



AOWEI AGRICULTURAL TECHNOLOGY CO., LTD.

ADD: NO. 27, CBD BUSINESS INNER RING ROAD, ZHENGDONG NEW DISTRICT,
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SAFETY DATA SHEET

Date / Revised: 25.07.2024

Product: **Prohexadione Calcium**

1. Identification

Product identifier

Prohexadione Calcium

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

Relevant identified uses: crop protection product, growth regulator

Details of the supplier of the safety data sheet

Manufacturer : AOWEI AGRICULTURAL TECHNOLOGY CO., LTD.

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2. Hazards Identification

Classification of the substance or mixture

According to UN GHS criteria

Aquatic Acute 1

Aquatic Chronic 2

For the classifications not written out in full in this section the full text can be found in section 16.

Label elements

Globally Harmonized System (GHS)

Pictogram:



Signal Word: Warning

Hazard Statement:

H411 Toxic to aquatic life with long lasting effects.
H400 Very toxic to aquatic life.

Precautionary Statement:

P101 If medical advice is needed, have product container or label at hand.
P102 Keep out of reach of children.
P103 Read carefully and follow all instructions.

Precautionary Statements (Response):

P391 Collect spillage.

Precautionary Statements (Disposal):

P501 Dispose of contents and container to hazardous or special waste collection point.

Other hazards

According to UN GHS criteria

See section 12 - Results of PBT and vPvB assessment.

If applicable information is provided in this section on other hazards which do not result in classification but which may contribute to the overall hazards of the substance or mixture.

3. Composition/Information on Ingredients

Substances Not applicable

Mixtures Chemical nature

crop protection product, growth regulator, water dispersible granules

Hazardous ingredients (GHS) According to UN GHS criteria

prohexadione calcium

Content (W/W): 27,44 %
CAS Number: 127277-53-6

Aquatic Acute 1
Aquatic Chronic 2
H411, H400

Ammonium sulphate

Content (W/W): < 60 %
CAS Number: 7783-20-2
EC-Number: 231-984-1

Eye Dam./Irrit. 2B
H320

Silicic acid, calcium salt

Content (W/W): < 5 %
CAS Number: 1344-95-2
EC-Number: 215-710-8

Silicon dioxide

Content (W/W): < 5 %
CAS Number: 7631-86-9
EC-Number: 231-545-4

For the classifications not written out in full in this section the full text can be found in section 16

4. First-Aid Measures

Description of first aid measures

Remove contaminated clothing.

If inhaled:

Keep patient calm, remove to fresh air.

On skin contact:

Wash thoroughly with soap and water

On contact with eyes:

Wash affected eyes for at least 15 minutes under running water with eyelids held open.

On ingestion:

Rinse mouth and then drink 200-300 ml of water

Most important symptoms and effects, both acute and delayed

Symptoms: (Further) symptoms and / or effects are not known so far

Hazards: (Further) symptoms and / or effects are not known so far

Indication of any immediate medical attention and special treatment needed

Treatment: Symptomatic treatment (decontamination, vital functions).

5. Fire-Fighting Measures

Extinguishing media

Suitable extinguishing media:

dry powder, foam, water spray

Unsuitable extinguishing media for safety reasons:

carbon dioxide

Special hazards arising from the substance or mixture

Carbon monoxide, Carbon dioxide, nitrogen oxides, sulfur oxides

The substances/groups of substances mentioned can be released in case of fire.

Advice for fire-fighters

Special protective equipment:

Wear self-contained breathing apparatus and chemical-protective clothing.

Further information:

Collect contaminated extinguishing water separately, do not allow to reach sewage or effluent systems. Dispose of fire debris and contaminated extinguishing water in accordance with official regulations. In case of fire and/or explosion do not breathe fumes. Keep containers cool by spraying with water if exposed to fire.

6. Accidental Release Measures

Personal precautions, protective equipment and emergency procedures

Avoid dust formation. Use personal protective clothing. Avoid contact with the skin, eyes and clothing.

Environmental precautions

Do not discharge into the subsoil/soil. Do not discharge into drains/surface waters/groundwater.

Methods and material for containment and cleaning up

For small amounts: Contain with dust binding material and dispose of.

For large amounts: Sweep/shovel up.

Avoid raising dust. Dispose of absorbed material in accordance with regulations. Collect waste in suitable containers, which can be labeled and sealed. Clean contaminated floors and objects thoroughly with water and detergents, observing environmental regulations.

7. Handling and Storage

Precautions for safe handling

No special measures necessary if stored and handled correctly. Ensure thorough ventilation of stores and work areas. When using do not eat, drink or smoke. Hands and/or face should be washed before breaks and at the end of the shift.

Protection against fire and explosion:

Avoid dust formation. Dust can form an explosive mixture with air. Prevent electrostatic charge - sources of ignition should be kept well clear - fire extinguishers should be kept handy.

Conditions for safe storage, including any incompatibilities

Segregate from foods and animal feeds.

Further information on storage conditions: Keep away from heat. Protect from direct sunlight. Protect against moisture.

Storage stability:

Storage duration: 24 Months

Specific end use(s)

For the relevant identified use(s) listed in Section 1 the advice mentioned in this section 7 is to be observed.

8. Exposure Controls/Personal Protection

Control parameters

Components with occupational exposure limits

1344-95-2: Silicic acid, calcium salt

7783-20-2: Ammonium sulphate

7631-86-9: Silicon dioxide

Exposure controls

Personal protective equipment

Respiratory protection:

Breathing protection if dusts are formed. Suitable respiratory protection for higher concentrations or long-term effect: Particle filter with medium efficiency for solid and liquid particles (e.g. EN 143 or 149, Type P2 or FFP2)

Hand protection:

Suitable chemical resistant safety gloves (EN ISO 374-1) also with prolonged, direct contact (Recommended: Protective index 6, corresponding > 480 minutes of permeation time according to EN ISO 374-1): E.g. nitrile rubber (0.4 mm), chloroprene rubber (0.5 mm), butyl rubber (0.7 mm) etc.

Eye protection:

Safety glasses with side-shields (frame goggles) (e.g. EN 166)

Body protection:

Body protection must be chosen depending on activity and possible exposure, e.g. apron, protecting boots, chemical-protection suit (according to EN 14605 in case of splashes or EN ISO 13982 in case of dust).

General safety and hygiene measures

Wearing of closed work clothing is recommended. The statements on personal protective equipment in the instructions for use apply when handling crop-protection agents in final-consumer packing.

Store work clothing separately. Keep away from food, drink and animal feeding stuffs.

9. Physical and Chemical Properties

9.1. Information on basic physical and chemical properties

State of matter: solid

Form: granules, solid

Colour: tan

Odour: characteristic

Odour threshold: Not determined due to potential health hazard by inhalation.

Melting point: The substance / product decomposes therefore not determined.

Boiling point: The product is a non-volatile solid.

Flammability: not highly flammable

Lower explosion limit: As a result of our experience with this product and our knowledge of its composition we do not expect any hazard as long as the product is used appropriately and in accordance with the intended use.

Upper explosion limit: As a result of our experience with this product and our knowledge of its composition we do not expect any hazard as long as the product is used appropriately and in accordance with the intended use.

Flash point: not applicable, the product is a solid

Thermal decomposition: No decomposition if stored and handled as prescribed/indicated.

pH value: approx. 6,0 - 8,0 (20 °C)

Viscosity, dynamic: not applicable, the product is a solid

Solubility in water: dispersible

Partitioning coefficient n-octanol/water (log K_{ow}):

The statements are based on the properties of the individual components.

Information on: prohexadione calcium

Partitioning coefficient n-octanol/water (log K_{ow}): -2,9 (20 °C)

Vapour pressure:

not applicable

Relative vapour density (air):

not applicable

9.2. Other information

Information with regard to physical hazard classes

Explosives

Explosion hazard:

not explosive

Oxidizing properties

Fire promoting properties: not fire-propagating

Self-heating substances and mixtures

Self heating ability:

It is not a substance capable of spontaneous heating.

Other safety characteristics

Bulk density:

approx. 0,54 - 0,70 kg/m³

Evaporation rate: not applicable

10. Stability and Reactivity**Reactivity**

No hazardous reactions if stored and handled as prescribed/indicated.

Chemical stability

The product is stable if stored and handled as prescribed/indicated.

Possibility of hazardous reactions

No hazardous reactions if stored and handled as prescribed/indicated.

Conditions to avoid

See SDS section 7 - Handling and storage.

Incompatible materials

Substances to avoid:

strong oxidizing agents, strong bases, strong acids

Hazardous decomposition products

Hazardous decomposition products:

No hazardous decomposition products if stored and handled as prescribed/indicated

11. Toxicological Information**Information on toxicological effects**

Acute toxicity

Assessment of acute toxicity:

Virtually nontoxic after a single ingestion. Virtually nontoxic by inhalation. Virtually nontoxic after a single skin contact. The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

Experimental/calculated data:

LD50 rat (oral): > 5.000 mg/kg

LC50 rat (by inhalation): > 4,21 mg/l 4 h

LD50 rat (dermal): > 2.000 mg/kg

No mortality was observed.

Irritation

Assessment of irritating effects:

Not irritating to eyes and skin. The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

Experimental/calculated data:

Skin corrosion/irritation rabbit: non-irritant

Serious eye damage/irritation rabbit: non-irritant

Respiratory/Skin sensitization

Assessment of sensitization:

No sensitizing effect. The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

Experimental/calculated data:

Buehler test guinea pig: Non-sensitizing.

Germ cell mutagenicity

Assessment of mutagenicity:

The product has not been tested. The statement has been derived from the properties of the individual components. Mutagenicity tests revealed no genotoxic potential.

Carcinogenicity

Assessment of carcinogenicity:

The product has not been tested. The statement has been derived from the properties of the individual components. The results of various animal studies gave no indication of a carcinogenic effect.

Reproductive toxicity

Assessment of reproduction toxicity:

The product has not been tested. The statement has been derived from the properties of the individual components. The results of animal studies gave no indication of a fertility impairing effect.

Developmental toxicity

Assessment of teratogenicity:

The product has not been tested. The statement has been derived from the properties of the individual components. Animal studies gave no indication of a developmental toxic effect at doses that were not toxic to the parental animals.

Specific target organ toxicity (single exposure)

Assessment of STOT single:

Based on the available information there is no specific target organ toxicity to be expected after a single exposure.

Remarks: The product has not been tested. The statement has been derived from the properties of the individual components.

Repeated dose toxicity and Specific target organ toxicity (repeated exposure)

Assessment of repeated dose toxicity:

The product has not been tested. The statement has been derived from the properties of the individual components.

Information on: Silicon dioxide

Assessment of repeated dose toxicity:

Repeated inhalative uptake of particles/dust reaching the alveoli may cause damage to the lungs.

Aspiration hazard

not applicable

Other relevant toxicity information

Misuse can be harmful to health.

12. Ecological Information

Toxicity

Assessment of aquatic toxicity:

Very toxic to aquatic life. Toxic to aquatic life with long lasting effects.

The product has not been tested. The statement has been derived from the properties of the individual components.

Information on: prohexadione calcium

Toxicity to fish:

LC50 (96 h) > 100 mg/l, Oncorhynchus mykiss (OECD 203; ISO 7346; 84/449/EWG, C.1, semistatic)

Information on: prohexadione calcium

Aquatic invertebrates:

EC50 (48 h) > 100 mg/l, Daphnia magna (OECD Guideline 202, part 1, static)

Information on: prohexadione calcium

Aquatic plants:

EC50 (72 h) > 100 mg/l, Pseudokirchneriella subcapitata

EC10 (14 d) 0,0632 mg/l (growth rate), Myriophyllum spicatum

EC50 (14 d) 0,39 mg/l, Myriophyllum spicatum

Persistence and degradability

Assessment biodegradation and elimination (H2O):

The product has not been tested. The statement has been derived from the properties of the individual components.

Information on: prohexadione calcium

Elimination information:

> 70 % (28 d) Readily biodegradable.

Bioaccumulative potential

Assessment bioaccumulation potential:

The product has not been tested. The statement has been derived from the properties of the individual components.

Information on: prohexadione calcium

Assessment bioaccumulation potential:

Because of the n-octanol/water distribution coefficient (log Pow) accumulation in organisms is not to be expected.

Mobility in soil

Assessment transport between environmental compartments:

Adsorption in soil: The product has not been tested. The statement has been derived from the

properties of the individual components.

Information on: prohexadione calcium

Assessment transport between environmental compartments:

Adsorption in soil: Following exposure to soil, the product trickles away and can - dependant on degradation - be transported to deeper soil areas with larger water loads.

Results of PBT and vPvB assessment

The product does not contain a substance fulfilling the PBT (persistent/bioaccumulative/toxic) criteria or the vPvB (very persistent/very bioaccumulative) criteria.

Other adverse effects

The product does not contain substances that are listed in the Montreal Protocol on substances that deplete the ozone layer.

Additional information

Other ecotoxicological advice:

Do not discharge product into the environment without control.

13. Disposal Considerations

Waste treatment methods

Must be sent to a suitable incineration plant, observing local regulations.

Contaminated packaging:

Contaminated packaging should be emptied as far as possible and disposed of in the same manner as the substance/product.

14. Transport Information

Land transport

ADR

UN number or ID number: UN3077

UN proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.
(PROHEXADIONE-CALCIUM)

Transport hazard class(es): 9, EHS

Packing group: III

Environmental hazards: yes

Special precautions for user: None known

RID

UN number or ID number: UN3077

UN proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.
(PROHEXADIONE-CALCIUM)

Transport hazard class(es): 9, EHS

Packing group: III

Environmental hazards: yes

Special precautions for user: None known

Inland waterway transport

ADN

UN number or ID number: UN3077

UN proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.
(PROHEXADIONE-CALCIUM)

Transport hazard class(es): 9, EHS

Packing group: III

Environmental hazards: yes

Special precautions for user: None known

Transport in inland waterway vessel

Not evaluated

Sea transport

IMDG

UN number or ID number: UN 3077

UN proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.
(PROHEXADIONE-CALCIUM)

Transport hazard class(es): 9, EHS

Packing group: III

Environmental hazards: yes

Marine pollutant: YES

Special precautions for user: EmS: F-A; S-F

Air transport

IATA/ICAO

UN number or ID number: UN 3077

UN proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.
(PROHEXADIONE-CALCIUM)

Transport hazard class(es): 9, EHS

Packing group: III

Environmental hazards: yes

Special precautions for user: None known

Maritime transport in bulk according to IMO instruments

Maritime transport in bulk is not intended

Further information

Product may be shipped as non-hazardous in suitable packages containing a net quantity of 5 kg or less under the provisions of various regulatory agencies: ADR, RID, ADN: Special Provision 375; IMDG: 2:10.2.7; IATA: A197; TDS: Special Provision 99(2); 49CFR: §171.4 (c) (2) and also the Special Provision 375 in Appendix B which is regulated in China "Regulations Concerning Road Transportation of Dangerous Goods Part 3: Index of dangerous goods name and transportation requirements" (JT/T 617.3)

15. Regulatory Information

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

To avoid risks to man and the environment, comply with the instructions for use.

16. Other Information

Full text of classifications, hazard symbols and hazard statements, if mentioned in section 2 or 3:

Aquatic Acute Hazardous to the aquatic environment - acute

Aquatic Chronic Hazardous to the aquatic environment - chronic

Eye Dam./Irrit. Serious eye damage/eye irritation

H411 Toxic to aquatic life with long lasting effects.

H400 Very toxic to aquatic life.

H320 Causes eye irritation.

The data contained in this safety data sheet are based on our current knowledge and experience and describe the product only with regard to safety requirements. This safety data sheet is neither a Certificate of Analysis (CoA) nor technical data sheet and shall not be mistaken for a specification agreement. Identified uses in this safety data sheet do neither represent an agreement on the corresponding contractual quality of the substance/mixture nor a contractually designated use. It is the responsibility of the recipient of the product to ensure any proprietary rights and existing laws and legislation are observed.