3. CLASSIFICATION AND LABELLING

3.1. Classification and labelling according to CLP / GHS

**Name: Magnesium nitrate (anhydrous)**

Implementation: EU

State/form of the substance: solid

Related composition:

Name: Magnesium nitrate

**Classification**

The substance is classified as follows:

**Table 16. Classification and labelling according to CLP / GHS for physicochemical properties**

| **Hazard class** | **Hazard category** | **Hazard statement** | **Reason for no classification** | **CSR section\*)** |
| --- | --- | --- | --- | --- |
| Explosives: |   |   | conclusive but not sufficient for classification | 6.1 |
| Desensitised explosives: |  |  | data lacking |  |
| Flammable gases and chemically unstable gases: |   |   | conclusive but not sufficient for classification | 6.2 |
| Flammable aerosols: |   |   | conclusive but not sufficient for classification | 6.2 |
| Oxidising gases: |   |   | conclusive but not sufficient for classification | 6.3 |
| Gases under pressure: |   |   | conclusive but not sufficient for classification |  |
| Flammable liquids: |   |   | conclusive but not sufficient for classification | 6.2 |
| Flammable solids: |   |   | conclusive but not sufficient for classification | 6.2 |
| Self-reactive substances and mixtures: |   |   | conclusive but not sufficient for classification |  |
| Pyrophoric liquids: |   |   | conclusive but not sufficient for classification | 6.2 |
| Pyrophoric solids: |   |   | conclusive but not sufficient for classification | 6.2 |
| Self-heating substances and mixtures: |   |   | conclusive but not sufficient for classification |  |
| Substances and mixtures which in contact with water emit flammable gases: |   |   | conclusive but not sufficient for classification | 6.2 |
| Oxidising liquids: |   |   | conclusive but not sufficient for classification | 6.3 |
| Oxidising solids: | Oxid. Solid 3 | H272: May intensify fire; oxidiser. |   | 6.3 |
| Organic peroxides: |   |   | conclusive but not sufficient for classification |  |
| Corrosive to metals: |   |   | conclusive but not sufficient for classification |  |

\*) Justification for (non) classification can be found in the CSR section indicated

**Table 17. Classification and labelling according to CLP / GHS for health hazards**

| **Hazard class** | **Hazard category** | **Hazard statement** | **Reason for no classification** | **CSR section\*)** |
| --- | --- | --- | --- | --- |
| Acute toxicity - oral: |   |   | conclusive but not sufficient for classification | 5.2.3 |
| Acute toxicity - dermal: |   |   | conclusive but not sufficient for classification | 5.2.3 |
| Acute toxicity - inhalation: |   |   | conclusive but not sufficient for classification | 5.2.3 |
| Skin corrosion / irritation: |   |   | conclusive but not sufficient for classification | 5.3.4 and 5.4.3 |
| Serious damage / eye irritation: |   |   | conclusive but not sufficient for classification | 5.3.4 |
| Respiratory sensitisation: |   |   | data lacking | 5.5.3 |
| Skin sensitation: |   |   | conclusive but not sufficient for classification | 5.5.3 |
| Aspiration hazard: |   |   | data lacking | 5.2.3 |
| Reproductive Toxicity: |   |   | conclusive but not sufficient for classification | 5.9.3 |
| Reproductive Toxicity: Effects on or via lactation: |   |   | data lacking | 5.9.3 |
| Germ cell mutagenicity: |   |   | conclusive but not sufficient for classification | 5.7.3 |
| Carcinogenicity: |   |   | conclusive but not sufficient for classification | 5.8.3 |
| Specific target organ toxicity - single exposure: |   |   | conclusive but not sufficient for classification | 5.2.3 and 5.3.4 |
| Specific target organ toxicity - repeated exposure: |   |   | conclusive but not sufficient for classification | 5.6.3 |

\*) Justification for (non) classification can be found in the CSR section indicated

**Table 18. Classification and labelling according to CLP / GHS for environmental hazards**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Hazard class** | **Hazard category** | **Hazard statement** | **Reason for no classification** | **CSR section\*)** |
| Hazards to the aquatic environment (acute/short-term): |   |   | conclusive but not sufficient for classification | 7.6 |
| Hazards to the aquatic environment (chronic/long-term): |   |   | conclusive but not sufficient for classification | 7.6 |
| Hazardous to the ozone layer: |   |   | conclusive but not sufficient for classification | 7.6 |

\*) Justification for (non) classification can be found in the CSR section indicated

**Labelling**

Signal word: Warning

Hazard pictogram:

GHS03: flame over circle



Hazard statements:

H272: May intensify fire; oxidiser.

Precautionary statements:

P210: Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

P220: Keep/Store away from clothing/... /combustible materials.

P370+P378: In case of fire: Use… to extinguish.

P280: Wear protective gloves/protective clothing/eye protection/face protection.

P501: Dispose of contents/container to... in accordance with local/regional/national /international regulations (to be specified). Manufacturer/supplier or the competent authority to specify whether disposal requirements apply to contents, container or both.

**Name: Magnesium nitrate hexahydrate**

Implementation: EU

State/form of the substance: solid

Related composition:

Name: Magnesium nitrate hexahydrate

**Classification**

The substance is not classified.

**Table 19. Classification and labelling according to CLP / GHS for physicochemical properties**

| **Hazard class** | **Hazard category** | **Hazard statement** | **Reason for no classification** | **CSR section\*)** |
| --- | --- | --- | --- | --- |
| Explosives: |   |   | conclusive but not sufficient for classification | 6.1 |
| Desensitised explosives: |  |  | data lacking |  |
| Flammable gases and chemically unstable gases: |   |   | conclusive but not sufficient for classification | 6.2 |
| Flammable aerosols: |   |   | conclusive but not sufficient for classification | 6.2 |
| Oxidising gases: |   |   | conclusive but not sufficient for classification | 6.3 |
| Gases under pressure: |   |   | conclusive but not sufficient for classification |  |
| Flammable liquids: |   |   | conclusive but not sufficient for classification | 6.2 |
| Flammable solids: |   |   | conclusive but not sufficient for classification | 6.2 |
| Self-reactive substances and mixtures: |   |   | conclusive but not sufficient for classification |  |
| Pyrophoric liquids: |   |   | conclusive but not sufficient for classification | 6.2 |
| Pyrophoric solids: |   |   | conclusive but not sufficient for classification | 6.2 |
| Self-heating substances and mixtures: |   |   | conclusive but not sufficient for classification |  |
| Substances and mixtures which in contact with water emit flammable gases: |   |   | conclusive but not sufficient for classification | 6.2 |
| Oxidising liquids: |   |   | conclusive but not sufficient for classification | 6.3 |
| Oxidising solids: |   |   | conclusive but not sufficient for classification | 6.3 |
| Organic peroxides: |   |   | conclusive but not sufficient for classification |  |
| Corrosive to metals: |   |   | conclusive but not sufficient for classification |  |

\*) Justification for (non) classification can be found in the CSR section indicated

**Table 20. Classification and labelling according to CLP / GHS for health hazards**

| **Hazard class** | **Hazard category** | **Hazard statement** | **Reason for no classification** | **CSR section\*)** |
| --- | --- | --- | --- | --- |
| Acute toxicity - oral: |   |   | conclusive but not sufficient for classification | 5.2.3 |
| Acute toxicity - dermal: |   |   | conclusive but not sufficient for classification | 5.2.3 |
| Acute toxicity - inhalation: |   |   | conclusive but not sufficient for classification | 5.2.3 |
| Skin corrosion / irritation: |   |   | conclusive but not sufficient for classification | 5.3.4 and 5.4.3 |
| Serious damage / eye irritation: |   |   | conclusive but not sufficient for classification | 5.3.4 |
| Respiratory sensitisation: |   |   | data lacking | 5.5.3 |
| Skin sensitation: |   |   | conclusive but not sufficient for classification | 5.5.3 |
| Aspiration hazard: |   |   | data lacking | 5.2.3 |
| Reproductive Toxicity: |   |   | conclusive but not sufficient for classification | 5.9.3 |
| Reproductive Toxicity: Effects on or via lactation: |   |   | data lacking | 5.9.3 |
| Germ cell mutagenicity: |   |   | conclusive but not sufficient for classification | 5.7.3 |
| Carcinogenicity: |   |   | conclusive but not sufficient for classification | 5.8.3 |
| Specific target organ toxicity - single exposure: |   |   | conclusive but not sufficient for classification | 5.2.3 and 5.3.4 |
| Specific target organ toxicity - repeated exposure: |   |   | conclusive but not sufficient for classification | 5.6.3 |

\*) Justification for (non) classification can be found in the CSR section indicated

**Table 21. Classification and labelling according to CLP / GHS for environmental hazards**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Hazard class** | **Hazard category** | **Hazard statement** | **Reason for no classification** | **CSR section\*)** |
| Hazards to the aquatic environment (acute/short-term): |   |   | data lacking | 7.6 |
| Hazards to the aquatic environment (chronic/long-term): |   |   | data lacking | 7.6 |
| Hazardous to the ozone layer: |   |   | data lacking | 7.6 |

\*) Justification for (non) classification can be found in the CSR section indicated

**Labelling**

Signal word: No signal word

**Name: Aqueous magnesium nitrate solution (with <5% calcium nitrate and <5% nitric acid)**

Implementation: EU

State/form of the substance: liquid

Related composition:

Name: Aqueous magnesium nitrate solution (with <5% calcium nitrate and <5% nitric acid)

Remarks:

- Classification is determined based on calculations, as there's no experimental data available for (similar) mixtures. See other CSR sections for details how the classification is derived.

- Classification of nitric acid:

-- Self-classification:

Met. Corr. Cat. 1

-- Harmonized classification (Index No. 007-030-00-3):

Oxid. Liquid Cat. 3; H272: C >= 65%

Acute Tox. Cat. 3; H331 (ATE=2.65 mg/L)

Skin Corr. Cat. 1A; H314: C >=20%

Skin Corr. Cat. 1B; H314: 5% <= C < 20%

**Classification**

The substance is classified as follows:

**Table 22. Classification and labelling according to CLP / GHS for physicochemical properties**

| **Hazard class** | **Hazard category** | **Hazard statement** | **Reason for no classification** | **CSR section\*)** |
| --- | --- | --- | --- | --- |
| Explosives: |   |   | conclusive but not sufficient for classification | 6.1 |
| Desensitised explosives  |  |  | data lacking |  |
| Flammable gases and chemically unstable gases: |   |   | conclusive but not sufficient for classification | 6.2 |
| Aerosols: |   |   | conclusive but not sufficient for classification | 6.2 |
| Oxidising gases: |   |   | conclusive but not sufficient for classification | 6.3 |
| Gases under pressure: |   |   | conclusive but not sufficient for classification |  |
| Flammable liquids: |   |   | conclusive but not sufficient for classification | 6.2 |
| Flammable solids: |   |   | conclusive but not sufficient for classification | 6.2 |
| Self-reactive substances and mixtures: |   |   | conclusive but not sufficient for classification |  |
| Pyrophoric liquids: |   |   | conclusive but not sufficient for classification | 6.2 |
| Pyrophoric solids: |   |   | conclusive but not sufficient for classification | 6.2 |
| Self-heating substances and mixtures: |   |   | conclusive but not sufficient for classification |  |
| Substances and mixtures which in contact with water emit flammable gases: |   |   | conclusive but not sufficient for classification | 6.2 |
| Oxidising liquids: |   |   | conclusive but not sufficient for classification | 6.3 |
| Oxidising solids: |   |   | conclusive but not sufficient for classification | 6.3 |
| Organic peroxides: |   |   | conclusive but not sufficient for classification |  |
| Corrosive to metals: |   |   | conclusive but not sufficient for classification |  |

\*) Justification for (non) classification can be found in the CSR section indicated

**Table 23. Classification and labelling according to CLP / GHS for health hazards**

| **Hazard class** | **Hazard category** | **Hazard statement** | **Reason for no classification** | **CSR section\*)** |
| --- | --- | --- | --- | --- |
| Acute toxicity - oral: |   |   | conclusive but not sufficient for classification | 5.2.3 |
| Acute toxicity - dermal: |   |   | conclusive but not sufficient for classification | 5.2.3 |
| Acute toxicity - inhalation: |  |  | conclusive but not sufficient for classification | 5.2.3 |
| Skin corrosion / irritation: | When the product has a pH ≤ 2: Skin Corrosive Cat. 1When the product has a pH > 2: No Hazard category | When the product has a pH ≤ 2: H314: Causes severe skin burns and eye damageWhen the product has a pH > 2: No hazard Statement |  | 5.3.4 and 5.4.3 |
| Serious damage / eye irritation: | When the product contains ≥3% calcium nitrate and/or pH is ≤ 2:Eye Damage 1When the product contains ≥1 - <3% calcium nitrate and pH is > 2:Eye Irritant 2When the product contains <1% calcium nitrate and pH is > 2:No Hazard category | When the product contains ≥3% calcium nitrate and/or pH is ≤ 2:H318: Causes serious eye damage.When the product contains ≥1 - <3% calcium nitrate and pH is > 2:H319: Causes serious eye irritationWhen the product contains <1% calcium nitrate and pH is > 2:No Hazard statement |   | 5.3.4 |
| Respiratory sensitisation: |   |   | data lacking | 5.5.3 |
| Skin sensitation: |   |   | conclusive but not sufficient for classification | 5.5.3 |
| Aspiration hazard: |   |   | data lacking | 5.2.3 |
| Reproductive Toxicity: |   |   | conclusive but not sufficient for classification | 5.9.3 |
| Reproductive Toxicity: Effects on or via lactation: |   |   | data lacking | 5.9.3 |
| Germ cell mutagenicity: |   |   | conclusive but not sufficient for classification | 5.7.3 |
| Carcinogenicity: |   |   | conclusive but not sufficient for classification | 5.8.3 |
| Specific target organ toxicity - single exposure: |   |   | conclusive but not sufficient for classification | 5.2.3 and 5.3.4 |
| Specific target organ toxicity - repeated exposure: |   |   | conclusive but not sufficient for classification | 5.6.3 |

\*) Justification for (non) classification can be found in the CSR section indicated

**Table 24. Classification and labelling according to CLP / GHS for environmental hazards**

| **Hazard class** | **Hazard category** | **Hazard statement** | **Reason for no classification** | **CSR section\*)** |
| --- | --- | --- | --- | --- |
| Hazards to the aquatic environment (acute/short-term): |   |   | conclusive but not sufficient for classification | 7.6 |
| Hazards to the aquatic environment (chronic/long-term): |   |   | conclusive but not sufficient for classification | 7.6 |
| Hazardous to the ozone layer: |   |   | conclusive but not sufficient for classification | 7.6 |

\*) Justification for (non) classification can be found in the CSR section indicated

**Labelling (summary)**

- When the product has a pH <= 2: H314: Causes severe skin burns and eye damage

- When the product contains ≥3% calcium nitrate and pH is >2: H318: Causes serious eye damage.

- When the product contains ≥1 - <3% calcium nitrate and pH is > 2: H319: Causes serious eye irritation

- When the product contains <1% calcium nitrate and pH is > 2: not classified

**Labelling of Aqueous magnesium nitrate solution (with <5% calcium nitrate and <5% nitric acid) (assuming pH >2)**

Signal word: Danger

Hazard pictogram:

GHS05: corrosion



Hazard statements:

H318: Causes serious eye damage.

Precautionary statements:

P280: Wear protective gloves/protective clothing/eye protection/face protection.

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

P310: Immediately call a POISON CENTER/doctor/…