1. Identification

Product identifier

**Basta SL150**

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

Relevant identified uses: crop protection product, herbicide

Details of the supplier of the safety data sheet

- **Company:**
  - PT BASF Indonesia
  - DBS Bank Tower, 27th Floor, Ciputra World 1 Jakarta, Jl. Prof. Dr. Satrio Kav 3 - 5
  - Jakarta 12940, INDONESIA

- **Telephone:** +62 21 2988 6000

Emergency telephone number

- **International emergency number:**
  - Telephone: +49 180 2273-112

2. Hazards Identification

Classification of the substance or mixture

According to UN GHS criteria

- Acute Tox. 4 (oral)
- Acute Tox. 3 (dermal)
- Eye Dam./Irrit. 1
- Repr. 1B (fertility)
Repr. 1B (unborn child)
STOT RE (Nervous system) 2
Aquatic Chronic 3

For the classifications not written out in full in this section the full text can be found in section 16.

**Label elements**

**Globally Harmonized System (GHS)**

**Pictogram:**

- ![Pictogram]

**Signal Word:**
Danger

**Hazard Statement:**
- H318 Causes serious eye damage.
- H311 Toxic in contact with skin.
- H302 Harmful if swallowed.
- H373 May cause damage to organs (Nervous system) through prolonged or repeated exposure.
- H360 May damage fertility. May damage the unborn child.
- H412 Hazardous to aquatic life with long lasting effects.

**Precautionary Statement:**
- P101 If medical advice is needed, have product container or label at hand.
- P102 Keep out of reach of children.
- P103 Read label before use.

**Precautionary Statements (Prevention):**
- P260 Do not breathe dust/gas/mist/vapours.
- P201 Obtain special instructions before use.
- P202 Do not handle until all safety precautions have been read and understood.
- P270 Do not eat, drink or smoke when using this product.
- P264 Wash contaminated body parts thoroughly after handling.
- P280 Wear protective gloves/clothing/eye protection.

**Precautionary Statements (Response):**
P310  Immediately call a POISON CENTER or doctor/physician.
P305 + P351 + P338  IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P303 + P352  IF ON SKIN (or hair): Wash with plenty of soap and water.
P361 + P364  Take off immediately all contaminated clothing and wash it before reuse.
P330  Rinse mouth.

Precautionary Statements (Storage):
P405  Store locked up.

Precautionary Statements (Disposal):
P501  Dispose of contents/container to hazardous or special waste collection point.

According to UN GHS criteria

Hazard determining component(s) for labelling: glufosinate ammonium (ISO)

Other hazards

According to UN GHS criteria

See section 12 - Results of PBT and vPvB assessment.

If applicable information is provided in this section on other hazards which do not result in classification but which may contribute to the overall hazards of the substance or mixture.

3. Composition/Information on Ingredients

Substances

Not applicable

Mixtures

Chemical nature

crop protection product, herbicide, Soluble concentrate (SL)

Hazardous ingredients (GHS)

According to UN GHS criteria

| glufosinate ammonium (ISO); ammonium 2-amino-4-(hydroxymethylphosphinyl)butyrate |
4. First Aid Measures

**Description of first aid measures**

First aid personnel should pay attention to their own safety. If the patient is likely to become unconscious, place and transport in stable sideways position (recovery position). Immediately remove contaminated clothing. Symptoms of poisoning may occur even after several hours, continue medical observation for at least 48 hours after the accident.

If inhaled:
Keep patient calm, remove to fresh air, seek medical attention. Immediately administer a corticosteroid from a controlled/metered dose inhaler.

On skin contact:
Immediately wash thoroughly with plenty of water, apply sterile dressings, consult a skin specialist.

On contact with eyes:
Immediately wash affected eyes for at least 15 minutes under running water with eyelids held open, consult an eye specialist.

On ingestion:
Do not induce vomiting. Call a poison control center or physician for treatment advice. Immediately rinse mouth and then drink 200-300 ml of water, seek medical attention.

**Most important symptoms and effects, both acute and delayed**
Symptoms: The most important known symptoms and effects are described in the labelling (see section 2) and/or in section 11., vomiting, diarrhea, abdominal cramps, tremors, hypotony, unconsciousness, coma, convulsions, respiratory disorders, nausea, rapid heart rate, Symptoms may be delayed for several hours.

**Indication of any immediate medical attention and special treatment needed**

Treatment: Treat according to symptoms (decontamination, vital functions), no known specific antidote. Medical monitoring for at least 24-48 hours.

### 5. Fire-Fighting Measures

**Extinguishing media**

Suitable extinguishing media:
- water spray, dry powder, foam, carbon dioxide

Unsuitable extinguishing media for safety reasons:
- water jet

**Special hazards arising from the substance or mixture**

- carbon monoxide, Carbon dioxide, hydrogen cyanide, nitrogen oxides, sulfur oxides

The substances/groups of substances mentioned can be released in case of fire.

**Advice for fire-fighters**

Special protective equipment:
- Wear self-contained breathing apparatus and chemical-protective clothing.

Further information:
- Keep containers cool by spraying with water if exposed to fire. In case of fire and/or explosion do not breathe fumes. Collect contaminated extinguishing water separately, do not allow to reach sewage or effluent systems. Dispose of fire debris and contaminated extinguishing water in accordance with official regulations.

### 6. Accidental Release Measures

**Personal precautions, protective equipment and emergency procedures**

Do not breathe vapour/spray. Use personal protective clothing. Avoid contact with the skin, eyes and clothing.

**Environmental precautions**

Do not discharge into the subsoil/soil. Do not discharge into drains/surface waters/groundwater.

**Methods and material for containment and cleaning up**

For small amounts: Pick up with suitable absorbent material (e.g. sand, sawdust, general-purpose binder, kieselguhr).
For large amounts: Dike spillage. Pump off product.
Dispose of absorbed material in accordance with regulations. Collect waste in suitable containers, which can be labeled and sealed. Clean contaminated floors and objects thoroughly with water and detergents, observing environmental regulations. Wear suitable protective equipment.

7. Handling and Storage

Precautions for safe handling
No special measures necessary if stored and handled correctly. Ensure thorough ventilation of stores and work areas. When using do not eat, drink or smoke. Hands and/or face should be washed before breaks and at the end of the shift. Remove contaminated clothing and protective equipment before entering eating areas.

Protection against fire and explosion:
No special precautions necessary. The substance/product is non-combustible. Product is not explosive.

Conditions for safe storage, including any incompatibilities
Segregate from foods and animal feeds.
Further information on storage conditions: Keep only in the original container. Keep container tightly closed in a cool, well-ventilated place. Keep away from heat. Store protected against freezing. Protect from direct sunlight.

Storage stability:
Storage duration: 24 Months

Specific end use(s)
For the relevant identified use(s) listed in Section 1 the advice mentioned in this section 7 is to be observed.

8. Exposure Controls/Personal Protection

Control parameters
Components with occupational exposure limits

107-98-2: 1-methoxy-2-propanol

Exposure controls
Personal protective equipment
Respiratory protection:
Suitable respiratory protection for lower concentrations or short-term effect: Combination filter for gases/vapours of organic, inorganic, acid inorganic and alkaline compounds (e.g. EN 14387 Type ABEK).

Hand protection:
Suitable chemical resistant safety gloves (EN 374) also with prolonged, direct contact (Recommended: Protective index 6, corresponding > 480 minutes of permeation time according to EN 374): E.g. nitrile rubber (0.4 mm), chloroprene rubber (0.5 mm), butyl rubber (0.7 mm) etc.

Eye protection:
Tightly fitting safety goggles (splash goggles) (e.g. EN 166)

Body protection:
Body protection must be chosen depending on activity and possible exposure, e.g. apron, protecting boots, chemical-protection suit (according to EN 14605 in case of splashes or EN ISO 13982 in case of dust).

General safety and hygiene measures
The statements on personal protective equipment in the instructions for use apply when handling crop-protection agents in final-consumer packing. Wearing of closed work clothing is recommended. Store work clothing separately. Keep away from food, drink and animal feeding stuffs.

9. Physical and Chemical Properties

Information on basic physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Form</td>
<td>liquid</td>
</tr>
<tr>
<td>Colour</td>
<td>blue to green</td>
</tr>
<tr>
<td>Odour</td>
<td>pungent</td>
</tr>
<tr>
<td>Odour threshold</td>
<td>Not determined due to potential health hazard by inhalation.</td>
</tr>
<tr>
<td>pH value</td>
<td>approx. 6 - 8 (23 °C)</td>
</tr>
<tr>
<td></td>
<td>(undiluted)</td>
</tr>
<tr>
<td>Melting point</td>
<td>approx. 0 °C</td>
</tr>
<tr>
<td>Boiling point</td>
<td>approx. 100 °C</td>
</tr>
<tr>
<td>Flash point</td>
<td>57 °C</td>
</tr>
<tr>
<td></td>
<td>UN L.2 Sustained combustibility, The product does not burn self-sustainingly. By analogy with a product of similar composition</td>
</tr>
<tr>
<td>Evaporation rate</td>
<td>not applicable</td>
</tr>
<tr>
<td>Flammability</td>
<td>not applicable</td>
</tr>
<tr>
<td>Lower explosion limit</td>
<td>As a result of our experience with this product and our knowledge of its composition we do not expect any hazard as long as the product is used appropriately and in accordance with the intended use.</td>
</tr>
</tbody>
</table>
Upper explosion limit: As a result of our experience with this product and our knowledge of its composition we do not expect any hazard as long as the product is used appropriately and in accordance with the intended use.

Ignition temperature: Based on the water content the product does not ignite.

Vapour pressure: (20 °C)

Density: approx. 1.11 g/cm³ (20 °C)

Relative vapour density (air): not applicable

Solubility in water: miscible (20 °C)

Information on: glufosinate ammonium (ISO); ammonium 2-amino-4-(hydroxymethyl)phosphinyl)butyrate

Partitioning coefficient n-octanol/water (log Kow): < 0.1 (22 °C; pH value: 7)

Information on: Polyethyleneglycolmonoalkylethersulphate, sodium salt

Partitioning coefficient n-octanol/water (log Kow): 0.3

Thermal decomposition: > 200 °C

Viscosity, dynamic: not determined

Explosion hazard: Based on the chemical structure there is no indicating of explosive properties.

Fire promoting properties: Based on its structural properties the product is not classified as oxidizing.

Other information

Other Information:
If necessary, information on other physical and chemical parameters is indicated in this section.

10. Stability and Reactivity

Reactivity
No hazardous reactions if stored and handled as prescribed/indicated.

Chemical stability
The product is stable if stored and handled as prescribed/indicated.

Possibility of hazardous reactions
No hazardous reactions if stored and handled as prescribed/indicated.

**Conditions to avoid**
See MSDS section 7 - Handling and storage.

**Incompatible materials**
Substances to avoid:
bases

**Hazardous decomposition products**
Hazardous decomposition products:
ammonia, anhydrous
No hazardous decomposition products if stored and handled as prescribed/indicated.

### 11. Toxicological Information

**Information on toxicological effects**

**Acute toxicity**
Assessment of acute toxicity:
Of pronounced toxicity after short-term skin contact. Of moderate toxicity after single ingestion.
Inhalation is not likely in the available physical form. The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

Experimental/calculated data:
LD50 rat (oral): 1.730 mg/kg
LC50 rat (by inhalation): 2.97 mg/l 4 h
The test result applies only to the substance transferred into respirable aerosol (particles < 20 µm).
LD50 rat (dermal): 593 mg/kg

**Irritation**
Assessment of irritating effects:
May cause severe damage to the eyes. Not irritating to the skin.

Experimental/calculated data:
Skin corrosion/irritation rabbit: non-irritant

Serious eye damage/irritation rabbit: Risk of serious damage to eyes.

**Respiratory/Skin sensitization**
Assessment of sensitization:
Skin sensitizing effects were not observed in animal studies.

Experimental/calculated data:
modified Buehler test guinea pig: Non-sensitizing. (OECD Guideline 406)

Germ cell mutagenicity

Assessment of mutagenicity:
The product has not been tested. The statement has been derived from the properties of the individual components. Mutagenicity tests revealed no genotoxic potential.

Carcinogenicity

Assessment of carcinogenicity:
The product has not been tested. The statement has been derived from the properties of the individual components. In long-term studies in mice in which the substance was given by feed, a carcinogenic effect was not observed.

Reproductive toxicity

Assessment of reproduction toxicity:
The product has not been tested. The statement has been derived from the properties of the individual components.

Information on: glufosinate ammonium (ISO); ammonium 2-amino-4-(hydroxymethyl)phosphinyl)butyrate
Assessment of reproduction toxicity:
Causes impairment of fertility in laboratory animals.

Developmental toxicity

Assessment of teratogenicity:
The product has not been tested. The statement has been derived from the properties of the individual components.

Information on: glufosinate ammonium (ISO); ammonium 2-amino-4-(hydroxymethyl)phosphinyl)butyrate
Assessment of teratogenicity:
The substance caused malformations/developmental toxicity in laboratory animals. The substance did not cause malformations in animal studies; however, toxicity to development was observed at doses that were toxic to the parental animals.

Specific target organ toxicity (single exposure)

Assessment of STOT single:
Based on the available information there is no specific target organ toxicity to be expected after a single exposure.
Remarks: The product has not been tested. The statement has been derived from the properties of the individual components.

Repeated dose toxicity and Specific target organ toxicity (repeated exposure)

Assessment of repeated dose toxicity:
The product has not been tested. The statement has been derived from the properties of the individual components.

Information on: glufosinate ammonium (ISO); ammonium 2-amino-4-(hydroxymethylphosphinyl)butyrate
Assessment of repeated dose toxicity:
Prolonged or repeated exposure may cause neurological disturbances.

Aspiration hazard
No aspiration hazard expected.

Other relevant toxicity information
Misuse can be harmful to health.

12. Ecological Information

Toxicity

Assessment of aquatic toxicity:
Harmful to aquatic life with long lasting effects.

Toxicity to fish:
LC50 (96 h) 13,4 mg/l, Oncorhynchus mykiss

Aquatic invertebrates:
EC50 (48 h) 17,8 mg/l, Daphnia magna

Aquatic plants:
EC50 (72 h) 8,72 mg/l (growth rate), Pseudokirchneriella subcapitata
(72 h) 1,25 mg/l, Pseudokirchneriella subcapitata

Information on: glufosinate ammonium (ISO); ammonium 2-amino-4-(hydroxymethylphosphinyl)butyrate
Microorganisms/Effect on activated sludge:
EC50 (3 h) > 1.000 mg/l, activated sludge

Persistence and degradability
Assessment biodegradation and elimination (H2O):
The product has not been tested. The statement has been derived from the properties of the individual components.

*Information on: glufosinate ammonium (ISO); ammonium 2-amino-4-(hydroxymethylphosphinyl)butyrate*

**Assessment biodegradation and elimination (H2O):**
Not readily biodegradable (by OECD criteria).

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**Bioaccumulative potential**

Assessment bioaccumulation potential:
The product has not been tested. The statement has been derived from the properties of the individual components.

*Information on: glufosinate ammonium (ISO); ammonium 2-amino-4-(hydroxymethylphosphinyl)butyrate*

**Bioaccumulation potential:**
*Bioconcentration factor:* 0.05 - 0.3 (42 d), *Lepomis macrochirus*
*Does not accumulate in organisms.*

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**Mobility in soil**

Assessment transport between environmental compartments:
Adsorption in soil: The product has not been tested. The statement has been derived from the properties of the individual components.

*Information on: glufosinate ammonium (ISO); ammonium 2-amino-4-(hydroxymethylphosphinyl)butyrate*

**Assessment transport between environmental compartments:**
*Adsorption in soil: Following exposure to soil, the product trickles away and can - dependant on degradation - be transported to deeper soil areas with larger water loads.*

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**Results of PBT and vPvB assessment**

The product does not contain a substance fulfilling the PBT (persistent/bioaccumulative/toxic) criteria or the vPvB (very persistent/very bioaccumulative) criteria.

**Other adverse effects**

The product does not contain substances that are listed in the Montreal Protocol on substances that deplete the ozone layer.

**Additional information**

Other ecotoxicological advice:
Do not discharge product into the environment without control.
13. Disposal Considerations

Waste treatment methods

Must be sent to a suitable incineration plant, observing local regulations.

Contaminated packaging:
Contaminated packaging should be emptied as far as possible and disposed of in the same manner as the substance/product.

14. Transport Information

**Land transport**

ADR

<table>
<thead>
<tr>
<th>UN number</th>
<th>UN proper shipping name</th>
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<tbody>
<tr>
<td>UN2902</td>
<td>PESTICIDE, LIQUID, TOXIC, N.O.S. (contains GLUFOSINATE AMMONIUM SOLUTION)</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Transport hazard class(es)</th>
<th>Packing group</th>
<th>Environmental hazards</th>
<th>Special precautions for user</th>
</tr>
</thead>
<tbody>
<tr>
<td>6.1</td>
<td>III</td>
<td>no</td>
<td>Tunnel code: E</td>
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RID

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<th>UN number</th>
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<td>PESTICIDE, LIQUID, TOXIC, N.O.S. (contains GLUFOSINATE AMMONIUM SOLUTION)</td>
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<th>Special precautions for user</th>
</tr>
</thead>
<tbody>
<tr>
<td>6.1</td>
<td>III</td>
<td>no</td>
<td>None known</td>
</tr>
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</table>

**Inland waterway transport**

ADN

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<th>UN number</th>
<th>UN proper shipping name</th>
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</thead>
<tbody>
<tr>
<td>6.1</td>
<td>III</td>
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</table>
BASF Safety data sheet according to UN GHS 4th rev.
Date / Revised: 26.11.2018
Product: **Basta SL150**
(ID no. 30716988/SDS_CPA_00/EN)
Date of print 22.02.2019

**Special precautions for user:** None known

**Transport in inland waterway vessel**
Not evaluated

**Sea transport**

IMDG

- **UN number:** UN 2902
- **UN proper shipping name:** PESTICIDE, LIQUID, TOXIC, N.O.S. (contains GLUFOSINATE AMMONIUM SOLUTION)
- **Transport hazard class(es):** 6.1
- **Packing group:** III
- **Environmental hazards:** no
  - Marine pollutant: NO
- **Special precautions for user:** None known

**Air transport**

IATA/ICAO

- **UN number:** UN 2902
- **UN proper shipping name:** PESTICIDE, LIQUID, TOXIC, N.O.S. (contains GLUFOSINATE AMMONIUM SOLUTION)
- **Transport hazard class(es):** 6.1
- **Packing group:** III
- **Environmental hazards:** No Mark as dangerous for the environment is needed
- **Special precautions for user:** None known

**Transport in bulk according to Annex II of MARPOL and the IBC Code**

- **Regulation:** Not evaluated
- **Shipment approved:** Not evaluated
- **Pollution name:** Not evaluated
- **Pollution category:** Not evaluated
- **Ship Type:** Not evaluated

15. **Regulatory Information**

Safety, health and environmental regulations/legislation specific for the substance or mixture
16. Other Information

Full text of classifications, hazard symbols and hazard statements, if mentioned in section 2 or 3:

**Acute Tox.** Acute toxicity
**Eye Dam./Irrit.** Serious eye damage/eye irritation
**Repr.** Reproductive toxicity
**STOT RE** Specific target organ toxicity — repeated exposure
**Aquatic Chronic** Hazardous to the aquatic environment - chronic

**Flam. Liq.** Flammable liquids
**STOT SE** Specific target organ toxicity — single exposure
**H312** Harmful in contact with skin.
**H332** Harmful if inhaled.
**H302** Harmful if swallowed.
**H373** May cause damage to organs () through prolonged or repeated exposure.
**H360** May damage fertility. May damage the unborn child.
**H226** Flammable liquid and vapour.
**H303** May be harmful if swallowed.
**H336** May cause drowsiness or dizziness.

The data contained in this safety data sheet are based on our current knowledge and experience and describe the product only with regard to safety requirements. This safety data sheet is neither a Certificate of Analysis (CoA) nor technical data sheet and shall not be mistaken for a specification agreement. Identified uses in this safety data sheet do neither represent an agreement on the corresponding contractual quality of the substance/mixture nor a contractually designated use. It is the responsibility of the recipient of the product to ensure any proprietary rights and existing laws and legislation are observed.

Vertical lines in the left hand margin indicate an amendment from the previous version.