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|------------------------------|--|--|---|---|---|--|--|
| SEC | TION 1: Ide | entification of th | e substance/mixt | ure and of the com | pany/undertaking | | |
| 1.1. | product id | entifiers | | | | | |
| | | (manufacturer/supp on of the substance de: | | P12111 WUXAL Aminocal | | | |
| 1.2. | Relevant i | dentified uses of t | he substance or mi | xture and uses advis | ed against | | |
| | Relevant in Fertilizer | dentified uses | | | | | |
| 1.3. | Details of | the supplier of the | safety data sheet | | | | |
| | | - | orter/downstream us | ser/distributor) | | | |
| | | Spezialdünger Gm andstraße 199 seldorf | bH & Co. KG | Telephone: +49 (0) Telefax: +49 (0) 211 | | | |
| | Dept. resp | onsible for inform | ation: | | | | |
| | | nnotont nama) | | roach@calules. | ~ | | |
| 1.4. | | npetent person) y telephone numb | or | reach@aglukon.com | TI CONTRACTOR OF CONTRACTOR | | |
| 1.4. | GIZ Mainz, Germany | POISON CENTER | | Tel.: +49 (0) 6131 1 | 9240 | | |
| 0503 | | C C | | | | | |
| SEC | HON 2: Ha | zards identificat | lon | | | | |
| 2.1. | | | | | | | |
| | Classification according to Regulation (EC) No 1272/2008 [CLP] | | | | | | |
| | | | - | o regulation (EC) No 12 | | | |
| | Skin Irrit. 2 Eye Irrit. 2 Aquatic Ch | | skin corrosion/irrita Serious eye damag Hazardous to the a | | Causes skin irritation. Causes serious eye irritation. Harmful to aquatic life with long lasting effects. | | |
| 2.2. | Label elen | nents | | | | | |
| | Labelling a | according to Regu | lation (EC) No. 1272 | 2/2008 [CLP] | | | |
| | Hazard pictograms | | | | | | |
| | | Warning | | | | | |
| | Hazard sta H315 H319 H412 | Causes Causes | skin irritation. serious eye irritatior I to aquatic life with lo | | | | |
| | Precaution | nary statements | | | | | |
| | P273 | | elease to the environ | | | | |
| | P280 P337 + P3 ² | | | protection/face protect medical advice/attention | | | |
| | contains: | | | | | | |
| | | not app | licable | | | | |
| | Suppleme | ntal Hazard inform not app | | | | | |
| 2.3. | Other haza | ards | | | | | |
| | The substa | nces in the mixture | do not meet the PB | T/vPvB criteria accordi | ng to REACH, annex XIII. | | |
| SEC | TION 3: Co | omposition / info | rmation on ingred | dients | | | |
| | Mixtures | | | | | | |

3.2. Mixtures

Product description / chemical characterization Description



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|-------------------------------------|-----------------------------------|--|-------------------------|-------------|
| Hazardou | us ingredients | | | |
| Classific | ation according to | Regulation (EC) No 1272/2008 [CLP] | | |
| EC No. CAS No. INDEX No | Chen | CH No. nical name ification // Remark | | Wt % |
| 233-140-8 10043-52 017-013-0 | -4 calciu | 19494219-28-XXXX m chloride dihydrate rit. 2 H319 | | 30 < 45 |
| 231-869-0 64333-01 | -3 mang | anese(II) chloride monohydrate Tox. 3 H301 / Aquatic Chronic 2 H411 | 1 | 1 < 2 |
| 231-592-(7646-85-7 030-003-(| 0 01-21 7 zinc c 00-2 Acute | 19472431-44-XXXX hloride Tox. 4 H302 / Skin Corr. 1B H314 / H335 / Aquatic Chronic 1 H410 | | 1 < 2 DT |

Full text of classification: see section 16

SECTION 4: First aid measures

4.1. Description of first aid measures

General information

In all cases of doubt, or when symptoms persist, seek medical advice.

In case of inhalation

Remove casualty to fresh air and keep warm and at rest. In case of respiratory tract irritation, consult a physician.

Following skin contact

Take off immediately all contaminated clothing. After contact with skin, wash immediately with plenty of water and soap.

After eye contact

Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Seek medical advice immediately.

After ingestion

Rinse mouth thoroughly with water. Seek medical advice immediately. Keep victim calm.

4.2. **Most important symptoms and effects, both acute and delayed** No known symptoms to date.

4.3. **Indication of any immediate medical attention and special treatment needed** Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

The product itself does not burn.

Suitable extinguishing media:

Water spray jet, Water mist, carbon dioxide, Powder

Extinguishing media which must not be used for safety reasons: strong water jet

5.2. **Special hazards arising from the substance or mixture** Hazardous combustion products: Hydrogen chloride (HCI)

5.3. Advice for firefighters

In case of fire: Wear self-contained breathing apparatus. Do not allow water used to extinguish fire to enter drains, ground or waterways.

SECTION 6: Accidental release measures

6.1. **Personal precautions, protective equipment and emergency procedures** Provide adequate ventilation. Personal protection equipment: refer to section 8.

6.2. Environmental precautions

Do not allow to enter into surface water or drains.



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6.3. Methods and material for containment and cleaning up

Isolate leaked material using non-flammable absorption agent (e.g. sand, earth, vermiculit, diatomaceous earth) and collect it for disposal in appropriate containers in accordance with the local regulations (see section 13).

6.4. Reference to other sections

Observe protective provisions (see chapter 7 and 8).

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Advices on safe handling

Avoid contact with skin, eyes and clothes. When using do not eat, drink or smoke. Personal protection equipment: refer to section 8. Follow the legal protection and safety regulations.

Precautions against fire and explosion:

No special measures are necessary.

7.2. Conditions for safe storage, including any incompatibilities

Requirements for storage rooms and vessels

Protect from heat and direct sunlight. Keep container tightly closed. Always keep in containers that correspond to the material of the original container.

Hints on joint storage

Do not store together with: Food and feedingstuffs.

Further information on storage conditions

Take care of instructions on label. Store in a well-ventilated and dry room at temperatures between 0 °C and 40 °C. Store carefully closed containers upright to prevent any leaks.

7.3. Specific end use(s)

Observe technical data sheet. Observe instructions for use.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Occupational exposure limit values

not applicable

8.2. Exposure controls

Technical measures and the application of suitable work processes have priority over personal protection equipment. See section 7. No additional measures necessary.

Occupational exposure controls

Respiratory protection

Usually no personal respirative protection necessary.

Hand protection

For prolonged or repeated handling the following glove material must be used: e.g. NBR (Nitrile rubber).

Thickness of the glove material: No data available. Breakthrough time (maximum wearing time): No data available.

Observe the instructions and details for use, storage, maintenance and replacement provided by the protective glove manufacturer. Penetration time of glove material depending on intensity and duration of exposure to skin. Recommended glove articles: DIN EN 374.

Barrier creams can help protecting exposed skin areas. In no case should they be used after contact.

Eye protection

Wear eye glasses with side protection according to EN 166.

Protective measures

After contact clean skin thoroughly with water and soap or use appropriate cleanser.

Environmental exposure controls

Do not allow to enter into surface water or drains. See chapter 7. No additional measures necessary.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties Appearance:



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|------------------------------|---------------------------|--|--|----------------------------------|-------------------------|--|
| | Physical s Colour: | state: | | liquid | | |
| | | | | light brown | | |
| | Odour: | | | characteristic | | |
| | Odour threshold: | | | not applicable | | |
| | pH at 20 °C | | | 4 | | |
| | • • | nt/freezing point: | | not applicable | | |
| | | ng point and boilir | ng range: | not determined | | |
| | Flash point | | | not applicable | | |
| | Evaporatio | | | not applicable | | |
| | Flammabili burning ti | ty (solid, gas): me (s): | | not applicable | | |
| | Lower exp | er flammability or e plosion limit: plosion limit: | explosive limits: | not applicable not applicable | | |
| | Vapour pre | ssure at 20 °C: | | not applicable | | |
| | Vapour der | sity: | | not applicable | | |
| | Relative de Density at | | | 1,35 g/cm³ | | |
| | Solubility(ie | | _ | | | |
| | | bility (g/L) at 20 °C | | very soluble | | |
| | | efficient: n-octan | ol/water: | see section 12 | | |
| | • | on temperature: | | not applicable | | |
| | - | tion temperature: | | not applicable | | |
| | Viscosity a | | | not determined | | |
| | Explosive p | - | | not applicable | | |
| | Oxidising p | - | | not applicable | | |
| 9.2. | Other infor | | | | | |
| | No informat | ion available. | | | | |
| SEC | TION 10: St | ability and react | ivity | | | |

10.1. Reactivity

Stable when applying the recommended regulations for storage and handling. Further information on correct storage: refer to chapter 7.

10.2. Chemical stability

Stable when applying the recommended regulations for storage and handling. Further information on correct storage: refer to chapter 7.

10.3. **Possibility of hazardous reactions** No hazardous reaction when handled and stored according to provisions.

10.4. Conditions to avoid

Protect from heat and direct sunlight.

10.5. Incompatible materials Alkali (lye)

10.6. Hazardous decomposition products

Does not decompose when used for intended uses. Hazardous decomposition byproducts may form with exposure to high temperatures: Hydrogen chloride (HCI)

SECTION 11: Toxicological information

Classification according to Regulation (EC) No 1272/2008 [CLP] No data on preparation itself available.

11.1. Information on toxicological effects

Acute toxicity

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|--|--|---|--|--|
| | oral, LD50, Calculation | Rat: > 2000 mg/ł method. | ٨ġ | |
| | | l) chloride monol Rat: 250 mg/kg | nydrate ; evaluation Toxic if swallowed. | |
| | inc chloride oral, LD50, I Method: OE | | ; evaluation Harmful if swallowed. | |
| s | skin corrosio | on/irritation; Se | rious eye damage/eye irritation | |
| с | Calculation Skin: evalua Calculation calcium chlor | ation Causes ser method. tion Causes skir method. de dihydrate | | |
| | zinc chloride | | ious eye irritation. ere skin burns and eye damage. | |
| 5 | | or skin sensitis | | |
| | | data are not ava | | |
| | 0 | et organ toxicit | | |
| | zinc chloride Specific targ | | (single exposure), Irritation: evaluati | on May cause respiratory irritation. |
| | • | data are not ava | ilable. | |
| F | Practical exp | erience/human | evidence | |
| ١ | No informatio | n available. | | |
| C | Overall Asse | ssment on CMF | R properties | |
| | The ingredier Remark | ts in this mixture | e do not meet the criteria for classificat | ion as CMR category 1A or 1B according to CLP. |
| - | | formation availa | | |
| | | | ble on the preparation itself . | |
| SECTI | ION 12: Eco | ological inforn | nation | |
| | overall evalu | | | |
| C | | | gulation (EC) No 1272/2008 [CLP] ble on the preparation itself . | |
| C T | | | | |
| C T 12.1. T z | There is no in Foxicity zinc chloride Fish toxicity | formation availa , LC50, Oncorhy | | ng/l (96 h) |
| C T 12.1. T z | There is no in Foxicity zinc chloride Fish toxicity | formation availa , LC50, Oncorhy icity, EC50: 0,1 | ble on the preparation itself . nchus mykiss (Rainbow trout): 0,169 n | ng/l (96 h) |
| C T 12.1. T z | There is no in Foxicity zinc chloride Fish toxicity Daphnia tox _ong-term E WUXAL Amir | formation availa LC50, Oncorhy icity, EC50: 0,1 cotoxicity local evaluation Har | ble on the preparation itself . nchus mykiss (Rainbow trout): 0,169 n | |
| 12.1. T 2 L 12.2. F | There is no in Foxicity zinc chloride Fish toxicity Daphnia tox Long-term E NUXAL Amir Ecotoxicity: Calculation | formation availa , LC50, Oncorhy icity, EC50: 0,1 cotoxicity iocal evaluation Har method. and degradabil i | ble on the preparation itself . nchus mykiss (Rainbow trout): 0,169 n 47 - 0,000 mg/l (48 h) mful to aquatic life with long lasting eff | |
| 12.1. T 12.1. T 2 12.2. F N 12.3. E | There is no in Foxicity zinc chloride Fish toxicity Daphnia tox Long-term E NUXAL Amir Ecotoxicity: Calculation Persistence No data available | formation availa , LC50, Oncorhy icity, EC50: 0,1 cotoxicity nocal evaluation Har method. and degradabili able. ative potential | ble on the preparation itself . nchus mykiss (Rainbow trout): 0,169 n 47 - 0,000 mg/l (48 h) mful to aquatic life with long lasting eff | |
| 12.1. T 12.1. T Z U 12.2. F N 12.3. E | There is no in Foxicity tinc chloride Fish toxicity Daphnia tox Long-term E NUXAL Amir Ecotoxicity: Calculation Persistence No data availa No data availa | formation availa , LC50, Oncorhy icity, EC50: 0,1 cotoxicity nocal evaluation Har method. and degradabili able. ative potential | ble on the preparation itself . nchus mykiss (Rainbow trout): 0,169 n 47 - 0,000 mg/l (48 h) mful to aquatic life with long lasting eff | |
| 12.1. T 12.1. T 2 12.2. F N 12.3. E N E N | There is no in Foxicity zinc chloride Fish toxicity Daphnia tox Long-term E WUXAL Amir Ecotoxicity: Calculation Persistence No data availa Bioaccumula No data availa Bioconcentra No data availa | formation availa , LC50, Oncorhy icity, EC50: 0,1 cotoxicity nocal evaluation Har method. and degradabili able. ative potential able. ation factor (BC able. | ble on the preparation itself . nchus mykiss (Rainbow trout): 0,169 n 47 - 0,000 mg/l (48 h) mful to aquatic life with long lasting eff | |
| 12.1. T 12.1. T 2 12.2. F N 12.3. E N 12.4. N | There is no in Foxicity zinc chloride Fish toxicity Daphnia tox Long-term E NUXAL Amir Ecotoxicity: Calculation Persistence No data availe Bioaccumula No data availe Bioconcentre | formation availa , LC50, Oncorhy icity, EC50: 0,1 cotoxicity local evaluation Har method. and degradabili able. ative potential able. ation factor (BC able. bil | ble on the preparation itself . nchus mykiss (Rainbow trout): 0,169 n 47 - 0,000 mg/l (48 h) mful to aquatic life with long lasting eff | |



| accoi | rding to R | egulation (EU) | 2015/830 | THE HOUSE OF BRANDS | |
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| 12.6. | Other adv | ances in the mixtu erse effects ation available. | re do not meet the PBT/vPvB criteria ac | cording to REACH, annex XIII. | |
| SEC | TION 13: E | Disposal consid | lerations | | |
| 13.1. | Waste trea | atment methods | | | |
| | Recomme | | | | |
| | disposal a | ccording to directi | ve 2008/98/EC, covering waste and dan | - | |
| | 020108 | agroc | des/waste designations in accordanc hemical waste containing dangerous su | | |
| | packaging Recomme Non-conta | ndation | s may be recycled. Vessels not properly | emptied are special waste. | |
| SEC | TION 14: T | ransport infor | nation | | |
| | - | - | se of this transport regulation. | | |
| 14.1. | UN numbe | er | not applicable | | |
| 14.2. | UN prope | shipping name | ποι αρμιταρίε | | |
| 14.3. | Transport | hazard class(es |) not applicable | | |
| 14.4. | Packing g | roup | | | |
| 445 | F | | not applicable | | |
| 14.5. | | ental hazards | not oppliable | | |
| | | port (ADR/RID) | not applicable not applicable | | |
| 1/1.6 | Marine pol | ecautions for us | | | |
| 14.0. | Transport a case of an | | upright and safe containers. Make sure ge. | that persons transporting the product know what to do in | |
| | Further in | formation | | | |
| | Land trans | sport (ADR/RID) | | | |
| | tunnel rest | riction code | - | | |
| | Sea trans | oort (IMDG) | | | |
| | EmS-No. | | not applicable | | |
| | Air transp | ort (ICAO-TI / IA | TA-DGR) | | |
| 14.7. | Transport | in bulk accordin | g to Annex II of Marpol and the IBC C | ode | |
| | Not applica | able. | | | |
| SEC | TION 15: F | Regulatory info | rmation | | |
| 15.1. | Safety, he | alth and environ | mental regulations/legislation specified | c for the substance or mixture | |
| | EU legisla | tion | | | |
| | VOC-value | e (in g/L): 0,000 | dustrial emissions | | |
| | | egulations | | | |
| | Observe e | | tions under the Maternity Protection Dire | ective (92/85/EEC) for expectant or nursing mothers. enile work protection guideline' (94/33/EC). | |



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15.2. Chemical Safety Assessment

Chemical safety assessments for substances in this preparation were not carried out.

SECTION 16: Other information

| Eye Irrit. 2 / H319 | Serious eye damage/eye irritation | Causes serious eye irritation. |
|--------------------------|--|---|
| Acute Tox. 3 / H301 | Acute toxicity (oral) | Toxic if swallowed. |
| Aquatic Chronic 2 / H411 | Hazardous to the aquatic environment | Toxic to aquatic life with long lasting effects |
| Acute Tox. 4 / H302 | Acute toxicity (oral) | Harmful if swallowed. |
| Skin Corr. 1B / H314 | skin corrosion/irritation | Causes severe skin burns and eye damage |
| Aquatic Acute 1 / H400 | Hazardous to the aquatic environment | Very toxic to aquatic organisms. |
| STOT SE 3 / H335 | Specific target organ toxicity (single exposure) | May cause respiratory irritation. |
| Aquatic Chronic 1 / H410 | Hazardous to the aquatic environment | Very toxic to aquatic life with long lasting effects. |

Further information

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

The information supplied on this safety data sheet complies with our current level of knowledge as well as with national and EU regulations. Without written approval, the product must not be used for purposes different from those mentioned in chapter 1. It is always the user's duty to take any necessary measures for meeting the requirements laid down by local rules and regulations. The details in this safety data sheet describe the safety requirements of our product and are not to be regarded as guaranteed attributes of the product.