



# SAFETY DATA SHEET

Date of Issue:

April 15, 2015

## Section 1. 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.*

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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 the 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): 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.

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### 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 in accordance with federal, state and local environmental control regulations.

### Section 7. Handling and Storage

**Handling:** Use only with adequate ventilation. Wear eye protection and compatible chemical-resistant gloves.

**Storage:** 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.

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## Section 9. Physical and Chemical Properties

<b>Appearance:</b>	Liquid	<b>Flash point:</b>	58 °C (136 °F)
<b>Odor:</b>	Amine-like	<b>Autoflammability:</b>	Not determined
<b>pH:</b>	Not determined	<b>Vapor pressure:</b>	Not determined
<b>Boiling point:</b>	153 °C (307 °F)	<b>Relative density:</b>	Not determined
<b>Melting point:</b>	-61 °C (-78 °F)	<b>Solubility:</b>	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, 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:

Not determined.

**RTECS#:** LQ210000

**Toxicity data:** 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 disposal regulations.

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## Section 14. Transport Information

<b>DOT (US):</b>	Excepted Quantity UN number: 2265      Class: 3 Proper shipping name: N,N-Dimethylformamide Reportable Quantity (RQ): 100 lbs	Packing group: III
<b>RID/ADR:</b>	Excepted Quantity UN number: 2265      Class: 3 Proper shipping name: N,N-Dimethylformamide	Packing group: III
<b>IMDG:</b>	Excepted Quantity UN number: 2265      Class: 3 Proper shipping name: N,N-Dimethylformamide	Packing group: III
<b>IATA:</b>	Excepted Quantity UN number: 2265      Class: 3 Proper shipping name: N,N-Dimethylformamide	Packing group: III

## 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 the State of California to cause cancer, birth defects, or any other reproductive harm.

## Section 16. Other Information

The information contained in this Material Safety Data is believed to be accurate but it is the responsibility of the user to determine the applicability of these data to the formulation of 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 Material safety Data Sheet.