

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 29.05.2021

Revision: 29.05.2021

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

· 1.1 Product identifier

· **Trade name:** E2Pro resilience

· **Registration number** Mixture

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

· **Sector of Use** SU1 Agriculture, forestry, fishery

· **Product category** PC12 Fertilisers

· **Application of the substance / the mixture** Horticultural product.

· **Uses advised against**

Processes involving the use of incompatible substances - refer to section 10.

Any use carrying a risk of direct contact with eyes/skin where workers are exposed without adequate personal protective equipment (PPE).

Processes involving extreme heat use advised against.

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

· **Manufacturer/Supplier:**

Agrovista UK Ltd

Rutherford House

Nottingham Science and Technology Park

University Boulevard

Nottingham

NG7 2PZ

UK

Tel: +44 (0)1952 897910

· **Further information obtainable from:** Product safety department.

· **1.4 Emergency telephone number:**

UK National Poisons Information Service. E-mail: npis.birmingham@nhs.net; Tel: +44 (0)344 892 0111

SECTION 2: Hazards identification

· **2.1 Classification of the substance or mixture**

· **Classification according to Regulation (EC) No 1272/2008**



corrosion

Eye Dam. 1 H318 Causes serious eye damage.



Acute Tox. 4 H302 Harmful if swallowed.

· **2.2 Label elements**

· **Labelling according to Regulation (EC) No 1272/2008**

The product is classified and labelled according to the CLP regulation.

· **Hazard pictograms** GHS05, GHS07

· **Signal word** Danger

· **Hazard-determining components of labelling:**

CALCIUM NITRATE hydrate

· **Hazard statements**

H302 Harmful if swallowed.

H318 Causes serious eye damage.

· **Precautionary statements**

P102 Keep out of reach of children.

P260 Do not breathe mist/vapours/spray.

P270 Do not eat, drink or smoke when using this product.

P280 Wear eye protection / face protection.

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- P301+P312 IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.
 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.
- **Additional information:**
 EUH401 To avoid risks to human health and the environment, comply with the instructions for use.
 - **2.3 Other hazards**
 - **Results of PBT and vPvB assessment**
 - **PBT:** Not applicable.
 - **vPvB:** Not applicable.

SECTION 3: Composition/information on ingredients

- **3.2 Chemical characterisation: Mixtures**
- **Description:** Mixture of substances listed below with nonhazardous additions.

- **Dangerous components:**

| | | |
|-------------------|--|----------|
| CAS: 13477-34-4 | CALCIUM NITRATE hydrate | >25-≤50% |
| EINECS: 233-332-1 | ☠ Ox. Sol. 2, H272; ☠ Eye Dam. 1, H318; ☠ Acute Tox. 4, H302 | |
| CAS: 13446-18-9 | Magnesium nitrate hexahydrate | >10-≤25% |
| EINECS: 233-826-7 | ☠ Ox. Sol. 3, H272 | |

- **Additional information:** For the wording of the listed hazard phrases refer to section 16.

SECTION 4: First aid measures

- **4.1 Description of first aid measures**
- **General information:** Immediately remove any clothing soiled by the product.
- **After inhalation:** Supply fresh air; consult doctor in case of complaints.
- **After skin contact:**
 Immediately rinse with water.
 If skin irritation continues, consult a doctor.
- **After eye contact:**
 DO NOT DELAY!
 Check for and remove any contact lenses.
 Rinse opened eye for several minutes under running water. Then consult a doctor.
- **After swallowing:**
 DO NOT DELAY!
 Rinse out mouth and then drink plenty of water.
 Do not induce vomiting; call for medical help immediately.
 If vomiting occurs spontaneously, keep head below hips to prevent aspiration.
- **Information for doctor:** Treat symptomatically and supportively.
- **4.2 Most important symptoms and effects, both acute and delayed**
 No further relevant information available.
- **4.3 Indication of any immediate medical attention and special treatment needed**
 No further relevant information available.

SECTION 5: Firefighting measures

- **5.1 Extinguishing media**
- **Suitable extinguishing agents:** Use fire extinguishing methods suitable to surrounding conditions.
- **5.2 Special hazards arising from the substance or mixture**
 Formation of toxic gases is possible during heating or in case of fire.
- **5.3 Advice for firefighters**
- **Protective equipment:**
 Wear self-contained respiratory protective device.
 Wear fully protective suit.

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- Do not inhale explosion gases or combustion gases.
- **Additional information** Cool endangered receptacles with water spray.

SECTION 6: Accidental release measures

- **6.1 Personal precautions, protective equipment and emergency procedures**
 - Ensure adequate ventilation
 - Wear protective equipment. Keep unprotected persons away.
- **6.2 Environmental precautions:**
 - Dilute with plenty of water.
 - Do not allow product to reach sewage system or any water course in the undiluted form.
- **6.3 Methods and material for containment and cleaning up:**
 - Absorb liquid components with liquid-binding material.
 - Send for recovery or disposal in suitable receptacles.
 - Do not use combustible materials such as paper towels to clean up spills.
- **6.4 Reference to other sections**
 - No dangerous substances are released.
 - See Section 7 for information on safe handling.
 - See Section 8 for information on personal protection equipment.
 - See Section 13 for disposal information.

SECTION 7: Handling and storage

- **7.1 Precautions for safe handling**
 - Prevent formation of aerosols.
 - Ensure good ventilation/exhaustion at the workplace.
- **Information about fire - and explosion protection:** The product is not flammable.
- **7.2 Conditions for safe storage, including any incompatibilities**
 - **Storage:**
 - **Requirements to be met by storerooms and receptacles:** No special requirements.
 - **Information about storage in one common storage facility:** Store away from foodstuffs.
 - **Further information about storage conditions:**
 - Store in cool, dry conditions in well sealed receptacles.
 - Protect from frost.
 - Protect from heat and direct sunlight.
- **7.3 Specific end use(s)** No further relevant information available.

SECTION 8: Exposure controls/personal protection

- **8.1 Control parameters**
 - **Additional information about design of technical facilities:** No further data; see item 7.
 - **Ingredients with limit values that require monitoring at the workplace:**
 - The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.
 - **Additional information:** The lists valid during the making were used as basis.
- **8.2 Exposure controls**
 - **Personal protective equipment:**
 - **General protective and hygienic measures:**
 - Do not eat, drink, smoke or sniff while working.
 - Do not inhale gases / fumes / aerosols.
 - Wash hands before breaks and at the end of work.
 - Avoid contact with the eyes and skin.
 - **Respiratory protection:**
 - Not necessary if room is well-ventilated.
 - Use suitable respiratory protective device in case of insufficient ventilation.

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- **Protection of hands:**

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

- **Material of gloves**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

- **Penetration time of glove material**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

- **Eye protection:** Safety glasses

- **Body protection:**

Protective work clothing

Body protection must be chosen depending on product properties, activity and possible exposure.

SECTION 9: Physical and chemical properties

- **9.1 Information on basic physical and chemical properties**

- **General Information**

- **Appearance:**

Form: Fluid

Colour: Clear

- **Odour:** Mild

- **Odour threshold:** Not determined.

- **pH-value (100 g/l) at 20 °C:** 6.5 - 7

- **Change in condition**

Melting point/freezing point: Undetermined.

Initial boiling point and boiling range: Undetermined.

- **Flash point:** Not applicable.

- **Flammability (solid, gas):** Not applicable.

- **Decomposition temperature:** Not determined.

- **Auto-ignition temperature:** Product is not self-igniting.

- **Explosive properties:** Product does not present an explosion hazard.

- **Explosion limits:**

Lower: Not determined.

Upper: Not determined.

- **Vapour pressure at 20 °C:** 23 hPa

- **Density at 20 °C:** 1.48 g/cm³

- **Relative density** Not determined.

- **Vapour density** Not determined.

- **Evaporation rate** Not determined.

- **Solubility in / Miscibility with water:**

Fully miscible.

- **Partition coefficient: n-octanol/water:** Not determined.

- **Viscosity:**

Dynamic: Not determined.

Kinematic: Not determined.

- **Solvent content:**

Organic solvents: 0.00 %

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| | |
|-----------------|--------|
| VOC (EC) | 0.00 % |
|-----------------|--------|

| | |
|--------------------------------|--|
| · 9.2 Other information | NOTE: The physical data presented above are typical values and should not be construed as a specification. |
|--------------------------------|--|

SECTION 10: Stability and reactivity

- **10.1 Reactivity** No further relevant information available.
- **10.3 Possibility of hazardous reactions** No dangerous reactions known.
- **10.4 Conditions to avoid** No further relevant information available.
- **10.5 Incompatible materials:**
 - Strong bases.
 - Strong acids.
 - Combustible materials.
- **10.6 Hazardous decomposition products:**
 - Nitrogen oxides (NO_x)
 - Metal oxide

SECTION 11: Toxicological information

- **11.1 Information on toxicological effects**
- **Acute toxicity**
 - Harmful if swallowed.
- **Primary irritant effect:**
- **Skin corrosion/irritation** Based on available data, the classification criteria are not met.
- **Serious eye damage/irritation**
 - Causes serious eye damage.
- **Respiratory or skin sensitisation** Based on available data, the classification criteria are not met.
- **Additional toxicological information:**
 - Absorption of significant amounts of nitrates may cause: abdominal pain; blue lips or fingernails; blue skin; dizziness; laboured breathing; confusion; convulsions; diarrhoea; headache; nausea; unconsciousness.
- **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**
- **Germ cell mutagenicity** Based on available data, the classification criteria are not met.
- **Carcinogenicity** Based on available data, the classification criteria are not met.
- **Reproductive toxicity** Based on available data, the classification criteria are not met.
- **STOT-single exposure** Based on available data, the classification criteria are not met.
- **STOT-repeated exposure** Based on available data, the classification criteria are not met.
- **Aspiration hazard** Based on available data, the classification criteria are not met.

SECTION 12: Ecological information

- **12.1 Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **12.2 Persistence and degradability** The organic portion of the product is biodegradable.
- **12.3 Bioaccumulative potential** Product is not expected to bioaccumulate.
- **12.4 Mobility in soil** No further relevant information available.
- **Additional ecological information:**
- **General notes:**
 - Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water
 - Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
- **12.5 Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.

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- **12.6 Other adverse effects** No further relevant information available.

SECTION 13: Disposal considerations

- **13.1 Waste treatment methods**

- **Recommendation**

Recommended Hierarchy of Controls:

- Minimise waste;
- Reuse if not contaminated;
- Recycle, if possible; or
- Safe disposal (if all else fails).

Contact waste processors for recycling information.

Used, degraded or contaminated product may be classified as hazardous waste. Anyone classifying hazardous waste and determining its fate must be qualified in accordance with state and international legislation.

- **Uncleaned packaging:**

- **Recommendation:**

Container remains hazardous when empty. Continue to observe all precautions.

Containers, even those that are "empty," may contain residues that can develop flammable and/or hazardous vapours upon heating. Do not cut, drill, grind, weld, or perform similar operations on or near empty containers.

- **Recommended cleansing agents:** Water, if necessary together with cleansing agents.

SECTION 14: Transport information

- **14.1 UN-Number**

- **ADR, ADN, IMDG, IATA** Void

- **14.2 UN proper shipping name**

- **ADR** Void

- **ADN, IMDG, IATA** Void

- **14.3 Transport hazard class(es)**

- **ADR, ADN, IMDG, IATA**

- **Class** Void

- **14.4 Packing group**

- **ADR, IMDG, IATA** Void

- **14.5 Environmental hazards:**

- **Marine pollutant:** No

- **14.6 Special precautions for user**

Not applicable.

- **14.7 Transport in bulk according to Annex II of Marpol and the IBC Code**

Not applicable.

- **Transport/Additional information:**

Not dangerous according to the above specifications.

- **UN "Model Regulation":**

Void

SECTION 15: Regulatory information

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

- **Directive 2012/18/EU**

- **Named dangerous substances - ANNEX I** None of the ingredients is listed.

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- **15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

SECTION 16: Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

- **Relevant phrases**

H272 May intensify fire; oxidiser.

H302 Harmful if swallowed.

H318 Causes serious eye damage.

- **Department issuing SDS:** Product safety department.

- **Abbreviations and acronyms:**

ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

GHS: Globally Harmonised System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

VOC: Volatile Organic Compounds (USA, EU)

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

Ox. Sol. 2: Oxidizing solids – Category 2

Ox. Sol. 3: Oxidizing solids – Category 3

Acute Tox. 4: Acute toxicity – Category 4

Eye Dam. 1: Serious eye damage/eye irritation – Category 1

Annex: Exposure scenario

- **Sector of Use**

SU5 Manufacture of textiles, leather, fur

SU1 Agriculture, forestry, fishery

- **Product category** PC12 Fertilisers

- **Description of the activities / processes covered in the Exposure Scenario**

See section 1 of the annex to the Safety Data Sheet.

- **Conditions of use**

- **Duration and frequency** 5 workdays/week.

- **Physical parameters**

- **Physical state** Solid

- **Concentration of the substance in the mixture** Raw material.

- **Used amount per time or activity** According to directions for use.

- **Other operational conditions**

- **Other operational conditions affecting environmental exposure**

Observe section 6 of the Safety Data Sheet (Accidental release measures).

- **Other operational conditions affecting consumer exposure** Not required.

- **Other operational conditions affecting consumer exposure during the use of the product** Not applicable.

- **Risk management measures**

- **Worker protection**

- **Organisational protective measures**

Avoid contact with drinking water and / or food during application.

Consider section 4 of the Safety Data Sheet (First aid measures).

Deploy only trained chemical workers.

Employment restrictions concerning juveniles must be observed.

Keep away from food, beverages and animal feed.

Make sure that the workplace is well-lit and organised.

Provide Internal Plant Instruction.

Provide washing facilities in the workplace.

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· Technical protective measures

- Ensure good ventilation/exhaustion at the workplace.
- Prevent formation of aerosols.
- Store in cool, dry place in tightly closed receptacles.
- Washing facilities / Water for cleaning eyes and skin should be available.

· Personal protective measures

- Avoid contact with the eyes.
- Avoid close or long term contact with the skin.
- Do not eat or drink while working.
- Ensure that washing facilities are available at the work place.
- Use suitable respiratory protective device in case of insufficient ventilation.

· Measures for consumer protection Keep out of reach of children.**· Environmental protection measures**

- Air** No special measures required.
- Water** Do not allow product to reach sewage system or any water course in the undiluted form.
- Soil** No special measures required.

· Disposal measures

- Disposal must be made according to official regulations.
- Ensure that waste is collected and contained.
- Used, degraded or contaminated product may be classified as hazardous waste. Anyone classifying hazardous waste and determining its fate must be qualified in accordance with state and international legislation.

· Disposal procedures

- Containers, even those that are “empty,” may contain residues that can develop hazardous vapours upon heating. Do not cut, drill, grind, weld, or perform similar operations on or near empty containers.

· Waste type Partially emptied and uncleaned packaging**· Exposure estimation****· Consumer** Not relevant for this Exposure Scenario.**· Guidance for downstream users** No further relevant information available.

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