

1. IDENTIFICATION OF THE SUBSTANCE / MIXTURE AND OF THE COMPANY / UNDERTAKING

1.1 Product identifier:

- **Commercial name:** FERTIBAGRA 15GU
- **Chemical name:** Calcined ulexite, sodium and calcium borate anhydrous
- **N° EINECS:** 296-662-5
- **N° CAS:** 92908-33-3

1.2 Substance's identified relevant applications and unadvisable uses:

Recommended use:

- Agriculture, used to correct soil which is boron deficient.

Unadvisable uses:

- Unspecified

1.3 Safety information sheet's supplier's data:

Producer: INKABOR S.A.C.
Av. Italia 101 P.I. Rio Seco Arequipa - PERU
Web site: www.inkabor.com
E-mail address: info@inkabor.com
Tel: +51 (054) 444400 Ext. 211 / Fax : + 51 (054) 444010
(Office hours – Peru time)

1.2. Emergency number: +33 (0)1 45 42 59 59
Association/Organization: INRS / ORFILA
<http://www.centres-antipoison.net>

CHEMTREC: 1-800-424-9300 or 011-703-527-3887

2. DANGER IDENTIFICATION

2.1 Substance or mixture classification:

The product does not meet the criterion to be classified as dangerous with accordance to The Globally Harmonized System of Classification and Labelling of Chemicals (GHS).

Main side effects:

- **Inhaling:** It may cause some irritation to the nose and throat.
- **Eye contact:** FertiBagra 15GU causes low irritation to the human eye.
- **Skin contact:** It does not irritate the skin. Avoid contact with injured skin.
- **Ingestion:** The accidental ingestion of small amounts of FertiBagra 15GU may cause minimal effects. However, the ingestion of great quantities of this product may cause side effects to the digestive apparatus.
- **Carcinogenicity:** Not carcinogen.
- **Potential ecological effects:** Although boron is an essential micronutrient for the growth of plants, it may be harmful to vegetables that are sensitive to high quantities of boron. The quantity of FertiBagra 15GU exposed to the environment should be minimized.

2.2 Label elements:



Warning

H303 + H313 + H333: May be harmful if swallowed, in contact with skin or if inhaled.

H320: Causes eye irritation.

P102: Keep out of reach of children.

P264: Wash hands thoroughly after handling.

P312: Call a POISON CENTER/doctor, if you feel unwell.

P280: Wear protective gloves / protecting clothing / eyes protection / face protection.

P305 + P351 + P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P337 + P313: If eye irritation persists: Get medical advice/attention.

2.3 Other dangers:

None

3. COMPOSITION / COMPONENT INFORMATION

3.1 Substances:

- Chemical name: Calcined ulexite, sodium and calcium borate anhydrous
- N ° EINECS: 296-662-5
- N ° CAS: 92908-33-3
- Molecular formula: NaCaB_5O_9
- Molecular weight: 261.02 g/mol
- Concentration: 49% B_2O_3 Expected
- Family: Inorganic Borate

4. FIRST AID

4.1 First aid description:

In the case of manifest or suspected exposure: consult a doctor.

- **Inhaling:** If there is a case of symptoms such as nose or throat irritations, provide clear air and rest. If respiration is irregular or has stopped, proceed with artificial respiration and seek medical advice.
- **Eye contact:** Wash eyes with abundant water and clean for 15 minutes by keeping eyes wide open. If irritation persists for more than 30 minutes, seek medical advice.
- **Eye contact:** Wash the area with a lot of water and soap.
- **Ingestion:** Induce vomiting. Rinse mouth. Drink one or two glasses of water. Assure that the victim is in an open air space and provide complementary medical care.

4.2 Main symptoms and acute and delayed effects:

Acute effects	Symptoms
Oral intoxication	Nausea, vomiting, gastric annoyance
Irritation	Eye irritation, mouth, nose and throat dryness, soar throat and cough.

No delayed effects.

4.3 Medical attention indication and special treatment which need to be undertaken immediately:

No need for medical attention, follow the advice given in section 4.1

5 FIRE FIGHTING MEASURES

5.1 Extinguishing means:

All extinguishing agents are allowed in firefighting.

5.2 Specific dangers deriving from the substance or mix:

None, non-flammable product, non-combusting, non-explosive.

5.3 Recommendations for fire fighters:

Personal protection equipment: overall, boots, gloves, eye protection, breather.

6 MEASURES IN CASE OF ACCIDENTAL SPILLING

6.1 Personal precautions, protection equipment and emergency procedures

6.1.1 Personal precautions:

- Avoid making dust. In the case of prolonged exposure or high levels of dust in the air, use a personal breather in accordance to the national laws.
- Avoid inhaling dust.
- Assure an adequate ventilation

6.1.2 Personal protection equipment:

- Breathers that abide to EN149 are recommended
- The use of gloves and safely glasses in very dusty areas.

6.1.3 Emergency procedures:

Unnecessary

6.2 Relevant environmental precautions:

- Avoid the product entering sewers or running water.
- Place bins to discard residues according to the law.
- If the product pollutes groundwater, rivers or sewers, inform local authorities in accordance with the regulation procedures.
- FertiBagra 15GU is a granulated product which is partially soluble in water. In great quantities it may cause harm to trees and vegetation by absorption through the roots.

6.3 Containment and cleaning material and methods:

6.3.1 Cleaning:

Hoover or sweep with a broom and spade without lifting dust and use a container which abides by the law to discard it. Avoid polluting surrounding water and spilling when cleaning.

6.3.2 Water spills:

- Take the solution to a neutralization pond. Prevent the solution from being consumed or from polluting water sources or effluents.
- Warn local authorities so that none of the effected water is used for irrigation or as drinking water until natural dilution brings boron back to the normal environmental level.

6.4 References to other sections: See section 8, 12 y 13.

7 HANDLING AND STORING

7.1 Precautions for safe handling:

- Avoid dust formation and handle in ventilated areas.
- For personal safety see section 8.
- Avoid exposure and seek specific instructions before use.
- Handle product away from sewers, surface and underground water and human consumption water sources.
- Eating, drinking and smoking are prohibited in working areas.

7.2 Safety storing conditions including possible incompatibilities:

- It is recommended to store the product in a closed area under dry conditions. In order to maintain the characteristics of the product and the integrity of the packing and to minimize possible caking, apply the FIFO (first-in first-out) rotation system.
- Store the product in a dry place.
- Apply dust prevention procedures in order to minimize the formation and accumulation of dust.

7.3 Specific final uses:

None

8 EXPOSURE CONTROL / INDIVIDUAL PROTECTON

8.1 Control parameters:

8.1.1 Exposure limit in the environment:

- OSHA Permissible Exposure Limit (PEL): 15 mg/m³ of total dust, 5 mg/m³ breathable fraction by dust interference.
- ACGIH Threshold Limit Value (TLV): 10 mg/m³ of total dust.

8.2 Exposure controls:

8.2.1 Particulate matter emission control:

- Provide a particulate emission control system (confinement, collecting, filtering, solution, etc.)
- Respect the local regulations on dust (total and respiratory)

8.2.2 Personal protection:

- Provide special instructions before use.
- Do not handle substance before having read and understood all the safety instructions.
- Use local escape ventilation.
- It is recommended to use breathers that abide to EN149.
- The use of personal protection equipment is mandatory. Use gloves (rubber, nitrile or butyl are recommended) and safety glasses in very dusty areas.
- Provide eyewash in operational areas.
- Apply hand-washing protocols (before break and at the end of the working day) as well as clothing change and washing.

8.2.3 Environmental care:

Provide particulate emission monitoring data that gives value to the presence or concentration of particulate matter in relation to the permissible limits.

9 PHYSICAL AND CHEMICAL PROPERTIES

9.1 Basic physical and chemical property information:

Physical state	: Granular	Molecular weight	: 261.02 g/mol
Color	: Gray	pH at 20°C(Sol. Saturated)	: 8.7
Odor	: Odorless	Apparent density(22 °C)	: 2.00
Water solubility (20 °C)	: 4.93 g/L B ₂ O ₃	Fusion point	: 960 °C
Boiling point	: Not applicable	Ignition point	: Not applicable
Inflammability	: Non-inflammable	Vapor pressure (22 °C)	: Not available
Partition coefficient (22 °C)	: Not available		

10 STABILITY AND REACTIVITY

10.1 Reactivity:

- FertiBagra 15GU is a stable product.

10.2 Chemical stability:

Stable: Under normal usage, storage and transportation conditions.

10.3 Dangerous reaction possibility:

- None.
- Polymerization is inexistent.

10.4 Conditions to be avoided:

- Avoid exposure to humidity during storage and transport.
- Avoid contact with strong acids such as sulfuric and nitric acid. The product will decompose and there will be the formation of boric acid.

10.5 Incompatible matter:

It is incompatible with the presence of certain compounds of a basic character.

10.6 Dangerous decomposition products:

None

11 TOXICOLOGICAL INFORMATION

11.1 Toxicological effects information:

11.1.1 Acute toxicity:

- **Ingestion:** Low acute oral LD50 in rats is 3200 mg / kg body weight.
- **Skin:** Low acute dermal LD50 in rabbits is greater than 2,000 mg / kg of body weight. Poorly absorbed through intact skin.
- **Inhaling:** Low acute inhalation toxicity.
- **Skin irritation:** No skin irritation.
- **Eye irritation:** No eye irritation. Fifty years of occupational exposure indicate no adverse effects on the human eye.
- **Sensibility:** It is not a cutaneous sensitizer.

11.1.2 Reproduction toxicity:

Unspecified

11.1.3 Carcinogenicity / mutagenicity:

It is not carcinogenous. / It is not mutagen.

11.1.4 Data on humans:
None

12 ECOLOGICAL INFORMATION

12.1 Toxicity:

12.1.1 Animal ecotoxicity

Toxic to birds and mammals if swallowed in great quantities.

12.1.2 Plant ecotoxicity:

Great quantities of FertiBagra 15GU may kill plants. Boron is used in small concentrations as a micronutrient.

12.1.3 Air ecotoxicity:

Fertibagra 15GU does not evaporate and the particulate emission pollution will depend on the size and the concentration of the particle, mobility and degradability.

12.2 Persistency and degradability:

Boron appears in a natural way and is omnipresent in the environment.

12.3 bio-accumulation possibility:

Not bio-accumulative.

12.4 Soil mobility:

FertiBagra 15GU is partially soluble in water. Water contains low concentrations of boron that varies between a range of 0.001 and 0.1 mg/L

12.5 PBT and mPmB value results:

It is not persistent or bio-accumulative.

12.6 Other side effects:

None.

13 EMISSION RELATIVE CONSIDERATIONS

- Eliminate the content/container according to applicable local, regional, national or international regulations.
- Dumping the product is not recommended.
- In the case of great quantities of Fertibagra 15GU, reusing it for adequate applications is recommended.

13.1 Residue treatment methods:

The application of adequate methods or hiring the services of companies specializing in this issue is suggested.

14 RELEVANT TRANSPORTATION INFORMATION

Fertibagra 15GU does not have a UN number and is not regulated by international laws related to railroads, highways, sea or air.

U.S. DOT: Not Regulated

15 REGULATORY INFORMATION

15.1 Specific substance or mix safety, health and environmental regulations and legislations:

Assure that all national and local regulations are enforced.

- Clean air act (Montreal protocol):

Fertibagra 15GU was not manufactured with nor does it contain any class I or class II substances that deplete the ozone layer.

- Label information in accordance with the GHS (Globally Harmonized System of Classification and Labeling of Chemicals).

15.2 Chemical safety evaluation:

A Fertibagra 15GU chemical safety evaluation has been conducted

16 OTHER INFORMATION

16.1 MSDS modifications

Version	Change controls
01	Not applicable

16.2 Abbreviations:

- **GHS:** Globally Harmonized System of Classification and Labeling of Chemicals
- **DNEL:** Derived No-Effect Level
- **PNEC:** Predicted No-Effect Concentration
- **LD₅₀:** Median lethal Dose
- **LC₅₀:** Median lethal Concentration

16.3 References:

- *Lewis, R.J., Sr. and R.L. Tatken, Eds. Registry of Toxic Effects of Chemical Substances. Microfiche Ed. National Institute for Occupational Safety and Health. Cincinnati, OH. Quarterly Updates. ED4550000.*
- *Sax, N.I. Dangerous Properties of Industrial Materials. 6th Ed. Van Nostrand Reinhold. New York. 1984. pp. 511-512.*
- *Arthur D. Little, Inc. Health and Safety Package for Boric Acid. Arthur D. Little, Inc. Cambridge, MA. September 3, 1987.*
- *Oak Ridge National Laboratory. Environmental Mutagen Information Center (EMIC), Bibliographic Data Base. Oak Ridge National Laboratory. Oak Ridge, TN. Listed.*
- *Clansky, Kenneth B., Ed. Suspect Chemicals Sourcebook: A Guide to Industrial Chemicals Covered Under Major Federal Regulatory and Advisory Programs. Roytech Publications, Inc. Burlingame, CA. 1990. Update, p. ii.*

16.4 Security risk phrases (According to directive 67/548/CEE):

Irrelevant

16.5 Recommendations for employees:

- The product must not be used for any purpose other than the ones specified in rubric 1 without having previously obtained handling instructions.
- It is at all times the users own responsibility to take all the necessary measures in order to abide to the legal requirements and local regulations.
- The information on this safety data sheet needs to be considered as a description of the safety requirements relevant to our product and not as a guarantee of its properties.