# Material Safety Data Sheet

## HABA

## 1. Product and company identification

<table>
<thead>
<tr>
<th>Product name</th>
<th>HABA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Synonym</td>
<td>BENZOIC ACID, 2-[(4-HYDROXYPHENYL)AZO]-; HABA; 2-(4'-Hydroxyphenylazo)benzoic acid; HBABA; 2-(4'-Hydroxybenzeneazo)benzoic acid; 4'Hydroxyazobenzene-2-carboxylic acid; 2-(p-Hydroxyphenylazo)benzoic acid</td>
</tr>
<tr>
<td>Chemical formula</td>
<td>C₁₃H₁₀N₂O₃</td>
</tr>
<tr>
<td>Supplier</td>
<td>ThermoFisher Scientific Pierce Biotechnology P.O. Box 117 Rockford, IL 61105 United States 815.968.0747 or 800.874.3723</td>
</tr>
<tr>
<td>Manufacturer</td>
<td>ThermoFisher Scientific Pierce Biotechnology P.O. Box 117 Rockford, IL 61105 United States 815.968.0747 800.874.3723</td>
</tr>
<tr>
<td>Product No.</td>
<td>0028010 0028050 1854180</td>
</tr>
<tr>
<td>MSDS #</td>
<td>0813</td>
</tr>
<tr>
<td>Responsible name</td>
<td>MSDS (Regulatory Affairs)</td>
</tr>
<tr>
<td>In case of emergency</td>
<td>CHEMTREC: 800.424.9300 OUTSIDE US: 202.483.7616</td>
</tr>
</tbody>
</table>

## 2. Hazards identification

<table>
<thead>
<tr>
<th>Physical state</th>
<th>Solid. [Powdered solid.]</th>
</tr>
</thead>
<tbody>
<tr>
<td>OSHA/HCS status</td>
<td>This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).</td>
</tr>
<tr>
<td>Emergency overview</td>
<td>WARNING ! CAUSES RESPIRATORY TRACT, EYE AND SKIN IRRITATION.</td>
</tr>
<tr>
<td>Routes of entry</td>
<td>Dermal contact. Eye contact. Inhalation. Ingestion.</td>
</tr>
<tr>
<td>Potential acute health effects</td>
<td></td>
</tr>
<tr>
<td>Inhalation</td>
<td>Irritating to respiratory system. Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.</td>
</tr>
<tr>
<td>Ingestion</td>
<td>No known significant effects or critical hazards.</td>
</tr>
<tr>
<td>Skin</td>
<td>Irritating to skin.</td>
</tr>
<tr>
<td>Eyes</td>
<td>Irritating to eyes.</td>
</tr>
<tr>
<td>Potential chronic health effects</td>
<td></td>
</tr>
<tr>
<td>Chronic effects</td>
<td>No known significant effects or critical hazards.</td>
</tr>
<tr>
<td>Carcinogenicity</td>
<td>No known significant effects or critical hazards.</td>
</tr>
<tr>
<td>Mutagenicity</td>
<td>No known significant effects or critical hazards.</td>
</tr>
<tr>
<td>Teratogenicity</td>
<td>No known significant effects or critical hazards.</td>
</tr>
<tr>
<td>Developmental effects</td>
<td>No known significant effects or critical hazards.</td>
</tr>
<tr>
<td>Fertility effects</td>
<td>No known significant effects or critical hazards.</td>
</tr>
<tr>
<td>Over-exposure signs/symptoms</td>
<td>Refer to the instruction booklet for proper and intended use. Otherwise, contact supplier for specific applications.</td>
</tr>
</tbody>
</table>

2. Hazards identification

Inhalation: Adverse symptoms may include the following: respiratory tract irritation coughing

Ingestion: No specific data.

Skin: Adverse symptoms may include the following: irritation redness

Eyes: Adverse symptoms may include the following: pain or irritation watering redness

Medical conditions aggravated by over-exposure: None known.

The substance is classified as dangerous according to Directive 67/548/EEC and its amendments.

Classification: Xi; R36/37/38

Human health hazards: Irritating to eyes, respiratory system and skin.

See toxicological information (section 11)

3. Composition/information on ingredients

United States

<table>
<thead>
<tr>
<th>Name</th>
<th>CAS number</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>HABA</td>
<td>1634-82-8</td>
<td>98 - 100</td>
</tr>
</tbody>
</table>

Europe

Substance/preparation: Substance

<table>
<thead>
<tr>
<th>Ingredient name</th>
<th>CAS number</th>
<th>%</th>
<th>EC number</th>
<th>Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>HABA</td>
<td>1634-82-8</td>
<td>98 - 100</td>
<td>216-655-2</td>
<td>Xi; R36/37/38</td>
</tr>
</tbody>
</table>

[1] Substance classified with a health or environmental hazard

[2] Substance with a workplace exposure limit

Occupational exposure limits, if available, are listed in section 8.

4. First aid measures

Eye contact: Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention.

Skin contact: Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Continue to rinse for at least 10 minutes. Get medical attention. Wash clothing before reuse. Clean shoes thoroughly before reuse.

Inhalation: Move exposed person to fresh air. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. Keep person warm and at rest. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. In case of inhalation of decomposition products in a fire, symptoms may be delayed.
4. First aid measures

**Ingestion**
- Wash out mouth with water. Remove dentures if any. Move exposed person to fresh air. Keep person warm and at rest. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention if adverse health effects persist or are severe. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

**Protection of first-aiders**
- No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

See section 11 for more detailed information on health effects and symptoms.

5. Fire-fighting measures

**Flammability of the product**
- No specific fire or explosion hazard.

**Extinguishing media**
- Use an extinguishing agent suitable for the surrounding fire.

**Suitable**
- None known.

**Not suitable**
- Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

**Special exposure hazards**
- Decomposition products may include the following materials:
  - carbon oxides
  - nitrogen oxides

**Hazardous combustion products**
- Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

**Special protective equipment for fire-fighters**

6. Accidental release measures

**Personal precautions**
- No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment (see section 8).

**Environmental precautions**
- Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

**Large spill**
- Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Vacuum or sweep up material and place in a designated, labeled waste container. Dispose of via a licensed waste disposal contractor. Note: see section 1 for emergency contact information and section 13 for waste disposal.

**Small spill**
- Move containers from spill area. Vacuum or sweep up material and place in a designated, labeled waste container. Dispose of via a licensed waste disposal contractor.
### 7. Handling and storage

**Handling**
Put on appropriate personal protective equipment (see section 8). Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Do not ingest. Avoid contact with eyes, skin and clothing. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.

**Storage**
Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

### 8. Exposure controls/personal protection

**Europe**
No exposure limit value known.

Consult local authorities for acceptable exposure limits.

**Recommended monitoring procedures**
If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment.

**Engineering measures**
Use only with adequate ventilation. If user operations generate dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

**Hygiene measures**
Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

**Personal protection**

**Respiratory**
Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

**Hands**
Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.

**Eyes**
Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts.

**Skin**
Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

**Environmental exposure controls**
Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.
9. Physical and chemical properties

Physical state: Solid. [Powdered solid.]
Color: Yellow. Orange. [Light]
Molecular weight: 242.23 g/mole
Molecular formula: C_{13}H_{10}N_{2}O_{3}
Melting/freezing point: 204 to 208°C (399.2 to 406.4°F)
Vapor density: 8.4 [Air = 1]
Solubility: Partially soluble in the following materials: cold water and hot water.

10. Stability and reactivity

Stability: The product is stable. Under normal conditions of storage and use, hazardous polymerization will not occur.
Conditions to avoid: No specific data.
Materials to avoid: No specific data.
Hazardous decomposition products: Under normal conditions of storage and use, hazardous decomposition products should not be produced.
Hazardous polymerization: Will not occur.

11. Toxicological information

United States

Acute toxicity
Conclusion/Summary: Not available.

Chronic toxicity
Conclusion/Summary: Not available.

Carcinogenicity
Conclusion/Summary: Not available.

Classification
Product/ingredient name: benzoic acid, 2-[(4-hydroxyphenyl)azo]-
ACGIH: -
IARC: -
EPA: -
NIOSH: None.
NTP: -
OSHA: None.

Mutagenicity
Conclusion/Summary: Not available.

Teratogenicity
Conclusion/Summary: Not available.

Reproductive toxicity
Conclusion/Summary: Not available.

Europe

Conclusion/Summary: Not available.

Chronic effects: No known significant effects or critical hazards.
Carcinogenicity: No known significant effects or critical hazards.
Mutagenicity: No known significant effects or critical hazards.
Teratogenicity: No known significant effects or critical hazards.
Developmental effects: No known significant effects or critical hazards.
Fertility effects: No known significant effects or critical hazards.
12 . Ecological information

**Environmental effects**

United States

Aquatic ecotoxicity

Test results available upon request.

**Conclusion/Summary**

Not available.

**Other adverse effects**

No known significant effects or critical hazards.

13 . Disposal considerations

**Waste disposal**

The generation of waste should be avoided or minimized wherever possible. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

**Hazardous waste**

The classification of the product may meet the criteria for a hazardous waste.

Disposal should be in accordance with applicable regional, national and local laws and regulations.

Refer to Section 7: HANDLING AND STORAGE and Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION for additional handling information and protection of employees.

14 . Transport information

<table>
<thead>
<tr>
<th>Regulatory information</th>
<th>UN number</th>
<th>Proper shipping name</th>
<th>Classes</th>
<th>PG*</th>
</tr>
</thead>
<tbody>
<tr>
<td>DOT Classification</td>
<td>Not regulated.</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>IATA-DGR Class</td>
<td>Not regulated.</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

**PG*** : Packing group

15 . Regulatory information

**United States**

**HCS Classification**

Irritating material

**U.S. Federal regulations**

United States inventory (TSCA 8b): This material is listed or exempted.

SARA 302/304/311/312 extremely hazardous substances: No products were found.

SARA 302/304 emergency planning and notification: No products were found.

SARA 302/304/311/312 hazardous chemicals: No products were found.

SARA 311/312 MSDS distribution - chemical inventory - hazard identification: No products were found.

Clean Water Act (CWA) 307: No products were found.

Clean Water Act (CWA) 311: No products were found.

Clean Air Act (CAA) 112 accidental release prevention: No products were found.

Clean Air Act (CAA) 112 regulated flammable substances: No products were found.

Clean Air Act (CAA) 112 regulated toxic substances: No products were found.

**United States inventory (TSCA 8b)**

United States inventory (TSCA 8b): This material is listed or exempted.

**Canada**

**WHMIS (Canada)**

Not controlled under WHMIS (Canada).
15. Regulatory information

**Canadian lists**

- **CEPA Toxic substances**: This material is not listed.
- **Canadian ARET**: This material is not listed.
- **Canadian NPRI**: This material is not listed.
- **Alberta Designated Substances**: This material is not listed.
- **Ontario Designated Substances**: This material is not listed.
- **Quebec Designated Substances**: This material is not listed.

**Canada inventory**

- **Canada inventory**: This material is listed or exempted.

**EU regulations**

**Hazard symbol or symbols**

- [X] Irritant

**Risk phrases**

- R36/37/38- Irritating to eyes, respiratory system and skin.

**Safety phrases**

- S24/25- Avoid contact with skin and eyes.
- S26- In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
- S28- After contact with skin, wash immediately with plenty of [***].
- S36/37- Wear suitable protective clothing and gloves.

**International regulations**

**International lists**

- **Australia inventory (AICS)**: This material is listed or exempted.
- **China inventory (IECSC)**: Not determined.
- **Korea inventory (KECI)**: This material is listed or exempted.
- **Philippines inventory (PICCS)**: Not determined.
- **Japan inventory (ENCS)**: This material is listed or exempted.

16. Other information

**Label requirements**

- CAUSES RESPIRATORY TRACT, EYE AND SKIN IRRITATION.

**Hazardous Material Information System (U.S.A.)**

<table>
<thead>
<tr>
<th>Health</th>
<th>Flammability</th>
<th>Physical hazards</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

The customer is responsible for determining the PPE code for this material.

**National Fire Protection Association (U.S.A.)**

<table>
<thead>
<tr>
<th>Health</th>
<th>Flammability</th>
<th>Instability</th>
<th>Special</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>0</td>
<td>0</td>
<td></td>
</tr>
</tbody>
</table>

- **Date of printing**: 12/27/2007.
- **Date of issue**: 12/27/2007.
- **Date of previous issue**: No previous validation.
- **Version**: 1

*Indicates information that has changed from previously issued version.*
### 16. Other information

<table>
<thead>
<tr>
<th>Full text of R-phrases referred to in sections 2 and 3 - Europe</th>
<th>R36/37/38 - Irritating to eyes, respiratory system and skin.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Full text of classifications referred to in sections 2 and 3 - Europe</td>
<td>Xi - Irritant</td>
</tr>
</tbody>
</table>

**Notice to reader**

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein.

Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.