| | | |
|---|---|---|
| **Date of issue/ Date of revision** | : | 04.02.2020 |
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| **Version** | : | 4.0 |

# SAFETY DATA SHEET

**YaraVita Brassitrel Pro**

## SECTION 1: Identification of the substance/mixture and of the company/undertaking

### 1.1 Product identifier

| | | |
|---|---|---|
| **Product name** | : | YaraVita Brassitrel Pro |
| **Product code** | : | PYP1NL |
| **Product type** | : | Liquid (Suspension ) |

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

| **Identified uses** |
|---|
| Industrial distribution.<br>Industrial USE to formulate chemical product mixtures.<br>Professional formulation of fertiliser products.<br>Professional USE as fertiliser at Farm - loading and spreading.<br>Professional USE as fertiliser in Greenhouse.<br>Professional USE as liquid fertiliser in open field (e.g. Fertigation).<br>Professional USE as fertiliser - maintenance of equipment. |

| | | |
|---|---|---|
| **Uses advised against** | : | None identified. |

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

Yara UK Limited

**Address**

| | | |
|---|---|---|
| **Street** | : | Harvest House, Europarc |
| **Postal code** | : | DN37 9TZ |
| **City** | : | Grimsby, North East Lincolnshire |
| **Country** | : | United Kingdom |
| **Telephone number** | : | +44 (0) 1472 889250 |
| **Fax no.** | : | +44 (0) 1472 889251 |
| **e-mail address of person responsible for this SDS** | : | yarauk.hesq@yara.com |

### 1.4 Emergency telephone number

| | | |
|---|---|---|
| **National advisory body/Poison** | : | Not available. |

**Center**

**Supplier**
**Emergency telephone number (with hours of operation)** : National Chemical Emergency Centre
+44 (0) 1865 407333 (24h)

# SECTION 2: Hazards identification

## 2.1 Classification of the substance or mixture.

**Product definition** : Mixture

**Classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]**

**Classification** : Skin Sens. 1, H317
Repr. 2, H361fd (Fertility, Unborn child)

The product is classified as hazardous according to Regulation (EC) 1272/2008 as amended.

See Section 16 for the full text of the H statements declared above.
See Section 11 for more detailed information on health effects and symptoms.

## 2.2 Label elements

**Hazard pictograms** :

**Signal word** : Warning

**Hazard statements** :

| | |
|---|---|
| H317 | May cause an allergic skin reaction. |
| H361fd | Suspected of damaging fertility. Suspected of damaging the unborn child. |

**Precautionary statements**

**Prevention** :

| | |
|---|---|
| P202 | Do not handle until all safety precautions have been read and understood. |
| P280-d | Wear protective gloves/clothing and eye/face protection. |
| P261 | Avoid breathing gas, vapor or spray. |

**Response** :

| | |
|---|---|
| P308 | IF exposed or concerned: |
| P313-a | Get medical attention. |
| P302 | IF ON SKIN: |
| P352 | Wash with plenty of soap and water. |

**Hazardous ingredients** : colemanite (calcium borate)
2-methylisothiazol-3(2H)-one

**EU Regulation (EC) No. 1907/2006 (REACH) Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles** : Applicable, Table 3.

**Special packaging requirements**

**Containers to be fitted with child-resistant fastenings** : Not applicable.

**Tactile warning of danger** : Not applicable.

**2.3 Other hazards**

**Other hazards which do not result in classification** : None.

# SECTION 3: Composition/information on ingredients

**3.2 Mixtures** : Mixture

| Product/ingredient name | Identifiers | % | Regulation (EC) No. 1272/2008 [CLP] | Type |
|---|---|---|---|---|
| colemanite (calcium borate) | RRN: Not available.<br>EC: 234-511-7<br>CAS : 12291-65-5 | >= 20 - < 25 | Repr. 2, H361fd (Fertility, Unborn child) | [1] |
| manganese carbonate | RRN: Not available.<br>EC: 209-942-9<br>CAS : 598-62-9 | >= 10 - < 12.5 | Not classified. | [2] |
| ammonia, anhydrous | RRN: 01-2119488876-14<br>EC: 231-635-3<br>CAS : 7664-41-7<br>Index: 007-001-00-5 | >= 0.001 - < 0.01 | Flam. Gas 2, H221<br>Press. Gas Comp. Gas, H280<br>Acute Tox. 3, H331<br>Skin Corr. 1B, H314<br>Eye Dam. 1, H318<br><br>Aquatic Acute 1, H400<br>Aquatic Chronic 2, H411 | [1] [2] |
| carbon monoxide | RRN: 01-2119480165-39<br>EC: 211-128-3<br>CAS : 630-08-0<br>Index: 006-001-00-2 | >= 0.001 - < 0.01 | Flam. Gas 1, H220<br>Press. Gas Comp. Gas, H280<br>Acute Tox. 3, H331<br>Repr. 1A, H360D (Unborn child)<br>STOT RE 1, H372 (heart) (inhalation) | [1] [2] |
| 2-methylisothiazol-3(2H)-one | RRN: Not available.<br>EC: 220-239-6<br>CAS : 2682-20-4 | >= 0.001 - < 0.01 | Acute Tox. 2, H300<br>Acute Tox. 3, H311<br>Acute Tox. 2, H330<br>Skin Corr. 1B, H314<br>Eye Dam. 1, H318<br>Skin Sens. 1A, H317<br>Aquatic Acute 1, H400<br>Aquatic Chronic 1, H410<br>M-factor : 10 - AQUATIC HAZARD | [1] |

| | | | | |
|---|---|---|---|---|
| | | | (ACUTE), 1 - AQUATIC HAZARD (LONG-TERM), | |

Type
[1] Substance classified with a physical, health or environmental hazard
[2] Substance with a workplace exposure limit
[3] Substance meets the criteria for PBT according to Regulation (EC) No. 1907/2006, Annex XIII
[4] Substance meets the criteria for vPvB according to Regulation (EC) No. 1907/2006, Annex XIII
[5] Substance of equivalent concern

See Section 16 for the full text of the H statements declared above.

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment, are PBTs, vPvBs or Substances of equivalent concern, or have been assigned a workplace exposure limit and hence require reporting in this section.

**Occupational exposure limits, if available, are listed in Section 8.**

**Remarks** : This product contains Boron (see section 7 and 11).

# SECTION 4: First aid measures

## 4.1 Description of first aid measures

**Eye contact** : Rinse with plenty of running water. Check for and remove any contact lenses. Get medical attention if irritation occurs.

**Inhalation** : Avoid inhalation of vapor, spray or mist. If inhaled, remove to fresh air. Get medical attention if you feel unwell.

**Skin contact** : Wash with soap and water. Wash with plenty of soap and water. Continue to rinse for at least 10 minutes. Get medical attention. In the event of any complaints or symptoms, avoid further exposure.

**Ingestion** : Wash out mouth with water. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Get medical attention if you feel unwell.

**Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

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

**Over-exposure signs/symptoms**

**Eye contact** : No specific data.
**Inhalation** : No specific data.
**Skin contact** : Adverse symptoms may include the following: irritation, redness
**Ingestion** : No specific data.

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

**Notes to physician** : Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept

under medical surveillance for 48 hours.

**Specific treatments** : No specific treatment.

# SECTION 5: Firefighting measures

## 5.1 Extinguishing media

**Suitable extinguishing media** : Use an extinguishing agent suitable for the surrounding fire.

**Unsuitable extinguishing media** : None identified.

## 5.2 Special hazards arising from the substance or mixture

**Hazards from the substance or mixture** : In a fire or if heated, a pressure increase will occur and the container may burst.

**Hazardous combustion products** : Decomposition products may include the following materials: nitrogen oxides, metal oxide/oxides, ammonia, Avoid breathing dusts, vapors or fumes from burning materials., In case of inhalation of decomposition products in a fire, symptoms may be delayed.

## 5.3 Advice for firefighters

**Special protective actions for fire-fighters** : 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 protective equipment for fire-fighters** : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.

# SECTION 6: Accidental release measures

## 6.1 Personal precautions, protective equipment and emergency procedures

**For non-emergency personnel** : 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. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment (see Section 8).

**For emergency responders** : If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

**6.2 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).

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

**Small spill** : Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

**Large spill** : Stop leak if without risk. Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations. Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product.

**6.4 Reference to other sections** : See Section 1 for emergency contact information.
See Section 8 for information on appropriate personal protective equipment.
See Section 13 for additional waste treatment information.

## SECTION 7: Handling and storage

The information in this section contains generic advice and guidance. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

### 7.1 Precautions for safe handling

Not for human or animal consumption.

**Protective measures** : Put on appropriate personal protective equipment (see Section 8). Do not handle until all safety precautions have been read and understood. As a precaution, keep exposure as low as possible for pregnant women, children and workers in reproductive age. Do not get in eyes or on skin or clothing. Persons with a history of skin sensitization problems should not be employed in any process in which this product is used. Do not breathe vapor or mist. Do not ingest. 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.

**Advice on general occupational hygiene** : 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. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

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

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. Store locked up. 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. Bund storage facilities to prevent soil and water pollution in the event of spillage.

### 7.3 Specific end use(s)

**Recommendations** : Do not generate and inhale liquid fertilizer aerosols.

In addition to overalls, gloves and eye protection, use of efficient respiratory protection (P2/P3 respirators with a tight face seal) during discharge of fertilizer bags and maintenance of equipment is recommended to minimize inhalation exposure and to ensure safe-use during this activity (see section 8).

Risk assessments show safe use during normal spreading of fertilizers containing below 5% of boron by tractor (liquid or granular) and backpack (liquid).

## SECTION 8: Exposure controls/personal protection

The information in this section contains generic advice and guidance. Information is provided based on typical anticipated uses of the product. Additional measures might be required for bulk handling or other uses that could significantly increase worker exposure or environmental releases.

### 8.1 Control parameters

**Occupational exposure limits**

| Product/ingredient name | Exposure limit values |
|---|---|
| manganese carbonate | **EH40/2005 WELs (2018-08-21)**<br>TWA 0.2 mg/m3 (as manganese) Form: Inhalable fraction<br>TWA 0.05 mg/m3 (as manganese) Form: Respirable fraction |
| ammonia, anhydrous | **EH40/2005 WELs (1997-01-01)**<br>STEL 25 mg/m3 35 ppm<br>TWA 18 mg/m3 25 ppm |
| carbon monoxide | **EH40/2005 WELs (1997-01-01)**<br>STEL 232 mg/m3 200 ppm<br>TWA 35 mg/m3 30 ppm<br>**EH40/2005 WELs (2018-08-21)**<br>TWA 23 mg/m3 20 ppm<br>STEL 117 mg/m3 100 ppm |

**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.
Reference should be made to monitoring standards, such as the following:
European Standard EN 689 (Workplace atmospheres - Guidance for the assessment of exposure by inhalation to

chemical agents for comparison with limit values and measurement strategy)
European Standard EN 14042 (Workplace atmospheres - Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents)
European Standard EN 482 (Workplace atmospheres - General requirements for the performance of procedures for the measurement of chemical agents)
Reference to national guidance documents for methods for the determination of hazardous substances will also be required.

**DNELs/DMELs**

| Product/ingredient name | Type | Exposure | Value | Population | Effects |
|---|---|---|---|---|---|
| ammonia, anhydrous | DNEL | Short term Dermal | 6.8 mg/kg bw/day | Workers | Systemic |
| | DNEL | Short term Inhalation | 47.6 mg/m³ | Workers | Systemic |
| | DNEL | Long term Inhalation | 47.6 mg/m³ | Workers | Systemic |
| | DNEL | Short term Inhalation | 36 mg/m³ | Workers | Local |
| | DNEL | Long term Dermal | 6.8 mg/kg bw/day | Workers | Systemic |
| | DNEL | Long term Inhalation | 14 mg/m³ | Workers | Local |
| manganese carbonate | DNEL | Long term Dermal | 0.004 mg/kg bw/day | Workers | Systemic |
| | DNEL | Long term Inhalation | 0.2 mg/m³ | Workers | Systemic |
| | DNEL | Long term Dermal | 0.002 mg/kg bw/day | Consumers | Systemic |
| | DNEL | Long term Inhalation | 0.043 mg/m³ | Consumers | Systemic |

**PNECs**

| Product/ingredient name | Type | Compartment Detail | Value | Method Detail |
|---|---|---|---|---|
| ammonia, anhydrous | PNEC | Fresh water | 0.001 mg/l | Assessment Factors |
| | PNEC | Marine | 0.001 mg/l | Assessment Factors |
| | PNEC | Intermittent release | 0.089 mg/l | Assessment Factors |
| manganese carbonate | PNEC | Fresh water | 0.0084 mg/l | Assessment Factors |
| | PNEC | Marine water | 0.0008 mg/l | Assessment Factors |
| | PNEC | Fresh water sediment | 8.18 mg/kg dwt | Assessment Factors |
| | PNEC | Marine water sediment | 0.81 mg/kg dwt | Assessment Factors |
| | PNEC | Soil | 8.15 mg/kg dwt | Assessment Factors |
| | PNEC | Sewage Treatment Plant | 100 mg/l | Assessment Factors |

## 8.2 Exposure controls

**Appropriate engineering controls** : 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.

**Individual protection measures**

**Hygiene measures** : A washing facility or water for eye and skin cleaning purposes should be present. 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. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reusing.

**Eye/face protection** : 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.
**Recommended**: Tightly-fitting goggles, CEN: EN166,

**Skin protection**

**Hand protection** : 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. For general applications, we recommend gloves with a thickness typically greater than 0.35 mm. It should be emphasized that glove thickness is not necessarily a good predictor of glove resistance to a specific chemical, as the permeation efficiency of the glove will be dependent on the exact composition of the glove material.

**Body protection** : Personal protective equipment for the body should be selected based on the task being performed and the risks involved.

**Other skin protection** : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

**Respiratory protection** : Use respiratory protection with more than 94% efficiency (P2, P3 or N95) and a tight face seal, when risk of exposure to dust.

**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.

**Personal protective equipment (Pictograms)** :

# SECTION 9: Physical and chemical properties

## 9.1 Information on basic physical and chemical properties

| | | |
|---|---|---|
| **Appearance** | | |
| **Physical state** | : | Liquid (Suspension) |
| **Color** | : | Yellow., |
| **Odor** | : | Odorless. |
| **Odor threshold** | : | Not determined. |
| **pH** | : | 10 [Conc. (% w/w): 100 g/l] |
| **Melting point/freezing point** | : | < -5 °C |
| **Initial boiling point and boiling range** | : | 100 °C |
| **Flash point** | : | Not determined |
| **Evaporation rate** | : | Not determined |
| **Flammability (solid, gas)** | : | Non-flammable. |
| **Upper/lower flammability or explosive limits** | : | **Lower:** Not determined<br>**Upper:** Not determined |
| **Vapor pressure** | : | Not determined |
| **Vapor density** | : | Not determined |
| **Relative density** | : | Not applicable. |
| **Bulk density** | : | Not applicable. |
| **Density** | : | 1.537 g/cm3 |
| **Solubility(ies)** | : | Not applicable. |
| **Miscibility with water** | : | Miscible in water. |
| **Partition coefficient: n-octanol/water** | : | Not determined |
| **Auto-ignition temperature** | : | Not determined |
| **Viscosity** | : | **Dynamic:** 2,500 - 3,500 mPa.s<br>**Kinematic:** Not determined |
| **Explosive properties** | : | Non-explosive. |
| **Oxidizing properties** | : | None |

## 9.2 Other information

# SECTION 10: Stability and reactivity

| | | |
|---|---|---|
| **10.1 Reactivity** | : | No specific test data related to reactivity available for this product or its ingredients. |
| **10.2 Chemical stability** | : | The product is stable. |
| **10.3 Possibility of hazardous reactions** | : | Under normal conditions of storage and use, hazardous reactions will not occur. |

**10.4 Conditions to avoid** : Avoid contamination by any source including metals, dust and organic materials.

**10.5 Incompatible materials** : Urea reacts with calcium hypochlorite or sodium hypochlorite to form the explosive nitrogen trichloride.

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

# SECTION 11: Toxicological information

## 11.1 Information on toxicological effects

### Acute toxicity

| Product/ingredient name | Method | Species | Result | Exposure | References |
|---|---|---|---|---|---|
| ammonia, anhydrous | | | | | |
| | LC50 Inhalation | Rat | 9.85 mg/l | 1 h | IUCLID 5 |
| | LC50 Inhalation | Rat | 7.939 mg/l | 1 h | IUCLID 5 |
| carbon monoxide | | | | | |
| | LC50 Inhalation | Rat | 1,300 ppm | 4 h | |
| 2-methylisothiazol-3(2H)-one | | | | | |
| | LD50 Oral | Rat | 200 mg/kg | Not applicable. | |
| | LC50 Inhalation Vapor | Rat | 0.53 mg/l | 4 h | |
| | LD50 Dermal | Rat | 1,000 mg/kg | Not applicable. | |
| manganese carbonate | | | | | |
| | OECD 420 LD50 Oral | Rat | > 5,000 mg/kg | Not applicable. | CSR |
| colemanite (calcium borate) | | | | | |
| | LD50 Dermal | Rabbit | > 5,000 mg/kg | Not applicable. | |

**Conclusion/Summary** : No known significant effects or critical hazards.

### Irritation/Corrosion

**Conclusion/Summary**
**Skin** : No known significant effects or critical hazards.
**Eyes** : No known significant effects or critical hazards.
**Respiratory** : No known significant effects or critical hazards.

### Sensitization

**Conclusion/Summary**
**Skin** : May cause an allergic skin reaction.
**Respiratory** : No known significant effects or critical hazards.

### Mutagenicity

**Conclusion/Summary** : No known significant effects or critical hazards.

**Carcinogenicity**

| Product/ingredient name | Method | Species | Result | Exposure | References |
|---|---|---|---|---|---|
| ammonia, anhydrous | | | | | |
| | OECD 453 Oral | Rat | Negative NOAEL 67 mg/kg bw/day | | IUCLID 5 |

**Conclusion/Summary** : No known significant effects or critical hazards.

**Reproductive toxicity**

| Product/ingredient name | Method | Species | Result | Exposure | References |
|---|---|---|---|---|---|
| ammonia, anhydrous | | | | | |
| | OECD 422 Oral | Rat | Fertility effects-Negative NOAEL 408 mg/kg bw/day | 28 days | IUCLID 5 |
| | OECD 414 Oral | Rabbit | Developmental-Negative NOAEL 100 mg/kg bw/day | 28 days | IUCLID 5 |
| | Inhalation | Pig | Developmental-Negative NOAEC 25 mg/m³ | 6 weeks | IUCLID 5 |

**Conclusion/Summary** : Suspected of damaging fertility. Suspected of damaging the unborn child.

**Information on the likely routes of exposure** : Not available.

**Potential acute health effects**

**Inhalation** : Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.

**Ingestion** : No known significant effects or critical hazards.

**Skin contact** : May cause an allergic skin reaction.

**Eye contact** : No known significant effects or critical hazards.

**Symptoms related to the physical, chemical and toxicological characteristics**

**Inhalation** : No specific data.
**Ingestion** : No specific data.
**Skin contact** : Adverse symptoms may include the following: irritation, redness
**Eye contact** : No specific data.

**Delayed and immediate effects and also chronic effects from short and long term exposure**
**Short term exposure**

**Potential immediate effects** : No known significant effects or critical hazards.

**Potential delayed effects** : No known significant effects or critical hazards.

**Long term exposure**

**Potential immediate effects** : No known significant effects or critical hazards.

**Potential delayed effects** : No known significant effects or critical hazards.

**Potential chronic health effects**

**Carcinogenicity** : No known significant effects or critical hazards.

**Mutagenicity** : No known significant effects or critical hazards.

**Fertility effects** : Suspected of damaging fertility.

**Developmental effects** : Suspected of damaging the unborn child.

**Effects on or via lactation** : No known significant effects or critical hazards.

**Other effects** : Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels.

**Other information** : Not available.

# SECTION 12: Ecological information

**12.1 Toxicity**

| Product/ingredient name | Method | Species | Result | Exposure | References |
|---|---|---|---|---|---|
| ammonia, anhydrous | | | | | |
| | Acute LC50 Fresh water | Fish | 0.89 mg/l | 96 h | IUCLID 5 |
| | Acute LC50 Fresh water | Daphnia | 101 mg/l | 48 h | IUCLID 5 |
| | Acute EC50 Fresh water | Algae | 2,700 mg/l | 18 d | IUCLID 5 |
| | 215 Fish, Juvenile Growth Test Chronic NOEC Fresh water | Channel catfish | < 0.048 mg/l | 31 d | IUCLID 5 |
| | Chronic NOEC Fresh water | Daphnia | 0.79 mg/l | 96 h | IUCLID 5 |
| 2-methylisothiazol-3(2H)-one | | | | | |
| | Acute LC50 Fresh water | Rainbow trout,donaldson trout | 0.19 mg/l | 96 h | Environmental Fate and Effects Division, U.S.EPA, Washington, D.C.: |
| | Acute LC50 Fresh water | Bluegill | 0.3 mg/l | 96 h | Environmental Fate and |

| | | | | | |
|---|---|---|---|---|---|
| | | | | | Effects Division, U.S.EPA, Washington, D.C.: |
| | Acute EC50 Fresh water | Water flea | 0.18 mg/l | 48 h | Environmental Fate and Effects Division, U.S.EPA, Washington, D.C.: |
| | Acute EC50 | Algae | 0.157 mg/l | 72 h | |
| colemanite (calcium borate) | | | | | |
| | Acute EC50 Fresh water | Daphnia | > 100 mg/l | 48 h | |

**Conclusion/Summary** : No known significant effects or critical hazards.

### 12.2 Persistence and degradability

**Conclusion/Summary** : No known significant effects or critical hazards.

### 12.3 Bioaccumulative potential

| Product/ingredient name | LogPow | BCF | Potential |
|---|---|---|---|
| ammonia, anhydrous | 0.23 | Not applicable. | |

**Conclusion/Summary** : No known significant effects or critical hazards.

### 12.4 Mobility in soil

**Soil/water partition coefficient (KOC)** : Not available.

**Mobility** : Not available.

### 12.5 Results of PBT and vPvB assessment

### 12.6 Other adverse effects : No known significant effects or critical hazards.

## SECTION 13: Disposal considerations

The information in this section contains generic advice and guidance. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

### 13.1 Waste treatment methods

**Product**

**Methods of disposal** : The generation of waste should be avoided or minimized wherever possible. 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. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with

jurisdiction.

**Hazardous waste** : Yes.

**European waste catalogue (EWC)**

| Waste code | Waste designation |
|---|---|
| 06 10 02* | wastes containing hazardous substances |

**Packaging**

**Methods of disposal** : The generation of waste should be avoided or minimized wherever possible. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible.

**Special precautions** : This material and its container must be disposed of in a safe way.
Care should be taken when handling emptied containers that have not been cleaned or rinsed out.
Empty containers or liners may retain some product residues.
Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

# SECTION 14: Transport information

| Regulation: ADR/RID | |
|---|---|
| **14.1 UN number** | Not regulated. |
| **14.2 UN proper shipping name** | Not applicable. |
| **14.3 Transport hazard class(es)** | Not applicable. |
| **14.4 Packing group** | Not applicable. |
| **14.5 Environmental hazards** | No. |
| **Additional information** | |

| Regulation: ADN | |
|---|---|
| **14.1 UN number** | Not regulated. |
| **14.2 UN proper shipping name** | Not applicable. |
| **14.3 Transport hazard class(es)** | Not applicable. |
| **14.4 Packing group** | Not applicable. |
| **14.5 Environmental hazards** | No. |
| **Additional information** | |

**Danger code** : Not applicable.

| Regulation: IMDG | |
|---|---|
| **14.1 UN number** | Not regulated. |
| **14.2 UN proper shipping name** | Not applicable. |
| **14.3 Transport hazard class(es)** | Not applicable. |
| **14.4 Packing group** | Not applicable. |
| **14.5 Environmental hazards** | No. |
| **Additional information** | |

**Marine pollutant** : No.

| Regulation: IATA | |
|---|---|
| **14.1 UN number** | Not regulated. |
| **14.2 UN proper shipping name** | Not applicable. |
| **14.3 Transport hazard class(es)** | Not applicable. |
| **14.4 Packing group** | Not applicable. |
| **14.5 Environmental hazards** | No. |
| **Additional information**<br>**Marine pollutant** : No. | |

**14.6 Special precautions for user** : Transport within user's premises: Ensure that persons transporting the product know what to do in the event of an accident or spillage.

**14.7 Transport in bulk according to Annex II of MARPOL and the IBC Code** : Not available.

**14.8 IMSBC** : Not applicable.

# SECTION 15: Regulatory information

**15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**

**EU Regulation (EC) No. 1907/2006 (REACH)**

**Annex XIV - List of substances subject to authorization**

**Annex XIV:** None of the components are listed.

**Substances of very high concern:** None of the components are listed.

**EU Regulation (EC) No. 1907/2006 (REACH) Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles** : Applicable, Table 3.

**Other EU regulations**

**Europe inventory** : Not determined.

**Ozone depleting substances (1005/2009/EU)**

None of the components are listed.

**Prior Informed Consent (PIC) (649/2012/EU)**

None of the components are listed.

**Seveso Directive**

This product is not controlled under the Seveso Directive.

**National regulations**

**Biocidal products regulation** : Not applicable.

**Notes** : To our knowledge no other country or state specific regulations are applicable.

**15.2 Chemical Safety Assessment** : This product contains substances for which Chemical Safety Assessments are still required.

# SECTION 16: Other information

**Abbreviations and acronyms** :
ATE = Acute Toxicity Estimate
CLP = Classification, Labelling and Packaging Regulation [Regulation (EC) No. 1272/2008]
DNEL = Derived No Effect Level
DMEL = Derived Minimal Effect Level
EUH statement = CLP-specific Hazard statement
PNEC = Predicted No Effect Concentration
RRN = REACH Registration Number
SGG = Segregation Group
PBT = Persistent, Bioaccumulative and Toxic
vPvB = Very Persistent and Very Bioaccumulative
bw = Body weight

**Key data sources** :
EU REACH ECHA/IUCLID5 CSR.
National Institute for Occupational Safety and Health, U.S. Dept. of Health, Education, and Welfare, Reports and Memoranda Registry of Toxic Effects of Chemical Substances.
Sphera Solutions Inc., 4777 Levy Street, St Laurent, Quebec HAR 2P9, Canada.
Regulation (EC) No 1272/2008 Annex VI.

**Procedure used to derive the classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]**

| Classification | Justification |
|---|---|
| Skin Sens. 1, H317 | Calculation method |
| Repr. 2, H361fd (Fertility, Unborn child) | Calculation method |

**Full text of abbreviated H statements**

| | |
|---|---|
| H220 | Extremely flammable gas. |
| H221 | Flammable gas. |
| H280 | Contains gas under pressure; may explode if heated. |
| H300 | Fatal if swallowed. |
| H311 | Toxic in contact with skin. |
| H314 | Causes severe skin burns and eye damage. |
| H317 | May cause an allergic skin reaction. |
| H318 | Causes serious eye damage. |
| H330 | Fatal if inhaled. |
| H331 | Toxic if inhaled. |
| H360D | May damage the unborn child. |

| | |
|---|---|
| H361fd | Suspected of damaging fertility. Suspected of damaging the unborn child. |
| H372 | Causes damage to organs through prolonged or repeated exposure. |
| H372 (inhalation) | Causes damage to organs through prolonged or repeated exposure if inhaled. |
| H400 | Very toxic to aquatic life. |
| H410 | Very toxic to aquatic life with long lasting effects. |
| H411 | Toxic to aquatic life with long lasting effects. |

**Full text of classifications [CLP/GHS]**

| | |
|---|---|
| Flam. Gas 1, H220 | FLAMMABLE GASES - Category 1 |
| Flam. Gas 2, H221 | FLAMMABLE GASES - Category 2 |
| Press. Gas (Comp.), H280 | GASES UNDER PRESSURE - Compressed gas |
| Acute Tox. 2, H300 | ACUTE TOXICITY (oral) - Category 2 |
| Acute Tox. 3, H311 | ACUTE TOXICITY (dermal) - Category 3 |
| Skin Corr. 1B, H314 | SKIN CORROSION/IRRITATION - Category 1B |
| Skin Sens. 1, H317 | SKIN SENSITIZATION - Category 1 |
| Skin Sens. 1A, H317 | SKIN SENSITIZATION - Category 1A |
| Eye Dam. 1, H318 | SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 1 |
| Acute Tox. 2, H330 | ACUTE TOXICITY (inhalation) - Category 2 |
| Acute Tox. 3, H331 | ACUTE TOXICITY (inhalation) - Category 3 |
| Repr. 1A, H360D | TOXIC TO REPRODUCTION (Unborn child) - Category 1A |
| Repr. 2, H361fd | TOXIC TO REPRODUCTION (Fertility, Unborn child) - Category 2 |
| STOT RE 1, H372 | SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 1 |
| STOT RE 1, H372 (inhalation) | SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) (inhalation) - Category 1 |
| Aquatic Acute 1, H400 | AQUATIC HAZARD (ACUTE) - Category 1 |
| Aquatic Chronic 1, H410 | AQUATIC HAZARD (LONG-TERM) - Category 1 |
| Aquatic Chronic 2, H411 | AQUATIC HAZARD (LONG-TERM) - Category 2 |

| | | |
|---|---|---|
| **Revision comments** | : | The following sections contain new and updated information: 2, 3. |
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| **Version** | : | 4.0 |
| **Prepared by** | : | Yara Chemical Compliance (YCC). |

|| Indicates information that has changed from previously issued version.

**Notice to reader**

**To the best of our knowledge, the information provided in this Safety Data Sheet is accurate as at the date of its issue. The information it contains is being given for safety guidance purposes and relates only to the specific material and uses described in it. This information does not necessarily apply to that material when combined with other material(s) or when used otherwise than as described herein, since all materials may represent unknown hazards and should be used with caution. Final determination of the suitability of any material is the sole responsibility of the user.**

# Annex to the extended Safety Data Sheet (eSDS) - Exposure Scenario/Safe Use Information:

## Identification of the substance or mixture

**Product definition** : Mixture

**Product name** : YaraVita Brassitrel Pro

**Exposure Scenario/Safe Use Information** : Not yet complete.