



# MATERIAL SAFETY DATA SHEET SDS/MSDS

## 1. Identification

|                             |                                                |
|-----------------------------|------------------------------------------------|
| <b>Product Name</b>         | <b>Isatin</b>                                  |
| <b>CAS No</b>               | 91-56-5                                        |
| <b>Synonyms</b>             | 2,3-Indolinedione; Indole-2,3-dione            |
| <b>Recommended Use</b>      | Laboratory chemicals.                          |
| <b>Uses advised against</b> | Food, drug, pesticide or biocidal product use. |

### Details of the supplier of the safety data sheet

#### Company

BIO-CHEM Chemical  
5455 Nicholson Road, Science Market  
Ambala Cantt, 133001 - Haryana  
+91 82952 41953  
info@biofinechemical.com - www.biofinechemical.com

**Emergency Telephone Number** +91 99921 51495 (10.00am - 06.30pm) (Office Hours)

## 2. Hazard(s) identification

### Classification

Classification under 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

|                       |             |
|-----------------------|-------------|
| Reproductive Toxicity | Category 1B |
|-----------------------|-------------|

### Label Elements

None required

### Signal Word

Danger

May damage fertility or the unborn child

**Prevention**

Obtain special instructions before use  
Do not handle until all safety precautions have been read and understood  
Wear protective gloves/protective clothing/eye protection/face protection

**Response**

IF exposed or concerned: Get medical attention/advice

**Storage**

Store locked up

**Disposal**

Dispose of contents/container to an approved waste disposal plant

**Hazards not otherwise classified (HNOC)****Other hazards**

May cause skin, eye, and respiratory tract irritation.

### 3. Composition/Information on Ingredients

| Component           | CAS No  | Weight % |
|---------------------|---------|----------|
| 1H-Indole-2,3-dione | 91-56-5 | 98       |

### 4. First-aid measures

|                                            |                                                                                                                              |
|--------------------------------------------|------------------------------------------------------------------------------------------------------------------------------|
| <b>Eye Contact</b>                         | Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Get medical attention.              |
| <b>Skin Contact</b>                        | Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Get medical attention. |
| <b>Inhalation</b>                          | Remove from exposure, lie down. Remove to fresh air. If not breathing, give artificial respiration. Get medical attention.   |
| <b>Ingestion</b>                           | Clean mouth with water. Get medical attention.                                                                               |
| <b>Most important symptoms and effects</b> | No information available.                                                                                                    |
| <b>Notes to Physician</b>                  | Treat symptomatically                                                                                                        |

### 5. Fire-fighting measures

|                                       |                                                                              |
|---------------------------------------|------------------------------------------------------------------------------|
| <b>Suitable Extinguishing Media</b>   | Water spray. Carbon dioxide (CO <sub>2</sub> ). Dry chemical. Chemical foam. |
| <b>Unsuitable Extinguishing Media</b> | No information available                                                     |
| <b>Flash Point</b>                    | 220 °C / 428 °F                                                              |
| <b>Method -</b>                       | No information available                                                     |
| <b>Autoignition Temperature</b>       | Not applicable                                                               |

**Explosion Limits**

|                                         |                          |
|-----------------------------------------|--------------------------|
| <b>Upper</b>                            | No data available        |
| <b>Lower</b>                            | No data available        |
| <b>Sensitivity to Mechanical Impact</b> | No information available |
| <b>Sensitivity to Static Discharge</b>  | 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 (NO<sub>x</sub>). Carbon monoxide (CO). Carbon dioxide (CO<sub>2</sub>).

**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.

**NFPA**

**Health**  
2

**Flammability**  
1

**Instability**  
0

**Physical hazards**  
N/A

**6. Accidental release measures****Personal Precautions**

Ensure adequate ventilation. Use personal protective equipment as required.

**Environmental Precautions**

See Section 12 for additional Ecological Information.

**Methods for Containment and Clean Up** Avoid dust formation. Sweep up and shovel into suitable containers for disposal.

**7. Handling and storage****Handling**

Avoid contact with skin and eyes. Do not breathe dust.

**Storage.**

Keep in a dry, cool and well-ventilated place. Keep container tightly closed. Incompatible Materials. Strong oxidizing agents. Strong acids. Strong bases.

**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.

**Engineering Measures**

None under normal use conditions.

**Personal Protective Equipment****Eye/face Protection**

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 and body protection**

Wear appropriate protective gloves and clothing to prevent skin exposure.

**Respiratory Protection**

No protective equipment is needed under normal use conditions.

**Hygiene Measures**

Handle in accordance with good industrial hygiene and safety practice.

**9. Physical and chemical properties****Physical State**

Powder Solid

**Appearance**

Orange

**Odor**

Odorless

**Odor Threshold**

No information available

|                                        |                          |                       |
|----------------------------------------|--------------------------|-----------------------|
| pH                                     | 7                        | 1.9 g/l aq. sol. 20°C |
| Melting Point/Range                    | 201 - 204 °C             | / 393.8 - 399.2 °F    |
| Boiling Point/Range                    | No information available |                       |
| Flash Point                            | 220 °C                   | / 428 °F              |
| Evaporation Rate                       | Not applicable           |                       |
| Flammability (solid,gas)               | No information available |                       |
| Flammability or explosive limits       |                          |                       |
| Upper                                  | No data available        |                       |
| Lower                                  | No data available        |                       |
| Vapor Pressure                         | No information available |                       |
| Vapor Density                          | Not applicable           |                       |
| Specific Gravity                       | No information available |                       |
| Solubility                             | No information available |                       |
| Partition coefficient; n-octanol/water | No data available        |                       |
| Autoignition Temperature               | Not applicable           |                       |
| Decomposition Temperature              | 193 °C                   |                       |
| Viscosity                              | Not applicable           |                       |
| Molecular Formula                      | C8 H5 N O2               |                       |
| Molecular Weight                       | 147.13                   |                       |

## 10. Stability and reactivity

|                                  |                                                                                |
|----------------------------------|--------------------------------------------------------------------------------|
| Reactive Hazard                  | None known, based on information available                                     |
| Stability                        | Stable.                                                                        |
| Conditions to Avoid              | Incompatible products.                                                         |
| Incompatible Materials           | Strong oxidizing agents, Strong acids, Strong bases                            |
| Hazardous Decomposition Products | Nitrogen oxides (NOx), Carbon monoxide (CO), Carbon dioxide (CO <sub>2</sub> ) |
| Hazardous Polymerization         | Hazardous polymerization does not occur.                                       |
| Hazardous Reactions              | None under normal processing.                                                  |

## 11. Toxicological information

### Acute Toxicity

**Product Information** No acute toxicity information is available for this product

**Component Information**  
**Toxicologically Synergistic** No information available  
**Products**

### Delayed and immediate effects as well as chronic effects from short and long-term exposure

|                 |                                                                                          |
|-----------------|------------------------------------------------------------------------------------------|
| Irritation      | No information available                                                                 |
| Sensitization   | No information available                                                                 |
| Carcinogenicity | The table below indicates whether each agency has listed any ingredient as a carcinogen. |

| Component           | CAS No  | IARC       | NTP        | ACGIH      | OSHA       | Mexico     |
|---------------------|---------|------------|------------|------------|------------|------------|
| 1H-Indole-2,3-dione | 91-56-5 | Not listed | Not listed | Not listed | Not listed | Not listed |

**Mutagenic Effects** Not mutagenic in AMES Test

**Reproductive Effects** Product is or contains a chemical which is a known or suspected reproductive hazard.

**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 | No information available                                       |
| Endocrine Disruptor Information            | No information available                                       |
| Other Adverse Effects                      | The toxicological properties have not been fully investigated. |

## 12. Ecological information

### Ecotoxicity

|                               |                                                                          |
|-------------------------------|--------------------------------------------------------------------------|
| Persistence and Degradability | Soluble in water Persistence is unlikely based on information available. |
| Bioaccumulation/ Accumulation | No information available.                                                |
| Mobility                      | Will likely be mobile in the environment due to its water solubility.    |

## 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

| Component           | CAS No  | TSCA | TSCA Inventory notification - Active-Inactive | TSCA - EPA Regulatory Flags |
|---------------------|---------|------|-----------------------------------------------|-----------------------------|
| 1H-Indole-2,3-dione | 91-56-5 | X    | ACTIVE                                        | -                           |

#### Legend:

**TSCA** US EPA (TSCA) - Toxic Substances Control Act, (40 CFR Part 710)

X - Listed

'-' - Not Listed

|                                       |                |
|---------------------------------------|----------------|
| <b>TSCA 12(b)</b> - Notices of Export | Not applicable |
|---------------------------------------|----------------|

### International Inventories

Canada (DSL/NDSL), Europe (EINECS/ELINCS/NLP), Philippines (PICCS), Japan (ENCS), Japan (ISHL), Australia (AICS), China (IECSC), Korea (KECL).

| Component           | CAS No  | DSL | NDSL | EINECS    | PICCS | ENCS | ISHL | AICS | IECSC | KECL     |
|---------------------|---------|-----|------|-----------|-------|------|------|------|-------|----------|
| 1H-Indole-2,3-dione | 91-56-5 | X   | -    | 202-077-8 | X     | X    | X    | X    | X     | KE-21010 |

**KECL** - NIER number or KE number (<http://ncis.nier.go.kr/en/main.do>)

**U.S. Federal Regulations**

|                                                             |                                                             |
|-------------------------------------------------------------|-------------------------------------------------------------|
| <b>SARA 313</b>                                             | Not applicable                                              |
| <b>SARA 311/312 Hazard Categories</b>                       | See section 2 for more information                          |
| <b>CWA (Clean Water Act)</b>                                | Not applicable                                              |
| <b>Clean Air Act</b>                                        | Not applicable                                              |
| <b>OSHA - Occupational Safety and Health Administration</b> | Not applicable                                              |
| <b>CERCLA</b>                                               | Not applicable                                              |
| <b>California Proposition 65</b>                            | This product does not contain any Proposition 65 chemicals. |
| <b>U.S. State Right-to-Know Regulations</b>                 | Not applicable                                              |

**U.S. Department of Transportation**

|                             |   |
|-----------------------------|---|
| Reportable Quantity (RQ):   | N |
| DOT Marine Pollutant        | N |
| DOT Severe Marine Pollutant | N |

|                                             |                                                  |
|---------------------------------------------|--------------------------------------------------|
| <b>U.S. Department of Homeland Security</b> | This product does not contain any DHS chemicals. |
|---------------------------------------------|--------------------------------------------------|

**Other International Regulations**

|                       |                          |
|-----------------------|--------------------------|
| <b>Mexico - Grade</b> | No information available |
|-----------------------|--------------------------|

**Authorisation/Restrictions according to EU REACH****Safety, health and environmental regulations/legislation specific for the substance or mixture**

| Component           | CAS No  | OECD HPV       | Persistent Organic Pollutant | Ozone Depletion Potential | Restriction of Hazardous Substances (RoHS) |
|---------------------|---------|----------------|------------------------------|---------------------------|--------------------------------------------|
| 1H-Indole-2,3-dione | 91-56-5 | Not applicable | Not applicable               | Not applicable            | Not applicable                             |

| Component           | CAS No  | Seveso III Directive (2012/18/EC) - Qualifying Quantities for Major Accident Notification | Seveso III Directive (2012/18/EC) - Qualifying Quantities for Safety Report Requirements | Rotterdam Convention (PIC) | Basel Convention (Hazardous Waste) |
|---------------------|---------|-------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------|----------------------------|------------------------------------|
| 1H-Indole-2,3-dione | 91-56-5 | Not applicable                                                                            | Not applicable                                                                           | Not applicable             | Not applicable                     |