1. Identification

Product Name: p-Anisidine

Cat No.:
AC104830000; AC104830010; AC104830050; AC104832500

Synonyms:
4-Methoxyaniline; 4-Methoxybenzeneamine; 4-Aminoanisole

Recommended Use:
Laboratory chemicals.

Uses advised against:
Food, drug, pesticide or biocidal product use.

Details of the supplier of the safety data sheet:

Company:
Fisher Scientific
One Reagent Lane
Fair Lawn, NJ 07410
Tel: (201) 796-7100

Acros Organics
One Reagent Lane
Fair Lawn, NJ 07410

Emergency Telephone Number:
For information US call: 001-800-ACROS-01 / Europe call: +32 14 57 52 11
Emergency Number US: 001-201-796-7100 / Europe: +32 14 57 52 99
CHEMTREC Tel. No.US: 001-800-424-9300 / Europe: 001-703-527-3887

2. Hazard(s) identification

Classification:
This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

<table>
<thead>
<tr>
<th>Hazard Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute oral toxicity</td>
</tr>
<tr>
<td>Category 2</td>
</tr>
<tr>
<td>Acute dermal toxicity</td>
</tr>
<tr>
<td>Category 1</td>
</tr>
<tr>
<td>Acute Inhalation Toxicity - Dusts and Mists</td>
</tr>
<tr>
<td>Category 2</td>
</tr>
<tr>
<td>Carcinogenicity</td>
</tr>
<tr>
<td>Category 1B</td>
</tr>
<tr>
<td>Specific target organ toxicity - (repeated exposure)</td>
</tr>
<tr>
<td>Category 2</td>
</tr>
<tr>
<td>Target Organs - Blood</td>
</tr>
</tbody>
</table>

Label Elements:

Signal Word:
Danger

Hazard Statements:
May cause cancer
May cause damage to organs through prolonged or repeated exposure
Fatal if swallowed, in contact with skin or if inhaled
Precautionary Statements
Prevention
Obtain special instructions before use
Do not handle until all safety precautions have been read and understood
Use personal protective equipment as required
Wash face, hands and any exposed skin thoroughly after handling
Do not eat, drink or smoke when using this product
Do not get in eyes, on skin, or on clothing
Do not breathe dust/fume/gas/mist/vapors/spray
Use only outdoors or in a well-ventilated area
Wear respiratory protection
Response
IF exposed or concerned: Get medical attention/advice
Inhalation
IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing
Immediately call a POISON CENTER or doctor/physician
Skin
Immediately call a POISON CENTER or doctor/physician
IF ON SKIN: Gently wash with plenty of soap and water
Remove/Take off immediately all contaminated clothing
Wash contaminated clothing before reuse
Ingestion
IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician
Rinse mouth
Storage
Store locked up
Store in a well-ventilated place. Keep container tightly closed
Disposal
Dispose of contents/container to an approved waste disposal plant
Hazards not otherwise classified (HNOC)
Very toxic to aquatic life
WARNING. Cancer - https://www.p65warnings.ca.gov/

3. Composition/Information on Ingredients

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS-No</th>
<th>Weight %</th>
</tr>
</thead>
<tbody>
<tr>
<td>p-Anisidine</td>
<td>104-94-9</td>
<td>&gt;98.5</td>
</tr>
<tr>
<td>o-Anisidine</td>
<td>90-04-0</td>
<td>0.1-0.7</td>
</tr>
</tbody>
</table>

4. First-aid measures

General Advice
Show this safety data sheet to the doctor in attendance. Immediate medical attention is required.

Eye Contact
Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Immediate medical attention is required.

Skin Contact
Wash off immediately with plenty of water for at least 15 minutes. Immediate medical attention is required.
Inhalation
Remove to fresh air. If not breathing, give artificial respiration. Do not use mouth-to-mouth method if victim ingested or inhaled the substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Immediate medical attention is required.

Ingestion
Do NOT induce vomiting. Call a physician or poison control center immediately.

Most important symptoms and effects
None reasonably foreseeable.

Notes to Physician
Treat symptomatically

5. Fire-fighting measures

Suitable Extinguishing Media
Water spray, carbon dioxide (CO2), dry chemical, alcohol-resistant foam.

Unsuitable Extinguishing Media
No information available

Flash Point
122 °C / 251.6 °F

Method -
No information available

Autoignition Temperature
450 °C / 842 °F

Explosion Limits
Upper
No data available

Lower
No data available

Sensitivity to Mechanical Impact
No information available

Sensitivity to Static Discharge
No information available

Specific Hazards Arising from the Chemical
Do not allow run-off from fire-fighting to enter drains or water courses.

Hazardous Combustion Products
Carbon monoxide (CO), Carbon dioxide (CO2). Nitrogen oxides (NOx).

Protective Equipment and Precautions for Firefighters
As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear. Thermal decomposition can lead to release of irritating gases and vapors.

NFPA

<table>
<thead>
<tr>
<th>Health</th>
<th>Flammability</th>
<th>Instability</th>
<th>Physical hazards</th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td>1</td>
<td>0</td>
<td>N/A</td>
</tr>
</tbody>
</table>

6. Accidental release measures

Personal Precautions
Ensure adequate ventilation. Use personal protective equipment as required. Avoid dust formation. Keep people away from and upwind of spill/leak. Evacuate personnel to safe areas.

Environmental Precautions
Do not flush into surface water or sanitary sewer system. Do not allow material to contaminate ground water system. Prevent product from entering drains. Local authorities should be advised if significant spillages cannot be contained.

Methods for Containment and Clean Up
Sweep up and shovel into suitable containers for disposal. Avoid dust formation.

7. Handling and storage

Handling
Wear personal protective equipment/face protection. Do not get in eyes, on skin, or on clothing. Avoid dust formation. Use only under a chemical fume hood. Do not breathe (dust, vapor, mist, gas). Do not ingest. If swallowed then seek immediate medical assistance.
Storage

Keep containers tightly closed in a dry, cool and well-ventilated place. Store under an inert atmosphere.

8. Exposure controls / personal protection

Exposure Guidelines

<table>
<thead>
<tr>
<th>Component</th>
<th>ACGIH TLV</th>
<th>OSHA PEL</th>
<th>NIOSH IDLH</th>
<th>Mexico OEL (TWA)</th>
</tr>
</thead>
<tbody>
<tr>
<td>p-Anisidine</td>
<td>TWA: 0.5 mg/m³</td>
<td>皮肤</td>
<td>IDLH: 50 mg/m³</td>
<td>TWA: 0.5 mg/m³</td>
</tr>
<tr>
<td>Skin</td>
<td></td>
<td></td>
<td>TWA: 0.5 mg/m³</td>
<td></td>
</tr>
<tr>
<td>o-Anisidine</td>
<td>TWA: 0.5 mg/m³</td>
<td>皮肤</td>
<td>IDLH: 50 mg/m³</td>
<td>TWA: 0.5 mg/m³</td>
</tr>
</tbody>
</table>

Legend

ACGIH - American Conference of Governmental Industrial Hygienists
NIOSH IDLH: NIOSH - National Institute for Occupational Safety and Health

Engineering Measures

Use only under a chemical fume hood. Ensure that eyewash stations and safety showers are close to the workstation location.

Personal Protective Equipment

Eye/face Protection

Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

Skin and body protection

Wear appropriate protective gloves and clothing to prevent skin exposure.

Respiratory Protection

Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

Hygiene Measures

Handle in accordance with good industrial hygiene and safety practice.

9. Physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical State</td>
<td>Solid</td>
</tr>
<tr>
<td>Appearance</td>
<td>Grey, Brown</td>
</tr>
<tr>
<td>Odor</td>
<td>No information available</td>
</tr>
<tr>
<td>Odor Threshold</td>
<td>No information available</td>
</tr>
<tr>
<td>pH</td>
<td>8.8 53 g/L aq.sol</td>
</tr>
<tr>
<td>Melting Point/Range</td>
<td>56 - 59 °C / 132.8 - 138.2 °F</td>
</tr>
<tr>
<td>Boiling Point/Range</td>
<td>240 - 243 °C / 464 - 469.4 °F</td>
</tr>
<tr>
<td>Flash Point</td>
<td>122 °C / 251.6 °F</td>
</tr>
<tr>
<td>Evaporation Rate</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Flammability (solid,gas)</td>
<td>No information available</td>
</tr>
<tr>
<td>Flammability or explosive limits</td>
<td>Upper: No data available</td>
</tr>
<tr>
<td>Lower: No data available</td>
<td></td>
</tr>
<tr>
<td>Vapor Pressure</td>
<td>0.02 hPa @ 20 °C</td>
</tr>
<tr>
<td>Vapor Density</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Specific Gravity</td>
<td>1.060</td>
</tr>
<tr>
<td>Solubility</td>
<td>Soluble</td>
</tr>
<tr>
<td>Partition coefficient; n-octanol/water</td>
<td>No data available</td>
</tr>
<tr>
<td>Autoignition Temperature</td>
<td>450 °C / 842 °F</td>
</tr>
<tr>
<td>Decomposition Temperature</td>
<td>&gt; 300°C</td>
</tr>
<tr>
<td>Viscosity</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Molecular Formula</td>
<td>C7 H9 N O</td>
</tr>
</tbody>
</table>
Molecular Weight 123.15

10. Stability and reactivity

Reactive Hazard None known, based on information available

Stability Light sensitive. Air sensitive.


Incompatible Materials Strong oxidizing agents, Acids, Acid chlorides, Acid anhydrides, Chloroformates

Hazardous Decomposition Products Carbon monoxide (CO), Carbon dioxide (CO₂), Nitrogen oxides (NOx)

Hazardous Polymerization Hazardous polymerization does not occur.

Hazardous Reactions None under normal processing.

11. Toxicological information

Acute Toxicity

Product Information

Component Information

<table>
<thead>
<tr>
<th>Component</th>
<th>LD50 Oral</th>
<th>LD50 Dermal</th>
<th>LC50 Inhalation</th>
</tr>
</thead>
<tbody>
<tr>
<td>p-Anisidine</td>
<td>LD50 = 1400 mg/kg (Rat)</td>
<td>LD50 = 3200 mg/kg (Rat)</td>
<td>Not listed</td>
</tr>
<tr>
<td>o-Anisidine</td>
<td>LD50 = 1890 mg/kg (Rat)</td>
<td>LD50 = 2000 mg/kg (Rat)</td>
<td>LC50 &gt; 3800 mg/m³ (Rat) 4 h</td>
</tr>
</tbody>
</table>

Toxicologically Synergistic Products

No information available

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Irritation No information available

Sensitization No information available

Carcinogenicity The table below indicates whether each agency has listed any ingredient as a carcinogen.

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS-No</th>
<th>IARC</th>
<th>NTP</th>
<th>ACGIH</th>
<th>OSHA</th>
<th>Mexico</th>
</tr>
</thead>
<tbody>
<tr>
<td>p-Anisidine</td>
<td>104-94-9</td>
<td>Not listed</td>
<td>Not listed</td>
<td>A3</td>
<td>X</td>
<td>A3</td>
</tr>
<tr>
<td>o-Anisidine</td>
<td>90-04-0</td>
<td>Group 2B</td>
<td>Reasonably Anticipated</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

IARC (International Agency for Research on Cancer)
- Group 1 - Carcinogenic to Humans
- Group 2A - Probably Carcinogenic to Humans
- Group 2B - Possibly Carcinogenic to Humans

NTP: (National Toxicity Program)
- Known - Known Carcinogen
- Reasonably Anticipated - Reasonably Anticipated to be a Human Carcinogen

ACGIH: (American Conference of Governmental Industrial Hygienists)
- A1 - Known Human Carcinogen
- A2 - Suspected Human Carcinogen
- A3 - Animal Carcinogen

Mexico - Occupational Exposure Limits - Carcinogens
- Mexico - Occupational Exposure Limits - Carcinogens
- A1 - Confirmed Human Carcinogen
- A2 - Suspected Human Carcinogen
- A3 - Confirmed Animal Carcinogen
- A4 - Not Classifiable as a Human Carcinogen
p-Anisidine

A5 - Not Suspected as a Human Carcinogen

- **Mutagenic Effects**: No information available
- **Reproductive Effects**: No information available.
- **Developmental Effects**: No information available.
- **Teratogenicity**: No information available.
- **STOT - single exposure**: None known
- **STOT - repeated exposure**: Blood
- **Aspiration hazard**: No information available
- **Symptoms / effects, both acute and delayed**: No information available
- **Endocrine Disruptor Information**: No information available
- **Other Adverse Effects**: The toxicological properties have not been fully investigated.

### 12. Ecological information

**Ecotoxicity**
Very toxic to aquatic organisms. The product contains following substances which are hazardous for the environment.

<table>
<thead>
<tr>
<th>Component</th>
<th>Freshwater Algae</th>
<th>Freshwater Fish</th>
<th>Microtox</th>
<th>Water Flea</th>
</tr>
</thead>
<tbody>
<tr>
<td>p-Anisidine</td>
<td>Not listed</td>
<td>Not listed</td>
<td>EC50 = 14.5 mg/L 30 min</td>
<td>EC50: = 0.18 mg/L, 48h (Daphnia magna)</td>
</tr>
<tr>
<td>o-Anisidine</td>
<td>Not listed</td>
<td>LC50: &gt; 100 mg/L, 96h static (Brachydanio rerio)</td>
<td>EC50 = 1500 mg/L 24 h</td>
<td>Not listed</td>
</tr>
</tbody>
</table>

**Persistence and Degradability**: Soluble in water. Persistence is unlikely based on information available.

**Bioaccumulation / Accumulation**: No information available.

**Mobility**: Will likely be mobile in the environment due to its water solubility.

<table>
<thead>
<tr>
<th>Component</th>
<th>log Pow</th>
</tr>
</thead>
<tbody>
<tr>
<td>p-Anisidine</td>
<td>0.95</td>
</tr>
<tr>
<td>o-Anisidine</td>
<td>1.18</td>
</tr>
</tbody>
</table>

### 13. Disposal considerations

**Waste Disposal Methods**: Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations to ensure complete and accurate classification.

### 14. Transport information

**DOT**
- **UN-No**: UN2811
- **Proper Shipping Name**: Toxic solid, organic, n.o.s.
- **Technical Name**: p-Anisidine, o-Anisidine
- **Hazard Class**: 6.1
- **Packing Group**: III

**TDG**
- **UN-No**: UN2811
- **Proper Shipping Name**: Toxic solid, organic, n.o.s.
- **Hazard Class**: 6.1
- **Packing Group**: III
**15. Regulatory information**

**United States of America Inventory**

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS-No</th>
<th>TSCA</th>
<th>TSCA Inventory notification - Active/Inactive</th>
<th>TSCA - EPA Regulatory Flags</th>
</tr>
</thead>
<tbody>
<tr>
<td>p-Anisidine</td>
<td>104-94-9</td>
<td>X</td>
<td>ACTIVE</td>
<td></td>
</tr>
<tr>
<td>o-Anisidine</td>
<td>90-04-0</td>
<td>X</td>
<td>ACTIVE</td>
<td></td>
</tr>
</tbody>
</table>

**Legend:**
TSCA - Toxic Substances Control Act, (40 CFR Part 710)
X - Listed
'-' - Not Listed

TSCA 12(b) - Notices of Export Not applicable

**International Inventories**
Canada (DSL/NDSL), Europe (EINECS/ELINCS/NLP), Philippines (PICCS), Japan (ENCS), Australia (AICS), China (IECSC), Korea (ECL).

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS-No</th>
<th>DSL</th>
<th>NDSL</th>
<th>EINECS</th>
<th>PICCS</th>
<th>ENCS</th>
<th>AICS</th>
<th>IECSC</th>
<th>KECL</th>
</tr>
</thead>
<tbody>
<tr>
<td>p-Anisidine</td>
<td>104-94-9</td>
<td>X</td>
<td>-</td>
<td>203-254-2</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>KE-23212</td>
</tr>
<tr>
<td>o-Anisidine</td>
<td>90-04-0</td>
<td>X</td>
<td>-</td>
<td>201-963-1</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>KE-23211</td>
</tr>
</tbody>
</table>

**U.S. Federal Regulations**

**SARA 313**

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS-No</th>
<th>Weight %</th>
<th>SARA 313 - Threshold Values %</th>
</tr>
</thead>
<tbody>
<tr>
<td>p-Anisidine</td>
<td>104-94-9</td>
<td>&gt;98.5</td>
<td>1.0</td>
</tr>
<tr>
<td>o-Anisidine</td>
<td>90-04-0</td>
<td>0.1-0.7</td>
<td>0.1</td>
</tr>
</tbody>
</table>

**SARA 311/312 Hazard Categories** See section 2 for more information

**CWA (Clean Water Act)** Not applicable

**Clean Air Act**

<table>
<thead>
<tr>
<th>Component</th>
<th>HAPS Data</th>
<th>Class 1 Ozone Depletors</th>
<th>Class 2 Ozone Depletors</th>
</tr>
</thead>
<tbody>
<tr>
<td>o-Anisidine</td>
<td>X</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**OSHA - Occupational Safety and Health Administration** Not applicable

**CERCLA** This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302)

<table>
<thead>
<tr>
<th>Component</th>
<th>Hazardous Substances RQs</th>
<th>CERCLA EHS RQs</th>
</tr>
</thead>
<tbody>
<tr>
<td>o-Anisidine</td>
<td>100 lb</td>
<td>-</td>
</tr>
</tbody>
</table>

**California Proposition 65** This product contains the following Proposition 65 chemicals.
<table>
<thead>
<tr>
<th>Component</th>
<th>CAS-No</th>
<th>California Prop. 65</th>
<th>Prop 65 NSRL</th>
<th>Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>o-Anisidine</td>
<td>90-04-0</td>
<td>Carcinogen</td>
<td>5 µg/day</td>
<td>Carcinogen</td>
</tr>
</tbody>
</table>

**U.S. State Right-to-Know Regulations**

<table>
<thead>
<tr>
<th>Component</th>
<th>Massachusetts</th>
<th>New Jersey</th>
<th>Pennsylvania</th>
<th>Illinois</th>
<th>Rhode Island</th>
</tr>
</thead>
<tbody>
<tr>
<td>p-Anisidine</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>o-Anisidine</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>-</td>
</tr>
</tbody>
</table>

**U.S. Department of Transportation**
- Reportable Quantity (RQ): Y
- DOT Marine Pollutant: N
- DOT Severe Marine Pollutant: N

**U.S. Department of Homeland Security**
This product does not contain any DHS chemicals.

**Other International Regulations**

Mexico - Grade: Slight risk, Grade 1

### 16. Other information

**Prepared By**
- Regulatory Affairs
- Thermo Fisher Scientific
- Email: EMSDS.RA@thermofisher.com

**Creation Date**
- 01-Dec-2009

**Revision Date**
- 19-Jan-2018

**Print Date**
- 19-Jan-2018

**Revision Summary**
This document has been updated to comply with the US OSHA HazCom 2012 Standard replacing the current legislation under 29 CFR 1910.1200 to align with the Globally Harmonized System of Classification and Labeling of Chemicals (GHS).

**Disclaimer**
The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of SDS