing, Rinse skin with water/shower. IF INHALED: Remove person to fresh air. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If exposed or concerned: Get medical advice/attention. If eye irritation persists: Get medical advice/attention.

## Section 3. Composition/Information on Ingredients

Reagent 1 is dissolved in the component listed below.

Component:	CAS#:	EC#:	% by weight:
Dimethylformamide	68-12-2	200-679-5	>90%

## Section 4. First Aid Measures

**Inhalation:** Remove to fresh air. Obtain medical attention.

**Skin contact:** Wash thoroughly with water for at least 15 minutes. Obtain medical attention.

**Eye Contact:** Wash thoroughly with water for at least 15 minutes. Obtain medical attention.

**Ingestion:** Do not induce vomiting. If person is conscious, wash out mouth with water. Obtain medical attention.

## Section 5. Fire Fighting Measures

**Suitable extinguishing media:** Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

**Special protective equipment:** Use respirator. Toxic gases can be evolved.

## Section 6. Accidental Release Measures

Wear protective clothing to prevent contact with eyes and skin. Ensure adequate ventilation. Collect on absorbent material and dispose of according to federal, state and local environmental regulations. Do not let product enter drains.

## Section 7. Handling and Storage

**Handling:** Use only with adequate ventilation. Wear eye protection and compatible chemical-resistant gloves. Handle in accordance with good industrial hygiene and safety practice.

**Storage:** Keep container tightly closed and store in a refrigerator.

## Section 8. Exposure Controls/Personal Protection

**Exposure limits:** Consult local authorities for acceptable exposure limits.

**Engineering controls:** Use enclosures, local exhaust ventilation or other engineering controls to keep airborne levels below recommended exposure limits.

**Personal protection:**

**Hand protection** - Compatible chemical-resistant gloves.

**Eye protection** - Chemical safety goggles.

**Skin protection** - Lab coat.

Date of Issue: 08/03/20

Version 1.0

Previous Date of Issue: 04/15/15

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## Section 9. Physical and Chemical Properties

**Appearance:** Liquid

**Odor:** Amine-like

**pH:** Not determined

**Boiling point:** 153 °C (307 °F)

**Melting point:** -61 °C (-78 °F)

**Flash Point:** 58 °C (136 °F)

**Autoflammability:** Not determined.

**Vapor pressure:** Not determined.

**Relative density:** Not determined.

**Solubility:** Water miscible.

## Section 10. Stability and Reactivity

**Chemical stability:** Stable under recommended storage conditions.

**Conditions to avoid:** Not determined.

**Materials to avoid:** Strong oxidizers.

**Hazardous reactions/decomposition products:** Carbon monoxide, carbon dioxide, and nitrogen oxides.

## Section 11. Toxicological Information

**Information on toxicological effects:**

**Acute toxicity:** No data available.

**Reproductive Toxicity:** No data available, may cause congenital malformation in the fetus.

**Acute effects:**

May cause skin irritation, eye irritation, mucus membrane irritation. May be harmful if swallowed, inhaled, or absorbed through the skin.

**Chronic effects:**

Note determined

**RTECS#:** LQ210000

**Acute effects:** ipr-mus LD50: 650 mg/kg

Orl-rat LD50: 2,800 mg/kg

Only selected RTECS data is shown.

## Section 12. Ecological Information

No data available.

## Section 13. Disposal Considerations

Observe all federal, state and local environmental regulations.

Date of Issue: 08/03/20

Version 1.0

Previous Date of Issue: 04/15/15

Previous Version: N/A

## Section 14. Transport Information

**DOT (US):** Excepted Quantity  
UN number: 2265      Class: 3      Packing group: III  
Proper shipping name: N,N-Dimethylformamide  
Reportable Quantity (RQ): 100 lbs.

**RID/ADR:** Excepted Quantity  
UN number: 2265      Class: 3      Packing group: III  
Proper shipping name: N,N-Dimethylformamide

**IMDG:** Excepted Quantity  
UN number: 2265      Class: 3      Packing group: III  
Proper shipping name: N,N-Dimethylformamide

**IATA:** Excepted Quantity  
UN number: 2265      Class: 3      Packing group: III  
Proper shipping name: N,N-Dimethylformamide

## Section 15. Regulatory Information

### SARA:

SARA 302 - No chemicals in this material are subject to the reporting requirements.

SARA 313 - The following components are subject to reporting levels: N,N-Dimethylformamide, CAS-No. 68-12-2

SARA 311/312 Hazards - Fire Hazard, Acute Health Hazard, Chronic Health Hazard

### Risk phrases:

R61 – May cause harm to the unborn child

R20/21 - Harmful by inhalation, in contact with skin and if swallowed.

R36 – Irritating to eyes.

### Safety phrases:

S53 – Avoid exposure – obtain special instructions before use.

S45 - In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

### California Prop. 65 components:

This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

## Section 16. Other Information

The information contained in this Safety Data Sheet is believed to be accurate, but it is the responsibility of the user to determine the applicability of this data to necessary safety precautions. Vector Laboratories, Inc. shall not be held responsible for any damage resulting from the use of the above product or the information contained in this Safety Data Sheet.

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Previous Version: N/A

## Section 1. Product and Company Identification

**Product Name:** TMB (3,3', 5,5' tetramethylbenzidine dihydrochloride) Peroxidase Substrate Kit  
**Catalog No.:** SK-4400 – Other Kit Components

**Manufacturer/Supplier USA:**

Vector Laboratories, Inc.  
30 Ingold Road  
Burlingame, CA 94010  
United States  
Tel: (650) 697-3600 Fax: (650) 697-0339  
Email: vector@vectorlabs.com

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## Section 2. Hazards Identification

**GHS Classification:**

These components have been classified as non-hazardous based on the physical and/or chemical nature and/or concentration of ingredients.

**GHS Label:** Non-hazardous substance or mixture.

**Hazards not otherwise classified (HNOC) or not covered by GHS:** None

## Section 3. Composition/Information on Ingredients

No ingredients are hazardous according to OSHA criteria.  
No components need to be disclosed according to the applicable regulations.

## Section 4. First Aid Measures

**Inhalation:** Remove to fresh air.  
**Skin contact:** Wash thoroughly with soap and water.  
**Eye Contact:** Flush eyes with water as a precaution.  
**Ingestion:** Do not induce vomiting. Wash out mouth with water.

## Section 5. Fire Fighting Measures

**Suitable extinguishing media:** Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.  
**Special protective equipment:** Use respirator for fire fighting if necessary.

## Section 6. Accidental Release Measures

Wear protective clothing to prevent contact with eyes and skin. Ensure adequate ventilation. Collect on absorbent material and dispose of according to federal, state and local environmental regulations.

## Section 7. Handling and Storage

**Handling:** Use only with adequate ventilation. Wear eye protection and compatible chemical-resistant gloves. Handle in accordance with good industrial hygiene and safety practice.

**Storage:** Keep container tightly closed and store according to product label.

## Section 8. Exposure Controls/Personal Protection

**Exposure limits:** Contains no substances with occupational exposure limit values.

**Engineering controls:** Use enclosures, local exhaust ventilation or other engineering controls to keep airborne levels below recommended exposure limits.

**Personal protection:**

**Hand protection** - Compatible chemical-resistant gloves.

**Eye protection** - Chemical safety goggles.

**Skin protection** - Lab coat.

## Section 9. Physical and Chemical Properties

**Appearance:** Liquid

**Odor:** None

**pH:** Not determined

**Boiling point:** Not determined.

**Melting point:** Not determined.

**Flash Point:** Not determined.

**Autoflammability:** Not determined.

**Vapor pressure:** Not determined.

**Relative density:** Not determined.

**Solubility:** Not applicable.

## Section 10. Stability and Reactivity

**Chemical stability:** Stable under recommended storage conditions.

**Conditions to avoid:** pH extremes.

**Materials to avoid:** Not applicable.

**Hazardous reactions/decomposition products:** Not determined.

## Section 11. Toxicological Information

**Acute toxicity:** No data available.

**Chronic toxicity:** No data available.

## Section 12. Ecological Information

No data available.

## Section 13. Disposal Considerations

Observe all federal, state and local environmental regulations.

## Section 14. Transport Information

**DOT (US):** Not dangerous goods.

**RID/ADR:** Not regulated.

**IMDG:** Not dangerous goods.

**IATA:** Not dangerous goods.

## Section 15. Regulatory Information

**Substances of Very High Concern:** None

**SARA:**

SARA 302 - No chemicals in this material are subject to the reporting requirements.

SARA 313 - No chemicals in this material with known CAS #s are subject to the reporting requirements.

SARA 311/312 Hazards - No SARA Hazards.

**California Prop. 65 components:**

These components do not contain any chemicals known to the state of California to cause cancer, birth defects or other reproductive harm.

## Section 16. Other Information

The information contained in this Safety Data Sheet is believed to be accurate, but it is the responsibility of the user to determine the applicability of this data to necessary safety precautions. Vector Laboratories, Inc. shall not be held responsible for any damage resulting from the use of the above product or the information contained in this Safety Data Sheet.

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