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

Catalogue Number	CS-O-58133
Product Name	Benzo[a]pyrene 100 µg/mL in acetonitrile
CAS No.	50-32-8
Category	Fine Chemicals
Synonyms	3,4-Benzpyrene
Brand	Clearsynth Labs Ltd.
Identified uses	Laboratory Chemicals
Uses advised against	Not available
Company	Clearsynth Labs Ltd. Mumbai, India
Emergency Phone #	+91-22-245045900
REACH No.	Not available

SECTION 2: Hazards identification

Disclaimer: This is sample MSDS. Please email **sales@clearsynth.com** for more details.

2.1 Classification of the substance or mixture-Regulation (EC) No 1272/2008:

Skin irritation (Category 2)

2.2 Label Elements

Signal Word: Warning

Hazard Statement(s)

Code	Statement
H317	May cause an allergic skin reaction.
H340	Not available
H350	Not available
H400	Not available

H410	Not available
H360	Not available
H373	Not available
H315	Causes skin irritation.

Precautionary Statement(s)

Code	Statement
P203	Not available
P261	Avoid breathing dust/fume/gas/mist/vapours/spray.
P272	Not available
P273	Not available
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P302+P352	IF ON SKIN: Wash with plenty of water and soap.
P318	Not available
P321	Specific treatment (see … on this label).
P333+P317	Not available
P362+P364	Take off contaminated clothing and wash it before reuse.
P391	Not available
P405	Store locked up.
P501	Dispose of contents/container in accordance with local/regional/national/international regulatio
P260	Not available
P319	Get medical help if you feel unwell.
P264	Wash hands thoroughly after handling.
P332+P317	If skin irritation occurs: Get medical help.

SECTION 3: Composition / information on ingredients

3.1 Substance

Component : Benzo[a]pyrene 100 µg/mL in acetonitrile
CAS Number : 50-32-8
Molecular Formula : C20H12
Molecular Weight : 252.31
Parent Chemical : -

Synonyms : 3,4-Benzpyrene
Concentration : Not available

SECTION 4: First aid measures

SECTION 4: First-aid measures

4.1 Description of first aid measures
General advice: Remove contaminated clothing and shoes. Seek medical attention if symptoms occur or persist.
Inhalation: Move person to fresh air. Keep at rest. If breathing is difficult, seek medical attention.
Skin contact: Wash with plenty of soap and water. Seek medical attention if irritation develops.
Eye contact: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing. Seek medical attention.
Ingestion: Rinse mouth. Do NOT induce vomiting. Seek medical attention.

4.2 Most important symptoms and effects, both acute and delayed
Not available.

4.3 Indication of any immediate medical attention and special treatment needed
Treat symptomatically. No data available.

SECTION 5: Firefighting measures

SECTION 5: Fire-fighting measures

5.1 Extinguishing media
Suitable extinguishing media: Use extinguishing measures appropriate to local circumstances and surrounding environment (e.g., water spray, alcohol-resistant foam, dry chemical, carbon dioxide).
Unsuitable extinguishing media: Not available.

5.2 Special hazards arising from the substance or mixture
Flammable solvent present (acetonitrile). Combustion may produce carbon oxides and nitrogen oxides. Hazardous decomposition products: Not available.

5.3 Advice for firefighters
Wear self-contained breathing apparatus and full protective gear. Cool containers with water spray. Prevent fire-fighting water from entering drains or waterways.

SECTION 6: Accidental release measures

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures
Evacuate unnecessary personnel. Provide adequate ventilation. Avoid breathing vapors/mist and avoid contact with skin and eyes. Use appropriate personal protective equipment.

6.2 Environmental precautions
Prevent further leakage or spillage if safe to do so. Avoid release to the environment. Prevent entry into drains, surface waters, and soil.

6.3 Methods and material for containment and cleaning up

Contain spill. Absorb with inert material (e.g., sand, silica gel, universal binder). Collect into suitable, closed containers for disposal. Clean spill area with suitable solvent/detergent as appropriate. Dispose of contaminated materials as hazardous waste.

6.4 Reference to other sections
See Section 8 for personal protective equipment and Section 13 for disposal considerations.

SECTION-7: Handling and storage

SECTION 7: Handling and storage

7.1 Precautions for safe handling
Handle in a chemical fume hood or with local exhaust ventilation. Avoid breathing vapors/mist. Avoid contact with skin, eyes, and clothing. Keep away from heat, sparks, open flames, and hot surfaces. Use non-sparking tools and take precautionary measures against static discharge. Wash hands thoroughly after handling.

7.2 Conditions for safe storage, including any incompatibilities
Store in tightly closed container in a cool, dry, well-ventilated place. Store away from ignition sources. Keep container protected from physical damage. Incompatibilities: Not available.

7.3 Specific end use(s)
For laboratory/research use only. Not available.

SECTION 8: Exposure controls / personal protection

SECTION 8: Exposure controls/personal protection

8.1 Control parameters
Occupational exposure limits:
- Acetonitrile: Not available.
- Benzo[a]pyrene: Not available.
Biological limit values: Not available.

8.2 Exposure controls
Engineering controls: Use local exhaust ventilation or fume hood. Provide eyewash station and safety shower.
Personal protective equipment (PPE):
- Eye/face protection: Safety glasses with side shields or chemical splash goggles.
- Skin protection: Chemical-resistant gloves; protective clothing as appropriate.
- Respiratory protection: If ventilation is inadequate, use appropriate respiratory protection. Specific respirator type: Not available.
Hygiene measures: Do not eat, drink, or smoke when using this product. Remove contaminated clothing and wash before reuse.
Environmental exposure controls: Avoid release to the environment; use appropriate containment.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Test	Result
Appearance	No data available
IR spectrum	No data available
pH	No data available
Solubility	No data available

Property	Value
a) Physical State	No data available
b) Color	No data available
c) Odor	No data available
d) pH	No data available
e) Vapour Pressure	No data available
f) Viscosity	No data available
g) Initial Boiling Point and boiling range	No data available
h) Melting Point / Freezing Point	No data available
i) Auto Ignition Temperature	No data available
j) Flash Point	No data available
k) Explosion Limit, Lower	No data available
l) Explosion Limit, Upper	No data available
m) Decomposition Temperature	No data available
n) Loss on Drying	No data available
o) Relative Density	No data available
p) Solubility (in DMSO)	No data available
q) Oxidizing Properties	No data available

SECTION 10: Stability and reactivity

SECTION 10: Stability and reactivity

10.1 Reactivity
No data available.

10.2 Chemical stability
Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions
No data available.

10.4 Conditions to avoid
Heat, sparks, open flames, and other ignition sources. Static discharge. Incompatible materials: Not available.

10.5 Incompatible materials
Not available.

10.6 Hazardous decomposition products
Carbon oxides and nitrogen oxides. Other decomposition products: Not available.

SECTION 11: Toxicological information

11.1 Information on toxicological effects
- Acute toxicity: Acute exposure to PAHs causes irritation and inflammation of the skin and lung tissue. Epidemiology studies involving exposure to PAH mixtures have reported associations between internal biomarkers of exposure to benzo[a]pyrene (benzo[a]pyrene diol epoxide-DNA adducts) and adverse birth outcomes (including reduced birth weight, postnatal body weight, and head circumference), neurobehavioral effects, and decreased fertility. Animal studies demonstrate that exposure to benzo[a]pyrene is associated with developmental (including developmental neurotoxicity), reproductive, and immunological effects.
- Skin corrosion/irritation: BaP can cause exposure by inhalation and passing through the unbroken skin. Can cause skin irritation with rash and/or burning sensations. Exposure to sunlight can increase these effects.
- Serious eye damage/eye irritation: No data available.
- Respiratory or skin sensitization: No data available.
- Germ cell mutagenicity: BaP was mutagenic in human MCL-5 cells. Accumulation of BaP in blood plasma of coking workers played a major role in the formation of lymphocyte micronucleus. Activated benzo[a]pyrene diol epoxide (BPDE) induced chromosomal aberrations in lymphocyte cultures. The genotoxic mechanism of action involves metabolism to highly reactive species that form covalent adducts to DNA; these adducts induce mutations in the K-RAS oncogene and the TP53 tumorsuppressor gene in human lung tumors, and in corresponding genes in mouse-lung tumors. Oral exposure to BaP causes spermatogonial stem cell mutations in mice.
- Carcinogenicity: There is strong evidence of carcinogenicity in occupations involving exposure to PAH mixtures containing benzo[a]pyrene (eg, aluminum production, chimney sweeping, coal gasification, coal-tar distillation, coke production, iron and steel founding, and paving and roofing with coal tar pitch). Occupational studies demonstrate a positive exposure-response relationship with cumulative BaP exposure and lung cancer. Studies in multiple animal species demonstrate that benzo[a]pyrene is carcinogenic at multiple tumor sites (alimentary tract, liver, kidney, respiratory tract, pharynx, and skin) by all routes of exposure.
- Reproductive toxicity: Epidemiology studies involving exposure to PAH mixtures have reported associations between internal biomarkers of exposure to benzo[a]pyrene and adverse birth outcomes (including reduced birth weight, postnatal body weight, and head circumference) and decreased fertility. Animal studies demonstrate that exposure to benzo[a]pyrene is associated with developmental (including developmental neurotoxicity) and reproductive effects.
- STOT-single exposure: No data available.
- STOT-repeated exposure: No data available.
- Aspiration hazard: No data available.

Likely routes of exposure

- BaP can cause exposure by inhalation and passing through the unbroken skin. Eye contact can cause irritations and burns.

Symptoms related to the physical, chemical and toxicological characteristics
- Can cause skin irritation with rash and/or burning sensations. Exposure to sunlight can increase these effects. Eye contact can cause irritations and burns. Acute exposure to PAHs causes irritation and inflammation of the skin and lung tissue.

SECTION 12: Ecological information

SECTION 12: Ecological information

12.1 Toxicity
No data available.

12.2 Persistence and degradability
No data available.

12.3 Bioaccumulative potential
No data available.

12.4 Mobility in soil
No data available.

12.5 Results of PBT and vPvB assessment
Not available.

12.6 Endocrine disrupting properties
Not available.

12.7 Other adverse effects
Not available.

SECTION 13: Disposal considerations

SECTION 13: Disposal considerations

13.1 Waste treatment methods
Dispose of contents/container in accordance with local/regional/national/international regulations. Treat as hazardous waste. Do not discharge to drains.
Contaminated packaging: Dispose of as hazardous waste unless adequately cleaned. Not available.

SECTION 14: Transport information

SECTION 14: Transport information

14.1 UN number
Not available.

14.2 UN proper shipping name
Not available.

14.3 Transport hazard class(es)

Not available.

14.4 Packing group
Not available.

14.5 Environmental hazards
Not available.

14.6 Special precautions for user
Not available.

14.7 Maritime transport in bulk according to IMO instruments
Not available.

SECTION 15: Regulatory information

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture
Not available.

15.2 Chemical safety assessment
Not available.

SECTION 16: Other information

SECTION 16: Other information

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Synonyms: 3,4-Benzpyrene
Supplier: Clearsynth Labs Ltd., Mumbai, India
Emergency phone: +91-22-245045900

Revision date: Not available
SDS version: Not available

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