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**SECTION 1: COMPANY AND PRODUCT INFORMATION**

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**1.1 Product identifiers**

Product name : Basta (Glufosinate Ammonium)  
Product code : 30632007  
CAS number : 77182-82-2  
Synonyms : 2-Amino-4-(hydroxymethylphosphinyl)butyric acidammonium salt;  
DL-Phosphinothricin

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

Identified uses : For research and laboratory use only.

**1.3 Details of the supplier of the safety data sheet**

Address : Genelix International Inc, dba bioWORLD  
4150 Tuller Rd. Suite 228  
Dublin, OH 43017  
Email : tech@bio-world.com  
Phone : 614-792-8680, Toll free: 1-888-bio-PLUS  
Fax : 614-792-8685

**1.4 Emergency telephone number**

Emergency phone : 1-888-bio-PLUS

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**SECTION 2: HAZARDS IDENTIFICATION**

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**2.1 Classification of substance or mixture**

Acute toxicity, Oral (Category 4), H302  
Acute toxicity, Inhalation (Category 4), H332  
Acute toxicity, Dermal (Category 4), H312  
Reproductive toxicity (Category 1B), H360  
Specific target organ toxicity - repeated exposure (Category 2), H373

**2.2 GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)**

Acute toxicity, Oral (Category 4), H302  
Acute toxicity, Inhalation (Category 4), H332  
Acute toxicity, Dermal (Category 4), H312  
Reproductive toxicity (Category 1B), H360  
Specific target organ toxicity - repeated exposure (Category 2), H373

**2.3 Label elements and precautionary statements**

Pictogram : 

Signal word : Danger

Hazard statement(s)	: H302+312+332 - Harmful if swallowed, in contact with skin or if inhaled. H360 - May damage fertility or the unborn child. H373 - May cause damage to organs through prolonged or repeated exposure.
Precautionary statement(s)	: P201 - Obtain special instructions before use. P202 - Do not handle until all safety precautions have been read and understood. P260 - Do not breathe dust/fume/gas/mist/vapors/spray. P264 - Wash skin thoroughly after handling. P270 - Do not eat, drink or smoke when using this product. P271 - Use only outdoors or in a well-ventilated area. P280 - Wear protective gloves/protective clothing/eye protection/face protection. P301+312+330 - IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell. Rinse mouth. P302+352+312 - IF ON SKIN: Wash with plenty of soap and water. Call a POISON CENTER or doctor/physician if you feel unwell. P304+340+312 - IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or physician if you feel unwell. P308+313 - IF exposed or concerned: Consult physician. P363 - Wash contaminated clothing before reuse. P405 - Store locked up. P501 - Dispose of contents/container to an approved waste disposal plant.

## 2.4 Hazards not otherwise classified (HNOC) or not covered by GHS

No unclassified hazards known.

## 2.5 NFPA Rating

Health hazard	: 2
Fire hazard	: 0
Reactivity hazard	: 0

## 2.6 HMIS Rating

Health hazard	: 2
Chronic health hazard	: *
Reactivity hazard	: 0
Flammability	: 0
Physical hazard	: 0

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## SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

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### 3.1 Substances

Substance	CAS#	EC#	Concentration
Glufosinate Ammonium M.F: C <sub>5</sub> H <sub>15</sub> N <sub>2</sub> O <sub>4</sub> P M.W: 198.16 g/mol	77182-82-2	278-636-5	100%

### 3.2 Hazardous components & classification

Acute Tox. 4; Repr. 1B; STOT RE 2; H302+312+332, H360, H373

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## SECTION 4: FIRST AID MEASURES

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### 4.1 Description of first aid measures

#### General advice

Consult a physician if symptoms are severe or persistent. Provide this data sheet to medical personnel. If product is spilled or leaked, evacuate area.

#### In case of inhalation

If inhaled, move person to fresh air and monitor breathing. If not breathing, give artificial ventilation. Consult a physician if symptoms are severe or persistent.

#### In case of skin contact

Immediately wash with excess soap and water. If spilled on clothing, remove all affected clothing. Consult a physician if symptoms are severe or persistent.

#### In case of eye contact

Flush eyes with water or eye wash solution as a precaution for 15 minutes. Consult a physician if symptoms are severe or persistent.

#### In case of ingestion

Only induce vomiting if recommended by medical personnel. If subject is unconscious, do not give anything by mouth. If conscious, rinse mouth with water. Consult a physician if symptoms are severe or persistent.

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

All known important symptoms are described in Section 2 and/or Section 11. No other important symptoms to report.

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

No special treatment indicated. Provide treatment in accordance with exhibited systems.

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## SECTION 5: FIREFIGHTING MEASURES

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### 5.1 Suitable extinguishing media

Water spray, alcohol-resistant foam, dry chemical, and carbon dioxide extinguishers are suitable.

### 5.2 Unsuitable extinguishing media

No known unsuitable extinguishing media.

### 5.3 Special hazards arising from the substance

Carbon oxides, nitrogen oxides (NO<sub>x</sub>), oxides of phosphorus.

### 5.4 Advice for firefighters

Wear protective gear, such as self-contained breathing apparatus, if necessary.

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## SECTION 6: ACCIDENTAL RELEASE MEASURES

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

Provide suitable ventilation. Use any necessary personal protective equipment. Avoid contact with skin and eyes, and avoid creation and inhalation of vapor or dust. Keep all unnecessary personnel away.

**For personal protection see section 8**

### 6.2 Environmental precautions

Prevent product from entering public sewers and waterways.

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

Sweep up any spilled product. Keep in suitable, closed containers for disposal.

**For proper disposal see section 13**

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## SECTION 7: HANDLING AND STORAGE

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### 7.1 Precautions for safe handling

Provide suitable ventilation. Wear any necessary personal protective equipment.

**For precautions see section 2**

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

Storage conditions : Store upright, closed container in arid, ventilated environment.  
Storage class (TRGS 510): Non-combustible, acute toxic Cat.3 / toxic hazardous materials or hazardous materials causing chronic effects

Incompatible materials : Strong oxidizing agents are incompatible with this product.

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## SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

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### 8.1 Control parameters

This product is not known to contain any substances with occupational exposure limit values.

### 8.2 Engineering controls

Follow good industrial hygiene and safety practices when handling product.

### 8.3 Personal protective equipment

Eye/face protection : Use only government-approved safety glasses with side-shields.

Skin protection : Use gloves when handling product. Inspect gloves before use to ensure suitability for use. Remove without exposing skin to the gloves outer surface. Discard used gloves according to all pertinent laws and/or current good practices (cGXP). Wash hands with soap and water.

Body protection : Wear appropriate clothing. Ensure clothing is in good condition, with no holes or tears. When selecting clothing, consider the concentration and amount of substance to be handled.

Respiratory protection : Use only approved respirators and components which comply with CDC and NIOSH (US) or CEN (EU) regulations. Required only when vapors or aerosols are created.

Control of environmental exposure : Prevent product from entering the environment, especially through public sewers or waterways.

General hygiene considerations : Comply with general industrial hygiene practice guidelines.

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## SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

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### 9.1 Information on basic physical and chemical properties

a) Appearance : White to Off-White

b)	Physical states	: Solid
c)	Odor	: Not available
d)	Odor threshold	: Not available
e)	Melting point	: 215°C
f)	Boiling point range	: Not available
g)	pH	: Not available
h)	Density	: Not available
i)	Flash point	: > 100°C
j)	Evaporation rate	: Not available
k)	Flammability	: Not available
l)	Upper/lower flammability or explosive limits:	: Not available
m)	Vapor pressure	: Not available
n)	Vapor density	: Not available
o)	Relative density	: Not available
p)	Water solubility	: Not available
q)	Partition coefficient:n-octanol/water	: Not available
r)	Autoignition temperature	: Not available
s)	Decomposition temperature	: Not available
t)	Kinematic viscosity	: Not available
u)	Explosive properties	: Not available
v)	Oxidizing properties	: Not available
w)	Solubility in other solvents	: Not available
x)	Surface tension	: Not available

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## SECTION 10: STABILITY AND REACTIVITY

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### 10.1 Reactivity

No special reactivity is known.

### 10.2 Chemical stability

Product is stable when stored and used as recommended.

### 10.3 Stability note(s)

No special or unusual instability known.

### 10.4 Polymerization

No known polymerization.

### 10.5 Possibility of hazardous reactions

No hazardous reactions are known.

### 10.6 Incompatible materials

Strong oxidizing agents are incompatible with this product.

### 10.7 Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

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## SECTION 11: TOXICOLOGICAL INFORMATION

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### 11.1 Acute toxicity

LD50 Oral : Rat - 1,620 mg/kg

LD50 Dermal : Rat - 1,380 mg/kg

LC50 Inhalation : Rat - 1,260 mg/m<sup>3</sup> (4 hours)

### 11.2 Skin corrosion/irritation

Rabbit - No skin irritation.

### 11.3 Serious eye damage/eye irritation

Rabbit - No eye irritation.

### 11.4 Respiratory or skin sensitization

No sensitization data available.

### 11.5 Germ cell mutagenicity

No mutagenicity data available.

### 11.6 Carcinogenicity

IARC : Product and components are not regulated by the IARC.

ACGIH : Product and components are not regulated by the ACGIH.

NTP : Product and components are not regulated by the NTP.

OSHA : Product and components are not regulated by OSHA.

### 11.7 Reproductive toxicity

Presumed human reproductive toxicant.

Maternal effects displayed in rats orally exposed to product.

### 11.8 Specific target organ toxicity – single exposure

No specific organ toxicity data available.

### 11.9 Specific target organ toxicity – repeated exposure

Can cause damage to organs through prolonged or repeated exposure.

### 11.10 Aspiration hazard

No aspiration hazard data available.

### 11.11 Additional Information

RTECS: EK7713600.

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## SECTION 12: ECOLOGICAL INFORMATION

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### 12.1 Toxicity

No ecological toxicity data available.

### 12.2 Aquatic toxicity

Species: Rainbow Trout (*Oncorhynchus mykiss*). Duration: 96 hours. Results: LC50 710 mg/L.

Species: Water Flea (*Daphnia magna*). Duration: 48 hours. Results: EC50 560 mg/L.

### 12.3 Persistence and degradability

No persistence/degradability data available.

#### **12.4 Bioaccumulative potential**

No bioaccumulation data available.

#### **12.5 Mobility in soil**

No soil mobility data available.

#### **12.6 Results of PBT and vPvB assessment**

PBT/vPvB assessment not available as chemical safety assessment is not required/was not conducted.

#### **12.7 Other adverse effect**

No other adverse effect data available.

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### **SECTION 13: DISPOSAL CONSIDERATIONS**

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#### **13.1 Product**

Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult and adhere to local, regional, and national hazardous waste regulations to ensure complete and accurate classification.

#### **13.2 Packaging**

Packaging should be disposed of in the same manner as unused product.

#### **13.3 Recommendation**

Disposal must be made according to official regulations.

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### **SECTION 14: TRANSPORTATION INFORMATION**

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#### **14.1 DOT (US)**

Not a dangerous good under DOT(US) regulations.

#### **14.2 IMDG**

Not a dangerous good under IMDG regulations.

#### **14.3 IATA**

Not a dangerous good under IATA regulations.

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### **SECTION 15: REGULATORY INFORMATION**

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#### **15.1 SARA**

SARA 302: This product and components are not subject to the reporting requirements of SARA Title III, Section 302.

SARA 313: This product does not contain any components with known CAS numbers that exceed the threshold reporting levels established by SARA Title III, Section 313.

SARA 311/312: Acute Health Hazard, Chronic Health Hazard

#### **15.2 Clean water act (CWA)**

No chemicals are present in this product that are subject to regulation under the Clean Water Act.

#### **15.3 Right to know components**

Massachusetts : No chemicals are present which require disclosure under the Massachusetts Right to Know Act.

Pennsylvania	: No chemicals are present which require disclosure under the Pennsylvania Right to Know Act.
New Jersey	: No chemicals are present which require disclosure under the New Jersey Right to Know Act.
California proposition 65 components	: This product contains no chemicals which are known to the State of California to cause cancer, or birth defects or other reproductive harm.

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## SECTION 16: OTHER INFORMATION

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### 16.1 Disclaimer

This product is offered by bioWORLD for research, laboratory or further manufacturing use. Not for human use or consumption. The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchant-ability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no event shall bio-WORLD.com be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages, howsoever arising, even if bio-WORLD.com has been advised of the possibility of such damages.

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### 16.2 Preparation Information

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