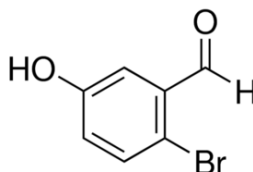


### MATERIAL SAFETY DATA SHEET (MSDS)

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

##### 1.1. Product identifier

Product form : Substance  
:  
CAS-No. : 2973-80-0  
Product code : D0044  
Chemical structure :



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

###### 1.2.1. Relevant identified uses

Industrial/Professional use spec : Industrial  
For professional use only

###### 1.2.2. Uses advised against

No additional information available

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

LOBA CHEMIE PVT.LTD.  
107 Wode House Road, Jehangir Villa, Colaba  
400005 Mumbai - INDIA  
T +91 22 6663 6663 - F +91 22 6663 6699  
[info@lobachemie.com](mailto:info@lobachemie.com) - [www.lobachemie.com](http://www.lobachemie.com)

##### 1.4. Emergency telephone number

Emergency number : + 91 22 6663 6663 (9:00am - 6:00 pm)

#### SECTION 2: Hazards identification

##### 2.1. Classification of the substance or mixture

###### Classification according to Regulation (EC) No. 1272/2008 [CLP]

Acute toxicity (oral), H302  
Category 4  
Hazardous to the aquatic H400  
environment — Acute  
Hazard, Category 1

Full text of H statements : see section 16

# 2-BROMO-5-HYDROXYBENZALDEHYDE

## Safety Data Sheet

Classification according to Directive 67/548/EEC [DSD] or 1999/45/EC [DPD]

Not classified

### Adverse physicochemical, human health and environmental effects

No additional information available

## 2.2. Label elements

### Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms (CLP)



GHS07

GHS09

Signal word (CLP)

: Warning

Hazard statements (CLP)

: H302 - Harmful if swallowed.  
H400 - Very toxic to aquatic life.

Precautionary statements (CLP)

: P273 - Avoid release to the environment.

## 2.3. Other hazards

No additional information available

## SECTION 3: Composition/information on ingredients

### 3.1. Substances

| Name                          | Product identifier  | %   |
|-------------------------------|---------------------|-----|
| 2-BROMO-5-HYDROXYBENZALDEHYDE | (CAS-No.) 2973-80-0 | 100 |

Full text of R- and H-statements: see section 16

### 3.2. Mixtures

Not applicable

## SECTION 4: First aid measures

### 4.1. Description of first aid measures

|                                       |                                                                                                                                                                                  |
|---------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| First-aid measures after inhalation   | : Remove person to fresh air and keep comfortable for breathing.                                                                                                                 |
| First-aid measures after skin contact | : Wash skin with plenty of water. If skin irritation occurs: Get medical advice/attention.                                                                                       |
| First-aid measures after eye contact  | : Remove contact lenses, if present and easy to do. Continue rinsing. Rinse cautiously with water for several minutes. If eye irritation persists: Get medical advice/attention. |
| First-aid measures after ingestion    | : Rinse mouth out with water. If you feel unwell, seek medical advice.                                                                                                           |

### 4.2. Most important symptoms and effects, both acute and delayed

|                                  |                         |
|----------------------------------|-------------------------|
| Symptoms/effects after ingestion | : Harmful if swallowed. |
|----------------------------------|-------------------------|

# 2-BROMO-5-HYDROXYBENZALDEHYDE

## Safety Data Sheet

### 4.3. Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

## SECTION 5: Firefighting measures

### 5.1. Extinguishing media

Suitable extinguishing media : dry chemical powder, alcohol-resistant foam, carbon dioxide (CO<sub>2</sub>).  
Unsuitable extinguishing media : Do not use a heavy water stream.

### 5.2. Special hazards arising from the substance or mixture

No additional information available

### 5.3. Advice for firefighters

Protection during firefighting : Do not attempt to take action without suitable protective equipment.

## SECTION 6: Accidental release measures

### 6.1. Personal precautions, protective equipment and emergency procedures

#### 6.1.1. For non-emergency personnel

Emergency procedures : Avoid contact with skin, eyes and clothing.

#### 6.1.2. For emergency responders

Protective equipment : Use personal protective equipment as required.

### 6.2. Environmental precautions

Avoid release to the environment.

### 6.3. Methods and material for containment and cleaning up

Methods for cleaning up : Clean contaminated surfaces with an excess of water.

### 6.4. Reference to other sections

No additional information available

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

Precautions for safe handling : Avoid contact with skin and eyes.  
Hygiene measures : Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work.

### 7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Store in a well-ventilated place. Keep container tightly closed.

### 7.3. Specific end use(s)

No additional information available

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

No additional information available

# 2-BROMO-5-HYDROXYBENZALDEHYDE

## Safety Data Sheet

### 8.2. Exposure controls

|                          |                                      |
|--------------------------|--------------------------------------|
| Hand protection          | : Protective gloves                  |
| Eye protection           | : Chemical goggles or safety glasses |
| Skin and body protection | : Wear suitable protective clothing  |
| Respiratory protection   | : Wear respiratory protection.       |

## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

|                                            |                     |
|--------------------------------------------|---------------------|
| Physical state                             | : Solid             |
| Molecular mass                             | : 201.02 g/mol      |
| Colour                                     | : No data available |
| Odour                                      | : No data available |
| Odour threshold                            | : No data available |
| pH                                         | : No data available |
| Relative evaporation rate (butylacetate=1) | : No data available |
| Melting point                              | : 130 - 135 °C      |
| Freezing point                             | : No data available |
| Boiling point                              | : No data available |
| Flash point                                | : No data available |
| Auto-ignition temperature                  | : No data available |
| Decomposition temperature                  | : No data available |
| Flammability (solid, gas)                  | : No data available |
| Vapour pressure                            | : No data available |
| Relative vapour density at 20 °C           | : No data available |
| Relative density                           | : 6.94              |
| Solubility                                 | : No data available |
| Log Pow                                    | : No data available |
| Viscosity, kinematic                       | : No data available |
| Viscosity, dynamic                         | : No data available |
| Explosive properties                       | : No data available |
| Oxidising properties                       | : No data available |
| Explosive limits                           | : No data available |

### 9.2. Other information

No additional information available

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

No additional information available

# 2-BROMO-5-HYDROXYBENZALDEHYDE

## Safety Data Sheet

### 10.2. Chemical stability

Stable under normal conditions.

### 10.3. Possibility of hazardous reactions

No additional information available

### 10.4. Conditions to avoid

Direct sunlight. Moisture.

### 10.5. Incompatible materials

No additional information available

### 10.6. Hazardous decomposition products

No additional information available

## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

Acute toxicity : Oral: Harmful if swallowed.

Skin corrosion/irritation : Not classified

Serious eye damage/irritation : Not classified

Respiratory or skin sensitisation : Not classified

Germ cell mutagenicity : Not classified

Carcinogenicity : Not classified

Reproductive toxicity : Not classified

STOT-single exposure : Not classified

STOT-repeated exposure : Not classified

Aspiration hazard : Not classified

## SECTION 12: Ecological information

### 12.1. Toxicity

No additional information available

### 12.2. Persistence and degradability

No additional information available

### 12.3. Bioaccumulative potential

No additional information available

# 2-BROMO-5-HYDROXYBENZALDEHYDE

## Safety Data Sheet

### 12.4. Mobility in soil

No additional information available

### 12.5. Results of PBT and vPvB assessment

No additional information available

### 12.6. Other adverse effects

No additional information available

## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

No additional information available

## SECTION 14: Transport information

In accordance with ADR / RID / IMDG / IATA / ADN

### 14.1. UN number

|               |        |
|---------------|--------|
| UN-No. (ADR)  | : 3077 |
| UN-No. (IMDG) | : 3077 |
| UN-No. (IATA) | : 3077 |
| UN-No. (ADN)  | : 3077 |
| UN-No. (RID)  | : 3077 |

### 14.2. UN proper shipping name

|                                       |                                                                                        |
|---------------------------------------|----------------------------------------------------------------------------------------|
| Proper Shipping Name (ADR)            | : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.                                   |
| Proper Shipping Name (IMDG)           | : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.                                   |
| Proper Shipping Name (IATA)           | : Environmentally hazardous substance, solid, n.o.s.                                   |
| Proper Shipping Name (ADN)            | : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.                                   |
| Proper Shipping Name (RID)            | : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.                                   |
| Transport document description (ADR)  | : UN 3077 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S., 9, III, (-)              |
| Transport document description (IMDG) | : UN 3077 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S., 9, III, MARINE POLLUTANT |
| Transport document description (IATA) | : UN 3077 Environmentally hazardous substance, solid, n.o.s., 9, III                   |
| Transport document description (ADN)  | : UN 3077 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S., 9, III                   |
| Transport document description (RID)  | : UN 3077 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S., 9, III                   |

### 14.3. Transport hazard class(es)

#### ADR

|                                  |     |
|----------------------------------|-----|
| Transport hazard class(es) (ADR) | : 9 |
| Danger labels (ADR)              | : 9 |



#### IMDG

|                                   |     |
|-----------------------------------|-----|
| Transport hazard class(es) (IMDG) | : 9 |
| Danger labels (IMDG)              | : 9 |

# 2-BROMO-5-HYDROXYBENZALDEHYDE

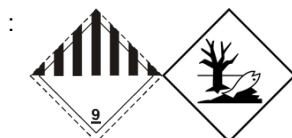
## Safety Data Sheet



### IATA

Transport hazard class(es) (IATA) : 9

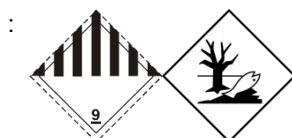
Hazard labels (IATA) : 9



### ADN

Transport hazard class(es) (ADN) : 9

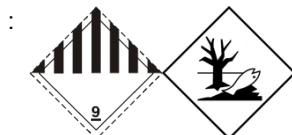
Danger labels (ADN) : 9



### RID

Transport hazard class(es) (RID) : 9

Danger labels (RID) : 9



### 14.4. Packing group

Packing group (ADR) : III

Packing group (IMDG) : III

Packing group (IATA) : III

Packing group (ADN) : III

Packing group (RID) : III

### 14.5. Environmental hazards

Dangerous for the environment : Yes

Marine pollutant : Yes

Other information : No supplementary information available

### 14.6. Special precautions for user

#### - Overland transport

Classification code (ADR) : M7

Special provisions (ADR) : 274, 335, 375, 601

Limited quantities (ADR) : 5kg

Excepted quantities (ADR) : E1

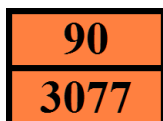
Packing instructions (ADR) : P002, IBC08, LP02, R001

Special packing provisions (ADR) : PP12, B3

# 2-BROMO-5-HYDROXYBENZALDEHYDE

## Safety Data Sheet

|                                                                         |                     |
|-------------------------------------------------------------------------|---------------------|
| Mixed packing provisions (ADR)                                          | : MP10              |
| Portable tank and bulk container instructions (ADR)                     | : T1, BK1, BK2, BK3 |
| Portable tank and bulk container special provisions (ADR)               | : TP33              |
| Tank code (ADR)                                                         | : SGAV, LGBV        |
| Vehicle for tank carriage                                               | : AT                |
| Transport category (ADR)                                                | : 3                 |
| Special provisions for carriage - Packages (ADR)                        | : V13               |
| Special provisions for carriage - Bulk (ADR)                            | : VC1, VC2          |
| Special provisions for carriage - Loading, unloading and handling (ADR) | : CV13              |
| Hazard identification number (Kemler No.)                               | : 90                |
| Orange plates                                                           | :                   |



|                               |      |
|-------------------------------|------|
| Tunnel restriction code (ADR) | : -  |
| EAC code                      | : 2Z |

### - Transport by sea

|                                   |                           |
|-----------------------------------|---------------------------|
| Special provisions (IMDG)         | : 274, 335, 966, 967, 969 |
| Limited quantities (IMDG)         | : 5 kg                    |
| Excepted quantities (IMDG)        | : E1                      |
| Packing instructions (IMDG)       | : LP02, P002              |
| Special packing provisions (IMDG) | : PP12                    |
| IBC packing instructions (IMDG)   | : IBC08                   |
| IBC special provisions (IMDG)     | : B3                      |
| Tank instructions (IMDG)          | : BK1, BK2, BK3, T1       |
| Tank special provisions (IMDG)    | : TP33                    |
| EmS-No. (Fire)                    | : F-A                     |
| EmS-No. (Spillage)                | : S-F                     |
| Stowage category (IMDG)           | : A                       |
| Stowage and handling (IMDG)       | : SW23                    |

### - Air transport

|                                              |                         |
|----------------------------------------------|-------------------------|
| PCA Excepted quantities (IATA)               | : E1                    |
| PCA Limited quantities (IATA)                | : Y956                  |
| PCA limited quantity max net quantity (IATA) | : 30kgG                 |
| PCA packing instructions (IATA)              | : 956                   |
| PCA max net quantity (IATA)                  | : 400kg                 |
| CAO packing instructions (IATA)              | : 956                   |
| CAO max net quantity (IATA)                  | : 400kg                 |
| Special provisions (IATA)                    | : A97, A158, A179, A197 |
| ERG code (IATA)                              | : 9L                    |

### - Inland waterway transport

|                           |                      |
|---------------------------|----------------------|
| Classification code (ADN) | : M7                 |
| Special provisions (ADN)  | : 274, 335, 375, 601 |
| Limited quantities (ADN)  | : 5 kg               |
| Excepted quantities (ADN) | : E1                 |
| Carriage permitted (ADN)  | : T* B**             |
| Equipment required (ADN)  | : PP, A              |

# 2-BROMO-5-HYDROXYBENZALDEHYDE

## Safety Data Sheet

Number of blue cones/lights (ADN) : 0  
Additional requirements/Remarks (ADN) : \* Only in the molten state. \*\* For carriage in bulk see also 7.1.4.1. \*\*\* Only in the case of transport in bulk.

### - Rail transport

Classification code (RID) : M7  
Special provisions (RID) : 274, 335, 375, 601  
Excepted quantities (RID) : E1  
Packing instructions (RID) : P002, IBC08, LP02, R001  
Special packing provisions (RID) : PP12, B3  
Mixed packing provisions (RID) : MP10  
Portable tank and bulk container instructions (RID) : T1, BK1, BK2, BK3  
Portable tank and bulk container special provisions (RID) : TP33  
Tank codes for RID tanks (RID) : SGAV, LGBV  
Transport category (RID) : 3  
Special provisions for carriage – Packages (RID) : W13  
Special provisions for carriage – Bulk (RID) : VC1, VC2  
Special provisions for carriage - Loading, unloading and handling (RID) : CW13, CW31  
Colis express (express parcels) (RID) : CE11  
Hazard identification number (RID) : 90

### 14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable

## SECTION 15: Regulatory information

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

#### 15.1.1. EU-Regulations

No REACH Annex XVII restrictions

2-BROMO-5-HYDROXYBENZALDEHYDE is not on the REACH Candidate List

2-BROMO-5-HYDROXYBENZALDEHYDE is not on the REACH Annex XIV List

#### 15.1.2. National regulations

##### Germany

12th Ordinance Implementing the Federal Immission Control Act - 12.BImSchV : Is not subject of the 12. BImSchV (Hazardous Incident Ordinance)

##### Netherlands

SZW-lijst van kankerverwekkende stoffen : The substance is not listed  
SZW-lijst van mutagene stoffen : The substance is not listed  
NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Borstvoeding : The substance is not listed

# 2-BROMO-5-HYDROXYBENZALDEHYDE

## Safety Data Sheet

NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Vruchtbaarheid : The substance is not listed

NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Ontwikkeling : The substance is not listed

### 15.2. Chemical safety assessment

No additional information available

## SECTION 16: Other information

Full text of R-, H- and EUH-statements:

|                     |                                                                 |
|---------------------|-----------------------------------------------------------------|
| Acute Tox. 4 (Oral) | Acute toxicity (oral), Category 4                               |
| Aquatic Acute 1     | Hazardous to the aquatic environment — Acute Hazard, Category 1 |
| H302                | Harmful if swallowed.                                           |
| H400                | Very toxic to aquatic life.                                     |

*This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product*