



SAFETY DATA SHEET

PRODUCT NAME**BULLDOG TURF 15-0-40 PN PLUS**

Product Code:

NCT.2150040_109_02.2_USA

Date of issue:

October 2019

1. PRODUCT AND COMPANY IDENTIFICATION

Product identifier Bulldog Turf 15-0-40 PN Plus

Recommended uses:
Fertilizer end-use, preparation of fertilizers mixtures.
Dry fertilizer for mixing with water for foliar and soil applications.

Restrictions on uses:
None

Manufacturer 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 mixture**

Classification of the chemical in accordance with 29CFR §1910.1200

Hazard classes and Hazard categories

Oxidizing solid, Cat. 3

Hazard statements

May intensify fire; oxidizer

Label elements**Hazard pictograms****Signal word**

WARNING

Hazard Statements

May intensify fire; oxidizer

Precautionary Statements

Keep away from heat. Keep/Store away from clothing/flammable/reducing/combustible materials.

Take any precaution to avoid mixing with flammable / combustible / reducing materials.

Wear protective gloves / protective clothing / eye protection.

In case of fire: use any suitable mean for extinguishing surrounding fire. Spray water for small fires. For large fires flood with abundant water.

Dispose of contents/container according to local/state/federal regulations.

Other hazards

None

Classification of the relevant ingredients of the mixture in accordance with 29CFR §1910.1200

Potassium nitrate

Oxidizing solid, Cat. 3

3. COMPOSITION/INFORMATION ON INGREDIENTS

This product has to be considered as a mixture/preparation

Substance name	CAS No	EC No	Concentration
Potassium nitrate	7757-79-1	231-818-8	> 50%
Perchlorate (ClO ₄ ⁻)			< 0.01%
Iodate (IO ₃ ⁻)			< 50 ppm

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



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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 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 and drink plenty of water. Call a POISON CENTER or doctor/physician if you feel unwell.

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 May cause redness or 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

Oxidizer. Contact with combustible materials will not cause spontaneous ignition, however, this product will enhance an existing fire.

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

Thermal decomposition products: Nitrous oxides (NO_x), nitrites, phosphorus oxides, ammonia and metallic oxides.

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, strong alkalis 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.



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Do not store together with:

Flammable substance, reducing agents, strong acids, strong alkalis, 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

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

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 and protective clothes, 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. Do not eat, drink or smoke when using this product.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Appearance	Solid, crystalline powder
Colour	white to pale blue
Odour	Odourless
Odour Threshold	No applicable
pH value	No data available
Melting point / freezing range	No data available
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	No data available
Vapour density	No data available
Relative Density	No data available
Solubility	> 100 g/L at 20°C/68°F (water)
Partition coefficient n-octanol /water	Not applicable
Auto Ignition temperature (AIT)	Not applicable
Decomposition temperature	No data available



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Viscosity	Not applicable
Explosive properties	Not explosive
Oxidising properties	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.

Possibility of hazardous reactions

None identified

Conditions to avoid

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

Incompatible materials

Flammable, combustible, strong acids, strong alkalis 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), nitrites, phosphorus oxides, ammonia and metallic oxides.

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 or agricultural 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 bw	(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	Result	Method
Main ingredients	non-irritant.	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	Method
Main ingredients	Not-irritating	OECD Guideline 405
Assessment / classification:	Based on available data for the ingredients of the mixture, the classification criteria are not met.	



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Respiratory or skin sensitisation

Skin sensitization	Result	Method
Main ingredients	not sensitizing.	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.

Main ingredients	Bacterial (Ames Test) negative	Chromosomal aberrations negative	Mutation in mammalian cell: negative
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

Main ingredients	OECD guideline 422. 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.

Main ingredients	Practical experience / human evidence No relevant effect have been observed after single exposure to potassium nitrate.		
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
Assessment / classification:	None	No effects (NOAEL >1500 mg/kg bw)	OECD 422
	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 for the ingredients of the mixture, the classification criteria are not met.
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Carcinogenicity

International Agency for Research on Cancer (IARC)	No component of this product present at levels $\geq 0.1\%$ is identified as probable, possible or confirmed human carcinogen by IARC.
National Toxicology Program (NTP)	No component of this product present at levels $\geq 0.1\%$ is identified as known or anticipated carcinogen by NTP.
29 CFR part 1910, subpart Z	No component of this product present at levels $\geq 0.1\%$ is identified as carcinogen or potential carcinogen by OSHA.
California Proposition 65	No component of this product present at levels $\geq 0.1\%$ 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 and phosphate salts. In aqueous solutions, these salts dissociate into their respective ions. Phosphate ions are finally incorporated into the Phosphorus cycle. Under anoxic conditions, denitrification occurs and nitrate is ultimately converted into molecular nitrogen as part of the Nitrogen cycle.

Bioaccumulative potential

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

Mobility in soil

The components of this mixture have a low potential for adsorption. Portion not taken up by plants, can leach to groundwater.

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.

Waste containing nitrates that exhibit 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.	1486
UN Proper Shipping Name	POTASSIUM NITRATE MIXTURE
Hazard class	5.1
Packing group	III
Hazard label(s)	5.1 (oxidizer)
Special marking	No
Special Provision	A1; A29; B120; IB8; IP3; T1; TP33; W1

International Maritime Organization (IMDG Code)

UN-No.	1486
UN Proper Shipping Name	POTASSIUM NITRATE MIXTURE
Hazard class	5.1
Packing group	III
Marine pollutant	No
Hazard label(s)	5.1 (oxidizer)
Special marking	No
Special Provision	964; 967

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

UN-No.	1486
UN Proper Shipping Name	POTASSIUM NITRATE MIXTURE



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Hazard class	5.1
Packing group	III
Hazard label	5.1 (oxidizer)
Special marking	No
Special Provision	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	No
Chronic Health Hazard	No
Fire Hazard	Yes (Oxidizer)
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

None ingredient is listed.

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

Potassium nitrate is listed

NFPA 704/2017: National Fire Protection Association

Health	0
Fire	0
Reactivity	0
Special	OX

NFPA 400/2016: Hazardous Materials Code

Oxidizer Class 1 (Inorganic 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**

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.

Chemical Inventories

United States TSCA	All ingredients are listed
Canada DSL	All ingredients are listed
European Union (EINECS)	All ingredients are listed
Japan (METI)	All ingredients are listed

16. OTHER INFORMATION

This SDS complies with 29 CFR part 1910 subpart Z (2012), Hazardous Products Regulations (HPR, 2015) and ANSI Standard Z400.1-2004



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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: October 2019 **Supersedes** April 2016

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Indication of changes

- Version 2.2 (October 2019) DNEL removed (Section 8)
Incompatible materials information updated (section 10)
NFPA 704 rule updated, NFPA 400 class included (section 15)
- Version 2.1 (May 2016) All sections were revised and minor changes were made in section 4, 7, 8, 9, 16.
Precautionary Statements were amended (section 2)
Composition has been amended (section 3)
DNEL and toxicity values were adjusted referring to the mixture (section 8, 11, 12)
Conditions to avoid and incompatible materials were updated (section 10)
Regulatory information was updated (Section 15)
- Version 2 (July 2013) All Sections were reviewed and modified to comply with 29CFR part 1910 subpart Z(2012).
- Version 1 (February 2012) First version