

SECURITY SHEET

HYDROLYZED BLOOD / HYDROLYZED KERATIN

1. PRODUCT IDENTIFICATION

TRADENAME: Hydrolyzed blood, Hydrolyzed blood (concentrated), Hydrolyzed keratin.

USE: Organic fertilisers for crops .

MANUFACTURER IDENTIFICATION:

Aplicaciones Biológicas Funcionales, SL

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2. COMPONENTS INFORMATION

COMPOSITION:

- Nature of the components and concentration: Product in solution from a mixture of organic fertilizers with mineral fertilizers.
- The most common raw materials are: potassium sulfate
- The concentrations of these products are low, not exceeding in any case 10% in the case of potassium sulphate

CLASSIFICATION:

- Not considered as hazardous material in accordance with RD 255/2003.

3. HAZARD INFORMATION

ABOUT THE NAME:

The product should be handled with caution, according to the recommendations in this file:

- **Contact with the skin:** Contact with the skin in a systematic way can cause burns.
- **Eye contact:** Splashes to the eyes can cause severe irritation and serious injury.
- **Ingestion:** May cause disorders in the gastrointestinal tract, as well as burns in the area of ingestion and digestive system.
- **Inhalation:** These products are handled in cold (room temperature) so it is unlikely to release gases.
- **Long-term effects:** No adverse effects are known
- **Decomposition by fire and heat:** The inhalation of gases from decomposition can cause irritation and corrosive effects on the respiratory system. Some of the effects on the lungs can manifest with delay.

ABOUT THE ENVIRONMENT:

- Large spills can cause adverse effects such as eutrophication (undesired development of the flora) in confined surface waters. In high concentrations it can be harmful to aquatic life.
- These fertilizers are not combustible. When it is included in a fire or when it is strongly heated, the fertilizer can decompose, releasing water vapor, toxic fumes containing nitrogen oxides and ammonia.

4. FIRST AID

PRODUCT

- **Skin contact:** Remove contaminated clothing. Wash the affected area with plenty of soap and water.
- **Eye contact:** Wash or irrigate eyes with large amounts of water for at least 15 minutes. Obtain medical attention if eye irritation persists.
- **Ingestion:** Do not induce vomiting. Give water or milk to drink. Obtain medical attention if you have swallowed more than small amounts.

FIRE AND THERMAL DECOMPOSITION

- **Inhalation:** Remove the affected person from the smoke exposure center. Keep it warm and at rest, even if it does not show obvious symptoms. People who have inhaled decomposition gases will be provided with medical attention immediately.

5. FIRE MEASURES

These liquid fertilizers are neither oxidizing nor combustible, however, in the event that a fire occurs where deposits containing these products may be involved, the following measures will be adopted:

- Call the fire department. Use water in abundance. Do not use chemical extinguishers or foam or try to fight the fire with steam or sand. Avoid breathing fumes (toxic). Equip yourself with breathing masks or self-contained equipment when fighting against a fire or when fumes have occurred. Open doors and windows in stores to get maximum ventilation. Do not allow the fertilizer to reach the drains. If the fertilizer containment water enters a drainage or watercourse, inform the local authorities immediately.

6. MEASURES IN CASE OF ACCIDENTAL SPILLAGE

- **Individual precautions:** follow the first aid measures described above.
- **Precautions for the protection of the environment:** biodegradable product. In case of spillage, collect it in a clean and sealed container and manage it as an organic material.
- **Cleaning methods:** collect the product with a clean dustpan and pour it into a clean sealed container.

7. MANIPULATION AND STORAGE

- **Handling:** These fertilizers are basically harmless products when handled correctly. Mixtures with any other product should be avoided. For handling, gloves and eye and skin protection should be used. Avoid splashing as much as possible.
- **Storage:** Mineral liquid mineral fertilizers can be stored according to their volume in stainless steel, polyethylene, PVC, polypropylene, butyl or glass fiber reinforced polyester containers. In the latter case, suitable resins should be used to resist the action of acidic products. With means to shake them those who need it.
- **Keep out of reach of children.**

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

- **Exposure limit values: Recommended exposure limits:** There are no specified limits.
- **Professional exposure controls:**
 - o **Respiratory protection:** Not necessary under normal conditions of use.
 - o **Skin protection: Hands.** Use rubber gloves when handling the product.
 - o **Eye protection:** Use chemical safety goggles or face shields.
 - o **Protection of the feet:** Use rubber boots in the event of spills that form puddles.
 - o **Skin protection:** Wear clothing that covers the entire body for possible splashes.

9. PHYSICAL AND CHEMICAL PROPERTIES

GENERAL INFORMATION

- Appearance: Liquid
- Dark color
- Smell: odorless
- pH of 6 (+/- 15% variation)
- Density at 20°C: between 1.10 and 1.30 kg / lite

10. STABILITY AND REACTIVITY

- **Estabilidad:** Este producto es muy estable bajo condiciones normales de almacenamiento, manipulación y uso.
- **Condiciones que deben evitarse:** Contaminación por materiales incompatibles. Proximidad a focos de calor o fuego. Trabajos de soldadura o térmicos en los equipos o plantas que puedan estar contaminadas con el producto sin que primero se hayan lavado vigorosamente para eliminar todos los restos de fertilizante.
- **Materiales que deben evitarse:** Materiales combustibles, agentes reductores, ácidos, álcalis, carbonato sódico, cloratos y algunos metales tales como el cobre, hierro, plomo, zinc y sus aleaciones.
- **Productos de descomposición peligrosos:** Ninguno en condiciones normales de almacenamiento y uso.
- **Stability:** This product is very stable under normal conditions of storage, handling and use.
- **Conditions to be avoided:** Contamination due to incompatible materials. Proximity to heat or fire. Welding or thermal work on equipment or plants that may be contaminated with the product without first washing vigorously to remove all traces of fertilizer.
- **Materials to avoid:** Combustible materials, reducing agents, acids, alkalis, sodium carbonate, chlorates and some metals such as copper, iron, lead, zinc and their alloys.
- **Hazardous decomposition products:** None under normal conditions of storage and use.

11. TOXICOLOGICAL INFORMATION

- **Toxicological data:** Non-toxic product. No toxicological data are available.

12. ECOLOGICAL INFORMATION

- **General:** Usar de acuerdo con la información del fabricante y no excederse de las cantidades de aplicación máximas recomendadas.
- **Ecotoxicidad:** Bajar toxicidad para la vida acuática.
- **Movilidad:** El ion NO_3^- es muy móvil, y el ion NH_4^+ es absorbido por el suelo.
- **Persistencia y degradabilidad:** El nitrógeno sigue el ciclo natural de nitrificación/desnitrificación para dar finalmente nitrógeno u óxidos de nitrógeno. Los fosfatos se convierten en fosfatos de calcio, de hierro, o aluminio, o bien se incorporan a la materia orgánica del suelo. El potasio se absorbe principalmente por los minerales arcillosos o permanece como ion potasio en la solución del suelo.
- **Bioacumulación:** No presenta ningún fenómeno de bioacumulación.
- **General:** Use according to the manufacturer's information and do not exceed the maximum recommended application quantities.
- **Ecotoxicity:** Lower toxicity to aquatic life.
- **Mobility:** The NO_3^- ion is very mobile, and the NH_4^+ ion is absorbed by the soil.
- **Persistence and degradability:** Nitrogen follows the natural nitrification / denitrification cycle to finally give nitrogen or nitrogen oxides. Phosphates are converted into calcium, iron, or aluminum phosphates, or are incorporated into the soil's organic matter. Potassium is absorbed mainly by clay minerals or remains as a potassium ion in the soil solution.
- **Bioaccumulation:** It does not present any phenomenon of bioaccumulation.

13. CONSIDERATIONS RELATED TO ELIMINATION

- **General:** If necessary, it must be taken to authorized waste tanks, which must be managed as an organic waste.

13. TRANSPORT INFORMATION

- Due to the packaging of the product and its ground transportation, the ADR exemptions are applicable.

14. REGLEMENTATION INFORMATION

- Does not require specific information regarding the classification, packaging and labeling of dangerous substances and preparations.
- Regulations on safety, health and the environment: RD 506/2013 on fertilizers and EC No. 2003/2003 on fertilizers. RD 374/2001 on protection of the health and safety of workers.

15. OTHER INFORMATIONS

- This Safety Data Sheet complements the Technical Data Sheet of the product, but does not replace it.
- The information contained herein is based on our own knowledge and is provided in good faith. The user must inform himself of the precautions and safety measures in the use of the product for purposes other than those indicated, this being his responsibility.
- In no case this Safety Data Sheet exempts the user of the product from its responsibility to know the legal regulations that affect it.