Material Safety Data Sheet
Benzo(e)pyrene

MSDS# 99790

Section 1 - Chemical Product and Company Identification

MSDS Name: Benzo(e)pyrene
Catalog Numbers: AC105610000, AC105610250, AC105611000, AC329750000, AC329750250
Synonyms: 4,5-Benzopyrene; 1,2-Benzpyrene.

Company Identification: Acros Organics BVBA
Janssen Pharmaceuticaalana 3a
2440 Geel, Belgium

Company Identification: (USA)
Acros Organics
One Reagent Lane
Fair Lawn, NJ 07410

For information in the US, call: 800-ACROS-01
For information in Europe, call: +32 14 57 52 11
Emergency Number, Europe: +32 14 57 52 99
Emergency Number US: 201-796-7100
CHEMTREC Phone Number, US: 800-424-9300
CHEMTREC Phone Number, Europe: 703-527-3887

Section 2 - Composition, Information on Ingredients

<table>
<thead>
<tr>
<th>CAS#</th>
<th>Chemical Name</th>
<th>%</th>
<th>EINECS#</th>
</tr>
</thead>
<tbody>
<tr>
<td>192-97-2</td>
<td>Benzo[e]pyrene</td>
<td>&gt;90</td>
<td>205-892-7</td>
</tr>
</tbody>
</table>

Hazard Symbols: T

Risk Phrases: 45 50/53

Section 3 - Hazards Identification

EMERGENCY OVERVIEW

Warning! May cause respiratory tract irritation. Cancer suspect agent. The toxicological properties of this material have not been fully investigated. May cause eye and skin irritation. Harmful if swallowed, inhaled, or absorbed through the skin. Target Organs: None known.

Potential Health Effects

Eye: May cause eye irritation.

Skin: May cause skin irritation. Harmful if absorbed through the skin.

Ingestion: Harmful if swallowed. May cause irritation of the digestive tract. The toxicological properties of this substance have not been fully investigated.

Inhalation: May cause respiratory tract irritation. The toxicological properties of this substance have not been fully investigated. Harmful if inhaled.

Chronic: Laboratory experiments have resulted in mutagenic effects. Cancer suspect agent. This substance has caused adverse reproductive and fetal effects in laboratory animals.
**Section 4 - First Aid Measures**

**Eyes:**
Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid.

**Skin:**
Get medical aid. Immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse.

**Ingestion:**
Never give anything by mouth to an unconscious person. Get medical aid. Do NOT induce vomiting. If conscious and alert, rinse mouth and drink 2-4 cupfuls of milk or water.

**Inhalation:**
Remove from exposure and move to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical aid.

**Notes to Physician:**

**Section 5 - Fire Fighting Measures**

**General Information:**
As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion.

**Extinguishing Media:**
Use water spray, dry chemical, carbon dioxide, or appropriate foam.

**Autoignition Temperature:**
Not available.

**Flash Point:**
Not available

**Explosion Limits:**
- **Lower:** Not available
- **Upper:** Not available

**NFPA Rating:**
health: 2; flammability: 0; instability: 0;

**Section 6 - Accidental Release Measures**

**General Information:**
Use proper personal protective equipment as indicated in Section 8.

**Spills/Leaks:**
Clean up spills immediately, observing precautions in the Protective Equipment section. Sweep up or absorb material, then place into a suitable clean, dry, closed container for disposal. Avoid generating dusty conditions. Provide ventilation.

**Section 7 - Handling and Storage**

**Handling:**
Wash thoroughly after handling. Use with adequate ventilation. Minimize dust generation and accumulation. Avoid contact with eyes, skin, and clothing. Keep container tightly closed. Avoid ingestion and inhalation.

**Storage:**
Store in a tightly closed container. Store in a cool, dry, well-ventilated area away from incompatible substances.

**Section 8 - Exposure Controls, Personal Protection**

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>ACGIH</th>
<th>NIOSH</th>
<th>OSHA - Final PELs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Benzo[e]pyrene</td>
<td>none listed</td>
<td>none listed</td>
<td>none listed</td>
</tr>
</tbody>
</table>

OSHA Vacated PELs: Benzo[e]pyrene: None listed

**Engineering Controls:**
Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use adequate ventilation to keep airborne concentrations low.

**Exposure Limits**

**Personal Protective Equipment**

**Eyes:**
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:**
Wear appropriate protective gloves to prevent skin exposure.

**Clothing:**
Wear appropriate protective clothing to prevent skin exposure.

**Respirators:**
Wear a NIOSH/MSHA or European Standard EN 149 approved full-facepiece airline respirator in the
positive pressure mode with emergency escape provisions.

Section 9 - Physical and Chemical Properties

Physical State: Crystalline powder
Color: yellow-green
Odor: None reported.
pH: Not available
Vapor Pressure: Not available
Vapor Density: Not available
Evaporation Rate: Not available
Viscosity: Not available
Boiling Point: Not available
Freezing/Melting Point: 180.00 - 182.00 deg C
Decomposition Temperature: Not available
Solubility in water: Not available
Specific Gravity/Density:
Molecular Formula: C20H12
Molecular Weight: 252.31

Section 10 - Stability and Reactivity

Chemical Stability: Stable under normal temperatures and pressures.
Conditions to Avoid: Incompatible materials, dust generation.
Incompatibilities with Other Materials Not available
Hazardous Decomposition Products Carbon monoxide, carbon dioxide.
Hazardous Polymerization Has not been reported.

Section 11 - Toxicological Information

RTECS#: CAS# 192-97-2: DJ4200000
LD50/LC50: RTECS: Not available.
Carcinogenicity: Benzo[e]pyrene - NTP: Suspect carcinogen (Aromatic hydrocarbons, polycyclic). IARC: Group 3 (not classifiable)
Other: The hazard classification for this product is based on supplier information. See actual entry in RTECS for complete information.

Section 12 - Ecological Information

Other: No information available.

Section 13 - Disposal Considerations

Dispose of in a manner consistent with federal, state, and local regulations.

Section 14 - Transport Information

US DOT
Shipping Name: TOXIC SOLID, ORGANIC, N.O.S. (Benzo (e) pyrene)
Hazard Class: 6.1
UN Number: UN2811
Packing Group: III

Canada TDG
Shipping Name: Not available
Hazard Class: 
UN Number: 
Packing Group: 

Section 15 - Regulatory Information

European/International Regulations
European Labeling in Accordance with EC Directives
Hazard Symbols: T

Risk Phrases:
  R 45 May cause cancer.
  R 50/53 Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Safety Phrases:
  S 53 Avoid exposure - obtain special instructions before use.
  S 45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).
  S 60 This material and its container must be disposed of as hazardous waste.
  S 61 Avoid release to the environment. Refer to special instructions/safety data sheets.

WGK (Water Danger/Protection)

CAS# 192-97-2: Not available

Canada

Canadian WHMIS Classifications: D2A, D2B
This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all of the information required by those regulations.

CAS# 192-97-2 is not listed on Canada's Ingredient Disclosure List.

US Federal

TSCA

CAS# 192-97-2 is not listed on the TSCA Inventory. It is for research and development use only.

Section 16 - Other Information

MSDS Creation Date: 9/02/1997
Revision #7 Date 7/20/2009

The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantibility or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no event shall the company be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential, or exemplary damages howsoever arising, even if the company has been advised of the possibility of such damages.

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