SAFETY DATA SHEET

PRODUCT NAME: ALLGANIC NITROGEN PLUS

Product Code: 053_A/01-US
Date of issue: March 2016

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
Midly irritating to eyes, cat. 2B

Hazard statements
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.

In case of ingestion
Rinse mouth immediately and drink plenty of water.

Emergency Telephone Number
(800) 424 9300 (CHEMTREC)

3. COMPOSITION/INFORMATION ON INGREDIENTS

This product has to be considered as a mixture/preparation

Ingredients classified as health hazards

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>CAS No</th>
<th>EC No</th>
<th>Concentration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sodium nitrate</td>
<td>7631-99-4</td>
<td>231-554-3</td>
<td>&gt; 90 %</td>
</tr>
<tr>
<td>Perchlorate (ClO₄⁻)</td>
<td></td>
<td></td>
<td>&lt; 0.01 %</td>
</tr>
<tr>
<td>Iodate (IO₃⁻)</td>
<td></td>
<td></td>
<td>0.005 - 0.01 %</td>
</tr>
</tbody>
</table>

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:

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.

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### 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)).

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### 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

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### 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.

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

**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.

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

Exposure Guidelines

Occupational exposure limits

Sodium nitrate:

<table>
<thead>
<tr>
<th>OSHA</th>
<th>PEL</th>
<th>STEL/ceiling</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Not Established</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>ACGIH</th>
<th>TWA</th>
<th>STEL/ceiling</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Not Established</td>
<td></td>
</tr>
</tbody>
</table>

Derived No-Effect Level (DNEL) suggested by the manufacturer

<table>
<thead>
<tr>
<th>Workers (industrial/professional):</th>
</tr>
</thead>
<tbody>
<tr>
<td>DNEL Human, dermal, long term (repeated):</td>
</tr>
<tr>
<td>DNEL Human, inhalation, long term (repeated):</td>
</tr>
</tbody>
</table>

Derived No-Effect Level (DNEL) is the level of exposure to the substance above which humans should not be exposed.

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

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>Solid, prilled</td>
</tr>
<tr>
<td>Colour</td>
<td>White</td>
</tr>
<tr>
<td>Odour</td>
<td>Odourless</td>
</tr>
<tr>
<td>Odour Threshold</td>
<td>No applicable</td>
</tr>
<tr>
<td>pH value</td>
<td>8-10 (1% aqueous solution)</td>
</tr>
<tr>
<td>Melting point / freezing range</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Boiling temperature / boiling range</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Flash point</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Vapourisation rate / Evaporation rate</td>
<td>No data available</td>
</tr>
<tr>
<td>Flammable solids</td>
<td>Not flammable</td>
</tr>
<tr>
<td>Explosion limits (LEL, UEL)</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Vapour pressure</td>
<td>Considered negligible (based on melting point)</td>
</tr>
<tr>
<td>Vapour density</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Density</td>
<td>1.25 ton (metric) / m³</td>
</tr>
<tr>
<td>Solubility</td>
<td>&gt; 96 g/L at 20 °C/68 °F (water)</td>
</tr>
<tr>
<td>Partition coefficient n-octanol /water</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Auto Ignition temperature (AIT)</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Decomposition temperature</td>
<td>&gt; 550 °C/1022 °F</td>
</tr>
<tr>
<td>Viscosity</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Explosive properties</td>
<td>Not explosive</td>
</tr>
<tr>
<td>Oxidising properties</td>
<td>Not oxidizer</td>
</tr>
<tr>
<td>Other information</td>
<td>None</td>
</tr>
</tbody>
</table>
10. STABILITY AND REACTIVITY

Reactivity
No hazardous reaction when handled and stored according to provisions.

Chemical stability
Stable under normal storage and temperature conditions.

Possibility of hazardous reactions
None identified

Conditions to avoid
Keep away from flammable, combustible, strong acids and reducing materials.

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 430/2004, Code for the Storage of Liquid and Solid Oxidizers, item 4.4.3.1).

Hazardous decomposition products
Thermal decomposition products: Nitrous oxides (NO\textsubscript{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
Acute oral toxicity
LD50:
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
Irritation to the skin
Main ingredients
ingredient 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.

Irritation to eyes
Result Species: Method:
non-irritant. In vitro study OECD Guideline 437

Sodium nitrate
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
Skin sensitization
Main ingredients
Not sensitising. OECD Guideline 429
Assessment / classification:
Based on available data for the ingredients of the mixture, the classification
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Genetic effects
The product does not contain ingredients classified as germ cell mutagens. The following data refers to sodium nitrate.

In-vitro genotoxicity
Gene-mutations microorganisms
Method: Equivalent or similar to OECD 471
Result: negative (literature information)

Chromosome aberrations mammalian cells
Method: OECD Guideline 473/EU B.10
Result: negative

In-vivo genotoxicity
In-vivo unscheduled DNA Synthesis (UDS)
Result: negative (literature information)

In-vivo micronucleus assay
Method: equivocal (literature information)

In-vivo chromosome aberrations
Method: 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.

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.
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 *Daphnia magna* (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 704/2012: National Fire Protection Association
Health 1
Fire 0
Instability 0
Special None

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
European Union (EINECS) All ingredients are listed
China (IECS) All ingredients are listed
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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
spn-northamerica@sqm.com

Date of issue: March 2016

Supersedes -

The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no event shall SQM be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages, however arising, even if SQM has been advised of the possibility of such damages.

Indication of changes