

SAFETY DATA SHEET

PRODUCT NAME ALLGANIC NITROGEN PLUS

Product Code: 053a_01.1_USA

Date of issue: January 2019



1. PRODUCT AND COMPANY IDENTIFICATION

Product identifier Allganic Nitrogen Plus
Allganic Nitrogen Plus 15-0-2

Recommended uses:

Only for professional use in the formulation of fertilizer preparations and end-use as fertilizer

Supplier SQM North America
2727 Paces Ferry Rd, Building Two, Suite 1425
Atlanta, GA 30339

Company Telephone/Fax (770) 916 9400 / (770) 916 9404

Emergency Telephone Number (800) 424 9300 (CHEMTREC)

2. HAZARDS IDENTIFICATION

Classification of the substance or mixture

Classification of the chemical in accordance with 29CFR §1910.1200

| | |
|--------------------------------------|------------------------|
| Hazard classes and Hazard categories | Hazard statements |
| Midly irritating to eyes, cat. 2B | Causes eye irritation. |

Label elements

Hazard pictograms Not applicable

Signal word WARNING

Hazard Statements Causes eye irritation.

Precautionary Statements

Wash hands thoroughly after handling.

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

If eye irritation persists: Get medical advice/attention.

Other hazards

None

3. COMPOSITION/INFORMATION ON INGREDIENTS

This product has to be considered as a mixture/preparation

| Ingredients classified as health hazards | CAS No | EC No | Concentration |
|--|-----------|-----------|----------------|
| Sodium nitrate | 7631-99-4 | 231-554-3 | > 90 % |
| Perchlorate (ClO ₄ ⁻) | | | < 0.01 % |
| Iodate (IO ₃ ⁻) | | | 0.005 - 0.01 % |

4. FIRST AID MEASURES

Description of first aid measures

General information

In case of persisting adverse effects consult a physician.

Never give anything by mouth to an unconscious person or a person with cramps.

In case of inhalation

Remove to fresh air and keep at rest in a position comfortable for breathing.

Get medical attention for any breathing difficulty.

In case of skin contact

Wash with plenty of soap and water. If skin irritation occurs: Get medical advice/attention.

In case of eye contact

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

If eye irritation persists: Get medical advice/attention.

In case of ingestion

Rinse mouth immediately and drink plenty of water.

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Most important symptoms and effects, both acute and delayed

The following symptoms may occur:

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|-------------------------|---|
| In case of inhalation | Irritation to respiratory tract Delayed lung effects after short term exposure to thermal degradation products |
| In case of skin contact | May cause redness or irritation |
| In case of eye contact | Causes serious eye irritation. |
| In case of ingestion | Ingestion of large amounts may cause: Gastrointestinal disturbances |

Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

5. FIRE FIGHTING MEASURES

Extinguishing media

Suitable extinguishing media: Use any suitable mean for extinguishing surrounding fire. Spray water for small fires. For large fires flood with abundant water.

Unsuitable material: None, but attention should be paid to compatibility with chemicals surrounding.

Specific hazards arising from the chemical

This product may enhance an existing fire.

Thermal decomposition can lead to the escape of toxic/corrosive gases and vapours.

Thermal decomposition products: Nitrous oxides (NOx), sodium nitrite and sodium oxide.

Protective equipment and precautions for firefighters

Keep upwind of fire. Wear full fire fighting turn-out gear (full Bunker gear) and respiratory protection (self contained breathing apparatus (SCBA)).

6. ACCIDENTAL RELEASE MEASURES

Personal precautions

Provide adequate ventilation. Wear personal protection equipment (Section 8).

Environmental precautions

Do not allow to enter into surface water or drains. Ensure waste is collected and contained.

Methods and material for containment and cleaning up

Take up mechanically, placing in appropriate containers for disposal or recovery.

Unsuitable material for containment/taking up: Do not absorb in saw-dust or other combustible absorbents.

Other information

None

7. HANDLING AND STORAGE

Precautions for Safe Handling

Avoid generation of dust. Provide adequate ventilation. Wear personal protective equipment. Wash hands thoroughly after handling. Do not eat, drink or smoke when using this product. Keep away from flammable, combustible, strong acids and reducing substances.

Conditions for safe storage, including any incompatibilities

Keep/store only in original container. Store in a well-ventilated place. Keep container tightly closed.

Do not store together with: Flammable substance, reducing agents, strong acids, empty wood pallets.

Do not store of more than 3 pallets/big bags high.

Perchlorate containing product - Special handling may apply. See www.dtsc.ca.gov/hazardouswaste/perchlorate and Section 15 for more information regarding California State regulations.

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8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Guidelines

Occupational exposure limits

Sodium nitrate:

| | | | |
|-------|--------------|-----------------|------------------------|
| OSHA | PEL | Not Established | |
| | STEL/ceiling | Not Established | |
| ACGIH | TWA | Not Established | (2012 TLVs® and BEIs®) |
| | STEL/ceiling | Not Established | (2012 TLVs® and BEIs®) |

Engineering controls

Use exhaust ventilation to keep airborne concentrations below exposure limits.

Personal Protective Equipment

| | |
|------------------------|---|
| Eye/face protection | Chemical goggles required all the time. |
| Skin Protection | Nitrile rubber gloves, over 0.11 mm thickness, > 480 min breakthrough time, recommended. |
| Respiratory Protection | Wear respiratory protection, where airborne concentrations are expected to exceed exposure limits |

General Hygiene Considerations

Avoid contact with eyes and skin. Wash hands thoroughly after handling.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

| | |
|--|--|
| Appearance | Solid, prilled |
| Colour | White |
| Odour | Odourless |
| Odour Threshold | No applicable |
| pH value | 8-10 (1% aqueous solution) |
| Melting point / freezing range | ~ 586°F / 308°C |
| Boiling temperature / boiling range | Not applicable |
| Flash point | Not applicable |
| Vapourisation rate / Evaporation rate | No data available |
| Flammable solids | Not flammable |
| Explosion limits (LEL, UEL) | Not applicable |
| Vapour pressure | Considered negligible (based on melting point) |
| Vapour density | Not applicable |
| Density | 1.25 ton (metric) / m ³ |
| Solubility | 88 g/ 100 cm ³ at 20 °C/68 °F (water) |
| Partition coefficient n-octanol /water | Not applicable |
| Auto Ignition temperature (AIT) | Not applicable |
| Decomposition temperature | > 550 °C/1022 °F |
| Viscosity | Not applicable |
| Explosive properties | Not explosive |
| Oxidising properties | Not oxidizer |

Other information

None

10. STABILITY AND REACTIVITY

Reactivity

No hazardous reaction when handled and stored according to provisions.

Chemical stability

Stable under normal storage and temperature conditions.

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Possibility of hazardous reactions

None identified

Conditions to avoid

Keep away from flammable, combustible, strong acids and reducing materials. Keep away from empty pallets. Avoid grinding.

Incompatible materials

Flammable, combustible, strong acids and reducing substances under specific conditions. These incompatible materials shall not include approved packaging materials, pallets, or other dunnage (NFPA 400/2016, Hazardous Materials Code, item 15.3.5.2.1.1).

Hazardous decomposition products

Thermal decomposition products: Nitrous oxides (NO_x), sodium nitrite and sodium oxide.

11. TOXICOLOGICAL INFORMATION

The following information mostly refers to the major component of the product.

Likely routes of exposure (inhalation, ingestion, skin and eye contact)

Eye contact, skin contact and inhalation. Exposure by ingestion is not expected to occur through normal industrial use.

Symptoms related to the physical, chemical and toxicological characteristics

May be irritant to the respiratory tract. Causes serious eye irritation. May cause redness or irritation to the skin. Ingestion of large amounts may cause gastrointestinal disturbances. May cause delayed lung effects after short term exposure to thermal degradation products.

Information on toxicological effects from short and long term exposure

There is no data for the mixture itself.

Acute toxicity

| | LD50: | Method: |
|---|--|----------------------|
| Acute oral toxicity | | |
| Acute Toxicity Estimate for the mixture | > 2000 mg/kg bw | (additivity formula) |
| Acute dermal toxicity | LD50: | |
| Acute Toxicity Estimate for the mixture | >2000 mg/kg pc | (additivity formula) |
| Acute inhalation toxicity | LC50: | |
| Acute Toxicity Estimate for the mixture | Does not contain acutely toxic ingredients/impurities. | |

Assessment / classification: Based on available data for the ingredients of the mixture, the classification criteria are not met.

Irritant and corrosive effects

| | Result | Method: |
|------------------------------|--|--|
| Irritation to the skin | | |
| Main ingredients | non-irritating to skin | Equivalent/similar to OECD guideline 404 |
| Assessment / classification: | Based on available data for the ingredients of the mixture, the classification criteria are not met. | |

| | Result | Species: | Method: |
|------------------------------|--|-----------------------|--------------------|
| Irritation to eyes | | | |
| Sodium nitrate | non-irritant. | <i>In vitro</i> study | OECD Guideline 437 |
| Sodium nitrate | Irritant | Rabbit. | OECD Guideline 405 |
| Assessment / classification: | Based on available data for ingredients of the mixture, this product is classified and labelled as Midly irritating to eyes, category 2B: Causes eye irritation , in accordance with Appendix A to 29CFR section 1910.1200. | | |

Respiratory or skin sensitisation

| | Result | Method |
|------------------------------|--|--------------------|
| Skin sensitization | | |
| Main ingredients | not sensitising. | OECD Guideline 429 |
| Respiratory sensitisation | No information available. | |
| Assessment / classification: | Based on available data for the ingredients of the mixture, the classification criteria are not met. | |

Genetic effects

The product does not contain ingredients classified as germ cell mutagens. The following data refers to sodium nitrate.

| <i>In-vitro</i> genotoxicity | Method | Result |
|-------------------------------|-----------------------------------|-----------------------------------|
| Gene-mutations microorganisms | Equivalent or similar to OECD 471 | negative (literature information) |

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| | | | |
|---|--|-----------|--------------------------|
| Chromosome aberrations mammalian cells <i>In-vivo genotoxicity</i> | OECD Guideline 473/EU B.10 | negative | |
| <i>In-vivo</i> unscheduled DNA Synthesis (UDS) | According to Alavantic, D. (1988) | negative | (literature information) |
| <i>In-vivo</i> micronucleus assay | | equivocal | (literature information) |
| <i>In-vivo</i> chromosome aberrations | | equivocal | (literature information) |
| Assessment / classification: | Based on available data for the ingredients of the mixture, the classification criteria are not met. | | |

Reproductive toxicity

| | | | |
|---|--|--|--|
| Adverse effects on sexual function and fertility/developmental toxicity | OECD guideline 422. | | |
| Main ingredients | No adverse effects on fertility/development (NOAEL >1500 mg/kg bw). | | |
| Assessment / classification: | Based on available data for the ingredients of the mixture, the classification criteria are not met. | | |

Specific target organ toxicity (single exposure)

| | | | |
|--|--|--|--|
| The product does not contain relevant ingredients classified as Target Organ Toxicant. | | | |
| Practical experience / human evidence | | | |
| No relevant effect have been observed after single exposure to the relevant ingredients. | | | |
| Assessment / classification: | Based on available data for the ingredients of the mixture, the classification criteria are not met. | | |

Specific target organ toxicity (repeated exposure)

| | | | |
|--|--|-----------------------------------|-----------|
| The product does not contain relevant ingredients classified as Target Organ Toxicant. | | | |
| Main ingredients | Organs affected: | Effects | Guideline |
| | None | No effects (NOAEL >1500 mg/kg bw) | OECD 422 |
| Assessment / classification: | Based on available data for the ingredients of the mixture, the classification criteria are not met. | | |

Aspiration hazard

| | |
|--|--|
| Physicochemical data and toxicological information does not indicate an aspiration hazard. | |
| Assessment / classification: | Based on available data, the classification criteria are not met |

Carcinogenicity

| | |
|--|---|
| International Agency for Research on Cancer (IARC) | No component of this product present at levels ≥0.1% is identified as probable, possible or confirmed human carcinogen by IARC. |
| National Toxicology Program (NTP) | No component of this product present at levels ≥0.1% is identified as known or anticipated carcinogen by NTP. |
| 29 CFR part 1910, subpart Z | No component of this product present at levels ≥0.1% is identified as carcinogen or potential carcinogen by OSHA. |
| California Proposition 65 | No component of this product present at levels ≥0.1% is identified as carcinogen by California Prop.65. |
| WHO (2003) Nitrate in drinking water | No association between nitrate exposure in humans and the risk of cancer |
| Assessment / classification: | Based on available data for the ingredients of the mixture, the classification criteria are not met. |

Other Toxicological Information

This product contains trace amounts of naturally-occurring perchlorate and iodate. Like other goitrogenic substances, perchlorate may affect iodine uptake by thyroid under specific conditions.

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12. ECOLOGICAL INFORMATION

There is no data for the mixture itself. The following information mostly refers to the major component of the product.

Ecotoxicity

Aquatic Toxicity

Toxicity estimate for the mixture (summation method)

| | | |
|--------------|------------|--|
| 96-h L(E)C50 | >100 mg/L | Fish |
| 24-h E(E)C50 | >100 mg/L | <i>Daphnia magna</i> (fresh water flea). |
| 72-h E(E)C50 | > 100 mg/L | Algae |

Assessment / classification Based on available data for the ingredients of the mixture, the classification criteria are not met.

Persistence and degradability

The product contains mainly inorganic nitrate salts. In aqueous compartments, these salts will dissociate into sodium and nitrate ions. Other minor compounds are also expected to be dissociated in their corresponding ions. Sodium ions are not subject to further degradation. Under anoxic conditions, nitrate is subjected to denitrification and is ultimately converted into molecular nitrogen as part of the nitrogen cycle. Nitrate and other oxyanions impurities are likely to be found in oxic compartments.

Bioaccumulative potential

Low potential for bioaccumulation based on physicochemical properties of main components.

Mobility in soil

Nitrate has a low potential for adsorption. Portion not taken up by plants, can leach to groundwater. Sodium can participate in ion exchange processes.

Other adverse effects

Excess nitrate leaching may enrich waters leading to eutrophication.

13. DISPOSAL CONSIDERATIONS

Disposal should be in accordance with applicable federal and state laws.

It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste identification and disposal method in compliance with applicable regulations.

Sodium nitrate waste exhibiting the characteristic of ignitability has the EPA Hazardous Waste Number of D001 according to the Resource Conservation and Recovery Act (RCRA) 40 CFR 261.

Perchlorate containing product - Special handling may apply. See www.dtsc.ca.gov/hazardouswaste/perchlorate and Section 15 for more information regarding California State regulations.

14. TRANSPORTATION INFORMATION

US DOT (49CFR part 172)

| | |
|-------------------------|--------------------|
| UN-No. | Non dangerous good |
| UN Proper Shipping Name | Not applicable |
| Hazard class | Not applicable |
| Packing group | Not applicable |
| Hazard label(s) | Not applicable |
| Special marking | No |
| Special Provision | No |

International Maritime Organization (IMDG Code)

| | |
|-------------------------|--------------------|
| UN-No. | Non dangerous good |
| UN Proper Shipping Name | Not applicable |
| Hazard class | Not applicable |
| Packing group | Not applicable |
| Marine pollutant | No |
| Hazard label(s) | Not applicable |
| Special marking | No |
| Special Provision | No |

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International Civil Aviation Organization (ICAO) and International Air Transport Association (IATA)

| | |
|-------------------------|--------------------|
| UN-No. | Non dangerous good |
| UN Proper Shipping Name | Not applicable |
| Hazard class | Not applicable |
| Packing group | Not applicable |
| Hazard label | Not applicable |
| Special marking | No |

Special handling procedure

None

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable

Other special precautions

None

15. REGULATORY INFORMATION

US Federal

SARA Title III Rules

Section 311/312 Hazard Classes

| | |
|-----------------------|----------------|
| Acute Health Hazard | Yes (Irritant) |
| Chronic Health Hazard | No |
| Fire Hazard | No |
| Release of Pressure | No |
| Reactive Hazard | No |

Section 313 Toxic Chemicals

N511 Nitrate compounds (water dissociable; reportable only when in aqueous solution)

Section 302 Extremely Hazardous Substances (EHS)/CERCLA Hazardous Substances

Sodium nitrate is not listed

DHS - Chemical of Interest (Appendix A to 6CFR Part 27)

Sodium nitrate is listed (ACG)

NFPA 704/2017: National Fire Protection Association

| | |
|-------------|------|
| Health | 1 |
| Fire | 0 |
| Instability | 0 |
| Special | None |

NFPA 400/2016: Hazardous Materials Code

Oxidizer Class 1 (Inorganics Nitrates)

US State Regulations

California Proposition 65

None ingredient is listed.

California Code of Regulations Title 22 (Health & Safety Code), Chapter 33

See <http://www.dtsc.ca.gov/hazardouswaste/perchlorate/>

Canada

WHMIS 2015 Classification:

Midly irritating to eyes, cat. 2B

Causes eye irritation.

This product has been classified according to the hazard criteria of the 2015 Hazardous Products Regulations (HPR) and the SDS contains all the information required by the HPR.

European Union

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

| | |
|--------------------------------------|-------------------|
| Hazard classes and Hazard categories | Hazard statements |
| Eye Irrit. 2 | H319 |

Chemical Inventories

United States TSCA

All ingredients are listed

Canada DSL

All ingredients are listed

México (INSQ)

All ingredients are listed

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| | |
|-------------------------|----------------------------|
| European Union (EINECS) | All ingredients are listed |
| China (IECS) | All ingredients are listed |
| Japan (METI) | All ingredients are listed |
| Korea (KECI) | All ingredients are listed |

16. OTHER INFORMATION

This SDS complies with 29 CFR part 1910 subpart Z (2012), Canada WHMIS (2015) and ANSI Standard Z400.1-2004

Data source REACH Registration Dossiers for major components

Prepared by Regulatory Affairs Department, SQM

E-mail product_safety@sqm.com
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Date of issue: January 2019

Supersedes

April 2016

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Indication of changes

Version 1.1 (January 2019) All sections were revised and minor changes were applied.

Storage conditions added (section 7)

DNEL values removed (section 8)

Physical - chemical properties updated (section 9)

Information on incompatible materials and conditions to avoid were updated (section 10)

NFPA 704 standard updated (section 15)

Version 1 (April 2016) New document.