



Website:- [chemicalbull.com](http://chemicalbull.com)

## MATERIAL SAFETY DATA SHEET

---

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

#### 1.1 Product identifiers

Product name : Bosentan  
CAS-No. : 157212-55-0

#### 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](http://chemicalbull.com)  
**Email:-** [info@chemicalbull.com](mailto:info@chemicalbull.com)

#### 1.4 Emergency telephone

Emergency Phone # : **+91 9696960250**

---

### SECTION 2: Hazards identification

#### 2.1 Classification of the substance or mixture

##### Classification according to Regulation

Long-term (chronic) aquatic hazard (Category 3), H412

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

#### 2.2 Label elements

##### Labelling according Regulation

Pictogram none

Signal word none

|                                |  |
|--------------------------------|--|
| Hazard statement(s)            |  |
| H412                           | Harmful to aquatic life with long lasting effects. |
| Precautionary statement(s)     |  |
| P273                           | Avoid release to the environment.                  |
| Supplemental Hazard Statements | none   |

### 2.3 Other hazards

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

---

## SECTION 3: Composition/information on ingredients

### 3.1 Substances

Molecular weight : 569,63 g/mol  
CAS-No. : 157212-55-0

| Component               | Classification          | Concentration |
|-------------------------|-------------------------|---------------|
| <b>Bosentan hydrate</b> |                         |               |
|                         | Aquatic Chronic 3; H412 | <= 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 material 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, Nitrogen oxides (NO<sub>x</sub>), Sulfur 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**

Avoid dust formation. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. 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. Discharge into the environment must be avoided.

### **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**

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**

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

#### **Ingredients 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

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 the standard derived from it.

### Body Protection

Choose body protection in relation to its type, to the concentration and amount of dangerous substances, and to the specific work-place., The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

### Respiratory protection

Respiratory protection is not required. Where protection from nuisance levels of dusts are desired, use type dust masks. 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. Discharge into the environment must be avoided.

---

## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

|   |   |
|---|---|
| a) Appearance                                   | Form: solid                                       |
| b) Odor   | No data available                                 |
| c) Odor Threshold                               | No data available                                 |
| d) pH   | No data available                                 |
| e) Melting point/freezing point                 | Melting point/range: 114 - 118 °C - Decomposition |
| f) Initial boiling point and boiling range      | No data available                                 |
| 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) Vapor pressure                               | No data available                                 |
| l) Vapor density                                | No data available                                 |

- |  |                   |
|--|-------------------|
| m) Relative density                          | No data available |
| n) Water solubility                          | No data available |
| o) Partition coefficient:<br>n-octanol/water | No data available |
| p) Autoignition<br>temperature               | No data available |
| q) Decomposition<br>temperature              | No data available |
| r) Viscosity                                 | No data available |
| s) Explosive properties                      | No data available |
| t) 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, Nitrogen oxides (NO<sub>x</sub>), Sulfur oxides

In the event of fire: see section 5

---

## SECTION 11: Toxicological information

### 11.1 Information on toxicological effects

#### Acute toxicity

LDLo Oral - Mouse - > 3.000 mg/kg

#### Skin corrosion/irritation

#### Serious eye damage/eye irritation

#### Respiratory or skin sensitization

#### Germ cell mutagenicity

#### Carcinogenicity

IARC: No ingredient 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

### Specific target organ toxicity - single exposure

### Specific target organ toxicity - repeated exposure

### Aspiration hazard

### 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

|   |  |
|---|--|
| Toxicity to fish                                    | mortality LC50 - Oncorhynchus mykiss (rainbow trout) - > 100 mg/l - 96 h<br>(OECD Test Guideline 203)<br>Remarks: (anhydrous substance)<br><br>NOEC - Oncorhynchus mykiss (rainbow trout) - < 100 mg/l - 96 h<br>(OECD Test Guideline 203)<br>Remarks: (anhydrous substance) |
| Toxicity to daphnia and other aquatic invertebrates | EC50 - Daphnia magna (Water flea) - 66 mg/l - 48 h<br>(OECD Test Guideline 202)<br>Remarks: (anhydrous substance)<br><br>EC0 - Daphnia magna (Water flea) - 33 mg/l - 48 h<br>(OECD Test Guideline 202)<br>Remarks: (anhydrous substance)                                    |
| Toxicity to bacteria                                | EC50 - activated sludge - > 100 mg/l - 3 h<br>(OECD Test Guideline 209)<br>Remarks: (anhydrous substance)  |

### 12.2 Persistence and degradability

### 12.3 Bioaccumulative potential

### 12.4 Mobility in soil

### 12.5 Results of PBT and vPvB assessment

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

### 12.6 Other adverse effects

Harmful to aquatic life with long lasting effects.

---

## 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. Waste material must be disposed of in accordance with the Directive on waste 2008/98/EC as well as other national and local regulations. Leave chemicals in original containers. No mixing with other waste. Handle uncleaned containers like the product itself.

#### **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 material safety data sheet complies with the requirements of Regulation.

#### **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.**

H412                                      Harmful 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.

See [chemicalbull.com](http://chemicalbull.com) and/or the reverse side of invoice or packing slip for additional terms and conditions of sale. The branding on the header and/or footer of this document may temporarily not visually match the product purchased as we

transition our branding. However, all of the information in the document regarding the product remains unchanged and matches the product ordered. For further information please contact [info@chemicalbull.com](mailto:info@chemicalbull.com)