SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product form: Mixture
Product name: 3,3'-Dimethoxybenzidine Standard
Product code: AL0-130004
Product group: Trade product

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

1.2.1. Relevant identified uses

Main use category: Laboratory Use
Industrial/Professional use spec: Industrial
For professional use only

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

Phenova
6390 Joyce Dr. Suite 100
80403 Golden, CO - United States
T 1-866-942-2978 - F 1-866-283-0269
info@phenova.com - www.phenova.com

1.4. Emergency telephone number

Emergency number: ChemTel Assistance (US/Canada) 1-800-255-3924
ChemTel Assistance (International) +1 813-248-0585

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Carc. 1B H350

Classification according to Directive 67/548/EEC [DSD] or 1999/45/EC [DPD]

Carc.Cat.2; R45

Full text of R-phrases: see section 16

Adverse physicochemical, human health and environmental effects

No additional information available

2.2. Label elements

Labeling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms (CLP): 

Signal word (CLP): Danger
Hazardous ingredients: 3,3’-dimethoxybenzidine
Hazard statements (CLP): H350 - May cause cancer
Precautionary statements (CLP): P280 - Wear protective gloves/protective clothing/eye protection/face protection
P308+P313 - IF exposed or concerned: Get medical advice/attention
P403+P235 - Store in a well-ventilated place. Keep cool

No labeling applicable

2.3. Other hazards

No additional information available
SECTION 3: Composition/information on ingredients

3.1. Substance
Not applicable

3.2. Mixture

<table>
<thead>
<tr>
<th>Name</th>
<th>Product identifier</th>
<th>%</th>
<th>Classification according to Regulation (EC) No. 1272/2008 [CLP]</th>
</tr>
</thead>
<tbody>
<tr>
<td>Methylene Chloride</td>
<td>(CAS No) 75-09-2 (EC no) 200-838-9 (EC index no) 802-004-00-3</td>
<td>99.8</td>
<td>Carc. 2, H351</td>
</tr>
<tr>
<td>3,3'-dimethoxybenzidine</td>
<td>(CAS No) 119-90-4 (EC no) 204-355-4 (EC index no) 812-036-00-X</td>
<td>0.2</td>
<td>Carc. 1B, H350 Acute Tox. 4 (Oral), H302</td>
</tr>
</tbody>
</table>

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general: Never give anything by mouth to an unconscious person. IF exposed or concerned: Get medical advice/attention.

First-aid measures after inhalation: Allow victim to breathe fresh air. Allow the victim to rest.

First-aid measures after skin contact: Remove affected clothing and wash all exposed skin area with mild soap and water, followed by warm water rinse.

First-aid measures after eye contact: Rinse immediately with plenty of water. Obtain medical attention if pain, blinking or redness persist.

First-aid measures after ingestion: Rinse mouth. Do NOT induce vomiting. Obtain emergency medical attention.

4.2. Most important symptoms and effects, both acute and delayed
No additional information available

4.3. Indication of any immediate medical attention and special treatment needed
No additional information available

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media: Use extinguishing media appropriate for surrounding fire.

Unsuitable extinguishing media: Do not use a heavy water stream.

5.2. Special hazards arising from the substance or mixture
No additional information available

5.3. Advice for firefighters

Firefighting instructions: Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Prevent fire-fighting water from entering environment.

Protection during firefighting: Do not enter fire area without proper protective equipment, including respiratory protection.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Emergency procedures: Evacuate unnecessary personnel.

6.1.2. For emergency responders

Protective equipment: Equip cleanup crew with proper protection.

Emergency procedures: Ventilate area.

6.2. Environmental precautions

Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up: Take up in absorbent material. Collect spillage.

6.4. Reference to other sections

See Heading 8. Exposure controls and personal protection.
### SECTION 7: Handling and storage

#### 7.1. Precautions for safe handling

<table>
<thead>
<tr>
<th>Precautions for safe handling</th>
<th>Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Provide good ventilation in process area to prevent formation of vapor. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hygiene measures</td>
<td>Gently wash with plenty of soap and water. Remove/Take off immediately all contaminated clothing. Wash contaminated clothing before reuse.</td>
</tr>
</tbody>
</table>

#### 7.2. Conditions for safe storage, including any incompatibilities

<table>
<thead>
<tr>
<th>Storage conditions</th>
<th>Keep container closed when not in use. Keep container tightly closed and in a well-ventilated place. Keep away from any flames or sparking source.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Incompatible materials</td>
<td>Direct sunlight.</td>
</tr>
</tbody>
</table>

#### 7.3. Specific end use(s)

No additional information available

### SECTION 8: Exposure controls/personal protection

#### 8.1. Control parameters

No additional information available

#### 8.2. Exposure controls

| Appropriate engineering controls | Either local exhaust or general room ventilation is usually required. |

| Hand protection | Wear chemically resistant protective gloves. Wear suitable gloves resistant to chemical penetration. |
| Eye protection  | Chemical goggles or safety glasses. Safety glasses. |
| Skin and body protection | Wear chemically protective gloves, lab coat or apron to prevent prolonged or repeated skin contact. |
| Respiratory protection       | Wear appropriate mask. |
| Other information            | Do not eat, drink or smoke during use. |

### SECTION 9: Physical and chemical properties

#### 9.1. Information on basic physical and chemical properties

<table>
<thead>
<tr>
<th>Physical state</th>
<th>Liquid</th>
</tr>
</thead>
<tbody>
<tr>
<td>Color</td>
<td>Colorless.</td>
</tr>
<tr>
<td>Odor</td>
<td>characteristic.</td>
</tr>
<tr>
<td>pH</td>
<td>No data available</td>
</tr>
<tr>
<td>Melting point</td>
<td>No data available</td>
</tr>
<tr>
<td>Freezing point</td>
<td>No data available</td>
</tr>
<tr>
<td>Boiling point</td>
<td>No data available</td>
</tr>
<tr>
<td>Flash point</td>
<td>No data available</td>
</tr>
<tr>
<td>Auto-ignition temperature</td>
<td>No data available</td>
</tr>
<tr>
<td>Decomposition temperature</td>
<td>No data available</td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>Non flammable.</td>
</tr>
<tr>
<td>Relative density</td>
<td>No data available</td>
</tr>
<tr>
<td>Solubility</td>
<td>No data available</td>
</tr>
<tr>
<td>Explosive properties</td>
<td>No data available</td>
</tr>
<tr>
<td>Oxidizing properties</td>
<td>No data available</td>
</tr>
<tr>
<td>Explosion limits</td>
<td>No data available</td>
</tr>
</tbody>
</table>

#### 9.2. Other information

No additional information available

### SECTION 10: Stability and reactivity

#### 10.1. Reactivity

No additional information available
### 10.2. Chemical stability
Not established.

### 10.3. Possibility of hazardous reactions
Not established.

### 10.4. Conditions to avoid
Direct sunlight. Extremely high or low temperatures.

### 10.5. Incompatible materials
No additional information available

### 10.6. Hazardous decomposition products
No additional information available

## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Classification</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute toxicity</td>
<td>Not classified</td>
<td></td>
</tr>
<tr>
<td><strong>3,3’-dimethoxybenzidine (119-90-4)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>LD50 oral rat</td>
<td>1920 mg/kg (Rat)</td>
<td></td>
</tr>
<tr>
<td><strong>Methylene Chloride (75-09-2)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>LD50 oral rat</td>
<td>&gt; 2000 mg/kg (Rat; Literature study)</td>
<td></td>
</tr>
<tr>
<td>LD50 dermal rabbit</td>
<td>&gt; 2000 mg/kg (Rabbit; Literature study)</td>
<td></td>
</tr>
<tr>
<td>Skin corrosion/irritation</td>
<td>Not classified</td>
<td>Based on available data, the classification criteria are not met</td>
</tr>
<tr>
<td>Serious eye damage/irritation</td>
<td>Not classified</td>
<td>Based on available data, the classification criteria are not met</td>
</tr>
<tr>
<td>Respiratory or skin sensitization</td>
<td>Not classified</td>
<td>Based on available data, the classification criteria are not met</td>
</tr>
<tr>
<td>Germ cell mutagenicity</td>
<td>Not classified</td>
<td>Based on available data, the classification criteria are not met</td>
</tr>
<tr>
<td>Carcinogenicity</td>
<td>May cause cancer.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>May cause cancer</td>
<td></td>
</tr>
<tr>
<td>Reproductive toxicity</td>
<td>Not classified</td>
<td>Based on available data, the classification criteria are not met</td>
</tr>
<tr>
<td>Specific target organ toxicity (single exposure)</td>
<td>Not classified</td>
<td>Based on available data, the classification criteria are not met</td>
</tr>
<tr>
<td>Specific target organ toxicity (repeated exposure)</td>
<td>Not classified</td>
<td>Based on available data, the classification criteria are not met</td>
</tr>
<tr>
<td>Aspiration hazard</td>
<td>Not classified</td>
<td>Based on available data, the classification criteria are not met</td>
</tr>
<tr>
<td>Potential Adverse human health effects and symptoms</td>
<td>Not classified</td>
<td>Based on available data, the classification criteria are not met.</td>
</tr>
</tbody>
</table>

### 12.1. Toxicity

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Classification</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Methylene Chloride (75-09-2)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>LC50 fish 1</td>
<td>193 mg/l (LC50; 96 h; Pimephales promelas)</td>
<td></td>
</tr>
<tr>
<td>EC50 Daphnia 1</td>
<td>168.2 mg/l (EC50; 48 h)</td>
<td></td>
</tr>
</tbody>
</table>

### 12.2. Persistence and degradability

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Classification</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>3,3’-Dimethoxybenzidine Standard</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Persistence and degradability</td>
<td>Not established.</td>
<td></td>
</tr>
<tr>
<td><strong>3,3’-dimethoxybenzidine (119-90-4)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Persistence and degradability</td>
<td>Biodegradable in water.</td>
<td></td>
</tr>
<tr>
<td><strong>Methylene Chloride (75-09-2)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Persistence and degradability</td>
<td>Not readily biodegradable in water. Biodegradable in the soil.</td>
<td></td>
</tr>
</tbody>
</table>
12.3. Bioaccumulative potential

3,3'-Dimethoxybenzidine Standard
Bioaccumulative potential: Not established.

3,3'-dimethoxybenzidine (119-90-4)
Bioaccumulative potential: No bioaccumulation data available.

Methylene Chloride (75-09-2)
| BCF fish 1 | 2 - 40 (BCF) |
| Log Pow | 1.25 (Experimental value) |
| Bioaccumulative potential | Low potential for bioaccumulation (BCF < 500). |

12.4. Mobility in soil

Methylene Chloride (75-09-2)
Surface tension: 0.028 N/m (20 °C)
Ecology - soil: May be harmful to plant growth, blooming and fruit formation.

12.5. Results of PBT and vPvB assessment
No additional information available.

12.6. Other adverse effects
Additional information: Avoid release to the environment.

SECTION 13: Disposal considerations

13.1. Waste treatment methods
Waste disposal recommendations: Dispose in a safe manner in accordance with local/national regulations.
Ecology - waste materials: Avoid release to the environment.

SECTION 14: Transport information

In accordance with ADR / RID / IMDG / IATA / ADN

14.1. UN number
UN-No. (ADR) : 2810
UN-No.(IATA) : 2810

14.2. UN proper shipping name
Proper Shipping Name (ADR) : TOXIC LIQUID, ORGANIC, N.O.S.
Proper Shipping Name (IATA) : TOXIC LIQUID, ORGANIC, N.O.S.
Transport document description (ADR) : UN 2810 TOXIC LIQUID, ORGANIC, N.O.S., 6.1, II, (D/E)

14.3. Packing group
Class (ADR) : 6.1
Classification code (ADR) : T1
Class (IATA) : 6.1
Hazard labels (ADR) : 6.1

Hazard labels (IATA) : 6.1

14.4. Packing group
Packing group (ADR) : II
Packing group (IATA) : II

14.5. Environmental hazards
Other information: No supplementary information available.

14.6. Special precautions for user

14.6.1. Overland transport
Hazard identification number (Kemler No.) : 60
3,3'-Dimethoxybenzidine Standard
Safety Data Sheet

Classification code (ADR): T1
Orange plates: 60/2810

Special provision (ADR): 274, 614
Transport category (ADR): 2
Tunnel restriction code (ADR): D/E
Limited quantities (ADR): 100ml
Excepted quantities (ADR): E4

14.6.2. Transport by sea
No additional information available

14.6.3. Air transport
CAO packing instructions (IATA): 662
CAO max net quantity (IATA): 60L
PCA packing instructions (IATA): 654
PCA Limited quantities (IATA): Y641
PCA limited quantity max net quantity (IATA): 1L
PCA max net quantity (IATA): 5L
PCA Excepted quantities (IATA): E4
Special provision (IATA): A4
ERG code (IATA): 6L

14.6.4. Inland waterway transport
Carriage prohibited (ADN): No

14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code
Not applicable

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

15.1.1. EU-Regulations
Contains no substances with Annex XVII restrictions
Contains no REACH candidate substance
Contains no REACH Annex XIV substances.

15.1.2. National regulations
No additional information available

15.2. Chemical safety assessment
No chemical safety assessment has been carried out

SECTION 16: Other information


Other information: None.

PHV SDS EU

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