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MATERIAL SAFETY DATA SHEET

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

1.1 Product identifiers

Product name : Estradiol hemihydrate

CAS-No. : 35380-71-3

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

Identified uses : Laboratory chemicals, Manufacture of substances

1.3 Details of the supplier of the safety data sheet

Company : ChemicalBull Pvt Ltd

123/124, Panchratna, G.I.D.C Char Rasta, Vapi-396195 Dist, Valsad, Gujarat, INDIA **Website:** chemicalbull.com **Email:** info@chemicalbull.com

1.4 Emergency telephone number

Emergency Phone # : +91 9696960250

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification according to Regulation

Carcinogenicity ,Reproductive toxicity H360Fd Effects on or via lactation,

For the full text of the H-Statements mentioned in this Section, see Section 16.

2.2 Label elements

Labelling according Regulation

Pictogram

Signal word Danger

Hazard statement(s)

H351 Suspected of causing cancer.

H360Fd May damage fertility. Suspected of damaging the unborn child.

H362 May cause harm to breast-fed children.

Precautionary statement(s)

P201 Obtain special instructions before use.

P263 Avoid contact during pregnancy/ while nursing.
P281 Use personal protective equipment as required.

P308 + P313 IF exposed or concerned: Get medical advice/ attention.

Supplemental Hazard none

Statements

Restricted to professional users.

2.3 Other hazards - none

SECTION 3: Composition/information on ingredients

3.1 Substances

Synonyms : β-Estradiol hemihydrate

1,3,5-Estratriene-3,17β-diol

 $3,17\beta$ -Dihydroxy-1,3,5(10)-estratriene

Formula : $C_{18}H_{24}O_2 \cdot 0.5H_2O$ Molecular weight : 281,39 g/mol

CAS-No. : 35380-71-3

Component	Classification	Concentration		
Estradiol hemihydrate				
	Carc. 2; Repr. 1A; Lact.; Aquatic Chronic 1; H351, H360FD, H362, H410	<= 100 %		

For the full text of the H-Statements mentioned in this Section, see Section 16.

SECTION 4: First aid measures

4.1 Description of first aid measures

General advice

Consult a physician. Show this safety data sheet to the doctor in attendance.

If inhaled

If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

In case of skin contact

Wash off with soap and plenty of water. Consult a physician.

In case of eye contact

Flush eyes with water as a precaution.

If swallowed

Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

4.2 Most important symptoms and effects, both acute and delayed

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

4.3 Indication of any immediate medical attention and special treatment needed

No data available

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

5.2 Special hazards arising from the substance or mixture

Carbon oxides

5.3 Advice for firefighters

Wear self-contained breathing apparatus for firefighting if necessary.

5.4 Further information

No data available

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Use personal protective equipment. Avoid dust formation. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid breathing dust.

For personal protection see section 8.

6.2 Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

6.3 Methods and materials for containment and cleaning up

Pick up and arrange disposal without creating dust. Sweep up and shovel. Keep in suitable, closed containers for disposal.

6.4 Reference to other sections

For disposal see section 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Avoid exposure - obtain special instructions before use.

Provide appropriate exhaust ventilation at places where dust is formed.

For precautions see section 2.2.

7.2 Conditions for safe storage, including any incompatibilities

Store in cool place. Keep container tightly closed in a dry and well-ventilated place.

7.3 Specific end use(s)

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Components with workplace control parameters

8.2 Exposure controls

Appropriate engineering controls

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

Personal protective equipment

Eye/face protection

Safety glasses with side-shields conforming to Use equipment for eye protection tested and approved under appropriate government standards.

Skin protection

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

The selected protective gloves have to satisfy the specifications of Regulation and the standard derived from it.

Body Protection

Impervious clothing, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Respiratory protection

Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards.

Control of environmental exposure

Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

a) Appearance Form: powder

Colour: white

b) Odourc) Odour Thresholdd) pHNo data availableNo data available

e) Melting point/range: ca.176 °C

point/freezing point

f) Initial boiling point No data available

and boiling range

g)	Flash point	No data available
h)	Evaporation rate	No data available
i)	Flammability (solid, gas)	No data available

j) Upper/lower flammability or explosive limits No data available

k) Vapour pressure
l) Vapour density
m) Relative density
n) Water solubility
o) Partition coefficient:
No data available
No data available
No data available

o) Partition coefficient: No data ava n-octanol/water

p) Auto-ignition No data available temperature

q) Decomposition No data available temperature

r) Viscosity No data availables) Explosive properties No data availablet) Oxidizing properties No data available

9.2 Other safety information

No data available

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

No data available

10.5 Incompatible materials

Strong oxidizing agents

10.6 Hazardous decomposition products

Hazardous decomposition products formed under fire conditions. - Carbon oxides Other decomposition products - No data available In the event of fire: see section 5

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

LD50 Oral - Rat - male and female - > 5.000 mg/kg

Remarks: (ECHA)

Skin corrosion/irritation

No data available

Serious eye damage/eye irritation

Eves - In vitro study

Result: No eye irritation - 5 min

Remarks: (anhydrous substance) (ECHA)

Respiratory or skin sensitisation

Local lymph node assay (LLNA) - Mouse

Result: negative

(OECD Test Guideline 429) Remarks: (anhydrous substance)

Germ cell mutagenicity

Ames test

Escherichia coli/Salmonella typhimurium

Result: negative

Rat - male and female - Liver cells

Result: negative

(anhydrous substance)

Carcinogenicity

Suspected of causing cancer.

IARC: No component of this product present at levels greater than or equal to 0.1% is

identified as probable, possible or confirmed human carcinogen by IARC.

No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

Reproductive toxicity

May damage the unborn child. Positive evidence from human epidemiological studies. May damage fertility. Positive evidence from human epidemiological studies. Studies indicating a hazard to babies during the lactation period

Specific target organ toxicity - single exposure

No data available

Specific target organ toxicity - repeated exposure

No data available

Aspiration hazard

No data available

Additional Information

RTECS: Not available

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

SECTION 12: Ecological information

12.1 Toxicity

No data available

Toxicity to algae static test ErC50 - Desmodesmus subspicatus (green algae) - > 2,48

mg/l - 72 h

(OECD Test Guideline 201)

Remarks: (anhydrous substance)(Estradiol hemihydrate)

12.2 Persistence and degradability

Biodegradability aerobic - Exposure time 28 d

Result: 68 % - According to the results of tests of biodegradability

this product is not readily biodegradable.

(OECD Test Guideline 301B)

Remarks: The 10 day time window criterion is not

fulfilled.(anhydrous substance)

12.3 Bioaccumulative potential

No data available

12.4 Mobility in soil

No data available

12.5 Results of PBT and vPvB assessment

PBT/vPvB assessment not available as chemical safety assessment not required/not conducted

12.6 Other adverse effects

No data available

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product

Offer surplus and non-recyclable solutions to a licensed disposal company. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber.

Contaminated packaging

Dispose of as unused product.

SECTION 14: Transport information

14.1 UN number

ADR/RID: - IMDG: - IATA: -

14.2 UN proper shipping name

ADR/RID: Not dangerous goods IMDG: Not dangerous goods IATA: Not dangerous goods

14.3 Transport hazard class(es)

ADR/RID: - IMDG: - IATA: -

14.4 Packaging group

ADR/RID: - IMDG: - IATA: -

14.5 Environmental hazards

ADR/RID: no IMDG Marine pollutant: no IATA: no

14.6 Special precautions for user

No data available

SECTION 15: Regulatory information

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

This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006.

15.2 Chemical safety assessment

For this product a chemical safety assessment was not carried out

SECTION 16: Other information

Full text of H-Statements referred to under sections 2 and 3.

H351 Suspected of causing cancer.

H360Fd May damage fertility. Suspected of damaging the unborn child.

H360FD May damage fertility. May damage the unborn child.

H362 May cause harm to breast-fed children.

H410 Very toxic to aquatic life with long lasting effects.

Further information

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. ChemicalBull Pvt Ltd and its Affiliates shall not be held liable for any damage resulting from handling or from contact with the above product.

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