SAFETY DATA SHEET

Revision Date 18-Jan-2018
Revision Number 3

1. Identification

Product Name Ethyl 4-aminobenzoate

Cat No. AC150780000; AC150780025; AC150780050; AC150781000; AC150785000

CAS-No. 94-09-7
Synonyms Benzocaine; 4-Aminobenzoic acid ethyl ester

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 Acros Organics
One Reagent Lane One Reagent Lane
Fair Lawn, NJ 07410 Fair Lawn, NJ 07410
Tel: (201) 796-7100

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>Label Elements</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Skin Corrosion/Irritation Category</td>
<td>2</td>
</tr>
<tr>
<td>Serious Eye Damage/Eye Irritation Category</td>
<td>2</td>
</tr>
<tr>
<td>Skin Sensitization Category</td>
<td>1</td>
</tr>
</tbody>
</table>

Signal Word Warning

Hazard Statements
Causes skin irritation
Causes serious eye irritation
May cause an allergic skin reaction
Precautionary Statements
Prevention
Wash face, hands and any exposed skin thoroughly after handling
Wear protective gloves/protective clothing/eye protection/face protection
Avoid breathing dust/fume/gas/mist/vapors/spray
Contaminated work clothing should not be allowed out of the workplace
Skin
IF ON SKIN: Wash with plenty of soap and water
Take off contaminated clothing and wash before reuse
If skin irritation or rash occurs: Get medical advice/attention
Eyes
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
If eye irritation persists: Get medical advice/attention
Disposal
Dispose of contents/container to an approved waste disposal plant

Hazards not otherwise classified (HNOC)
None identified

3. Composition/Information on Ingredients

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS-No</th>
<th>Weight %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Benzoic acid, 4-amino-, ethyl ester</td>
<td>94-09-7</td>
<td>&gt;95</td>
</tr>
</tbody>
</table>

4. First-aid measures

General Advice
If symptoms persist, call a physician. Show this safety data sheet to the doctor in attendance.

Eye Contact
Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Get medical attention. Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. Keep eye wide open while rinsing. If symptoms persist, call a physician.

Skin Contact
Get medical attention. Wash off immediately with plenty of water for at least 15 minutes. Call a physician immediately. SPEEDY ACTION IS CRITICAL, GET MEDICAL AID IMMEDIATELY. If symptoms persist, call a physician. If skin irritation persists, call a physician. Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes.

Inhalation
Remove to fresh air. Get medical attention. Immediate medical attention is not required. Move to fresh air in case of accidental inhalation of vapors. If symptoms persist, call a physician. If not breathing, give artificial respiration.

Ingestion
Clean mouth with water and drink afterwards plenty of water. Get medical attention if symptoms occur. Do not induce vomiting without medical advice. Never give anything by mouth to an unconscious person. Consult a physician if necessary.

Most important symptoms and effects
May cause allergic skin reaction. Symptoms of allergic reaction may include rash, itching, swelling, trouble breathing, tingling of the hands and feet, dizziness, lightheadedness, chest
Notes to Physician

- pain, muscle pain or flushing
- 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
- > 100 °C / > 212 °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
- Keep product and empty container away from heat and sources of ignition.

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

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.

6. Accidental release measures

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

Environmental Precautions
- Do not flush into surface water or sanitary sewer system.

Methods for Containment and Clean Up
- Sweep up and shovel into suitable containers for disposal. Keep in suitable, closed containers for disposal.

7. Handling and storage

Handling
- Wear personal protective equipment/face protection. Ensure adequate ventilation. Do not get in eyes, on skin, or on clothing. Avoid ingestion and inhalation. Avoid dust formation. Pay attention to flashback. No information available.

Storage
- Keep containers tightly closed in a dry, cool and well-ventilated place. Keep containers tightly closed in a cool, well-ventilated place. Refer product specification and/or label for storage temperature range. Keep in properly labeled containers.

8. Exposure controls / personal protection

Exposure Guidelines
- This product does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.
### 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>White</td>
</tr>
<tr>
<td>Odor</td>
<td>Odorless</td>
</tr>
<tr>
<td>Odor Threshold</td>
<td>No information available</td>
</tr>
<tr>
<td>Melting Point/Range</td>
<td>89 - 92 °C / 192.2 - 197.6 °F</td>
</tr>
<tr>
<td>Boiling Point/Range</td>
<td>172 °C / 341.6 °F @ 17 hPa</td>
</tr>
<tr>
<td>Flash Point</td>
<td>&gt; 100 °C / &gt; 212 °F</td>
</tr>
<tr>
<td>Flammability or explosive limits Upper</td>
<td>No data available</td>
</tr>
<tr>
<td>Flammability or explosive limits Lower</td>
<td>No data available</td>
</tr>
<tr>
<td>Vapor Pressure</td>
<td>No information available</td>
</tr>
<tr>
<td>Vapor Density</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Specific Gravity</td>
<td>No information available</td>
</tr>
<tr>
<td>Solubility</td>
<td>No information available</td>
</tr>
<tr>
<td>Partition coefficient; n-octanol/water</td>
<td>No data available</td>
</tr>
<tr>
<td>Autoignition Temperature</td>
<td>&gt;450 °C / &gt;842 °F</td>
</tr>
<tr>
<td>Decomposition Temperature</td>
<td>No information available</td>
</tr>
<tr>
<td>Viscosity</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Molecular Formula</td>
<td>C9 H11 N O2</td>
</tr>
<tr>
<td>Molecular Weight</td>
<td>165.19</td>
</tr>
</tbody>
</table>

### 10. Stability and reactivity

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reactive Hazard</td>
<td>None known, based on information available</td>
</tr>
<tr>
<td>Stability</td>
<td>Stable under normal conditions.</td>
</tr>
<tr>
<td>Conditions to Avoid</td>
<td>Incompatible products. Excess heat. Avoid dust formation.</td>
</tr>
<tr>
<td>Incompatible Materials</td>
<td>Acids, Bases, Reducing Agent</td>
</tr>
<tr>
<td>Hazardous Decomposition Products</td>
<td>Nitrogen oxides (NOx), Carbon monoxide (CO), Carbon dioxide (CO₂)</td>
</tr>
<tr>
<td>Hazardous Polymerization</td>
<td>Hazardous polymerization does not occur.</td>
</tr>
<tr>
<td>Hazardous Reactions</td>
<td>None under normal processing.</td>
</tr>
</tbody>
</table>
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>Benzoic acid, 4-amino-, ethyl ester</td>
<td>LD50 = 3042 mg/kg (Rat)</td>
<td>Not listed</td>
<td>Not listed</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
May cause sensitization by skin contact

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>Benzoic acid, 4-amino-, ethyl ester</td>
<td>94-09-7</td>
<td>Not listed</td>
<td>Not listed</td>
<td>Not listed</td>
<td>Not listed</td>
<td>Not listed</td>
</tr>
</tbody>
</table>

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
None known

Aspiration hazard
No information available

Symptoms / effects, both acute and delayed
Symptoms of allergic reaction may include rash, itching, swelling, trouble breathing, tingling of the hands and feet, dizziness, lightheadedness, chest pain, muscle pain or flushing

Endocrine Disruptor Information
No information available

Other Adverse Effects
The toxicological properties have not been fully investigated.

12. Ecological information

Ecotoxicity
Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment. 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>Benzoic acid, 4-amino-, ethyl ester</td>
<td>Not listed</td>
<td>LC50: 5.92 - 9.76 mg/L, 96h static (Oncorhynchus mykiss) LC50: 17.9 - 20.1 mg/L, 96h static (Cyprinus carpio) LC50: 7.48 - 11.3 mg/L, 96h static (Lepomis macrochirus) LC50: 24.9 - 26.9 mg/L, 96h static (Pimephales promelas) LC50: 34.6 - 36.1 mg/L, 96h flow-through (Pimephales promelas)</td>
<td>Not listed</td>
<td>Not listed</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
Not regulated

TDG
Not regulated

IATA
Not regulated

IMDG/IMO
Not regulated

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>Benzoic acid, 4- amino-, ethyl ester</td>
<td>94-09-7</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>Benzoic acid, 4-amino-, ethyl ester</td>
<td>94-09-7</td>
<td>X</td>
<td>-</td>
<td>202-303-5</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>KE-01203</td>
</tr>
</tbody>
</table>

U.S. Federal Regulations

SARA 313 Not applicable

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

CWA (Clean Water Act) Not applicable

Clean Air Act Not applicable

OSHA - Occupational Safety and Health Administration Not applicable

CERCLA Not applicable

California Proposition 65 This product does not contain any Proposition 65 chemicals.

U.S. State Right-to-Know Not applicable
Ethyl 4-aminobenzoate

U.S. Department of Transportation
Reportable Quantity (RQ): N
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

Revision Date 18-Jan-2018
Print Date 18-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