

**PRODUCT NAME** 

PRIMERAONE 16-3-16 CAL-MAG SPECIAL

**Product Code:** 

NL.2160316TURF\_165\_02\_USA

Date of issue:

November 2019

## 1. PRODUCT AND COMPANY IDENTIFICATION

**Product identifier** 

PrimeraOne 16-3-16 Cal-Mag Special

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
Emergency Telephone Number

(770) 916 9400 / (770) 916 9404 (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

Hazard statements

Oxidizing solid, Cat. 3

May intensify fire; oxidizer

Skin irritant, Cat. 2

Causes skin irritation

Irreversible eye effects, Cat. 1

Causes serious eye damage

**Label elements** 

Hazard pictograms





Signal word

**Hazard Statements** 

DANGER

May intensify fire; oxidizer

Causes skin irritation

Causes serious eye damage

# **Precautionary Statements**

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

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

Wash hands thoroughly after handling.

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

IF ON SKIN: Wash with plenty of water. Take off contaminated clothing and wash it before reuse.

If skin irritation occurs: Get medical advice / attention.

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a poison center or doctor/physician.

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

Hydrated ammonium calcium nitrate double salt

Acute Toxicity Cat. 4 oral; Serious eye damage, Cat. 1

Ammonium nitrate

Oxidizing solid, cat. 3; Eye irritant, Cat. 2

**Urea phosphate** 

Skin Corrosive Cat. 1B



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# 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	20% - 50%
Hydrated ammonium calcium nitrate double salt	15245-12-2	239-289-5	15% - 25%
Ammonium nitrate	6484-52-2	229-347-8	30% - 55%
Urea phosphate	4861-19-2	225-464-3	< 5%
Perchlorate (ClO <sub>4</sub> <sup>-</sup> )			< 0.01%
lodate (IO <sub>3</sub> )			< 50 ppm

# 4. FIRST AID MEASURES

### **Description of first aid measures**

#### **General information**

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 water. Take off contaminated clothing and wash it before reuse.

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.

Immediately call a POISON CENTER or doctor/physician.

### 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 Ir

Irritation to respiratory tract

Delayed lung effects after short term exposure to thermal degradation products

In case of skin contact

Causes skin irritation

In case of eye contact

Causes serious eye damage

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 (NOx), 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)).



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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

## 7. HANDLING AND STORAGE

## **Precautions for Safe Handling**

Avoid generation of dust. Provide adequate ventilation. Wear personal protective equipment. Wash hands thoroughly after handling. 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. Store locked up.

Do not store together with:

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

Not Established

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

		Potassium nitrate	Ammonium nitrate
OSHA	PEL	Not Established	Not Established
	STEL/ceiling	Not Established	Not Established
ACGIH (20	12 TLVs® and BEIs®)		
	TWA	Not Established	Not Established
	STEL/ceiling	Not Established	Not Established
		Urea phosphate	Hydrated ammonium calcium nitrate
OSHA	PEL	Not Established	Not Established

Not Established

STEL/ceiling ACGIH (2012 TLVs® and BEIs®)

TWA Not Established Not Established
STEL/ceiling Not Established Not Established

## **Engineering controls**

Use exhaust ventilation to keep airborne concentrations below exposure limits.

Personal Protective Equipment

Eve/face protection Tightly sealed safety go

Eye/face protection Tightly sealed safety goggles. Face protection if direct exposure occurs.

Skin Protection Nitrile rubber gloves, over 0.11 mm thickness, > 480 min breakthrough time. Overall.

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. Have eye-wash facilities immediately available.



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# 9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

**Appearance** 

Solid, crystalline powder

Colour

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

Not applicable

Vapour density

Not applicable

**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

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, and reducing materials. Keep away from empty wood pallets.

#### 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 (NOx), 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 damage. Causes skin irritation. Ingestion of large amounts may cause gastrointestinal disturbances. May cause delayed lung effects after short term exposure to thermal degradation products.



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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:

LC50:

Acute Toxicity Estimate for the mixture

>2000 mg/kg bw

(additivity formula)

Acute inhalation toxicity

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

Assessment / classification:

Irritation to the skin

Result

Method

Potassium nitrate

non-irritant. non-irritant. Equivalent/similar to OECD guideline 404 Equivalent/similar to OECD guideline 404

Ammonium nitrate Urea phosphate

Corrosive (Cat. 1B, PKG II)

Skin irritation in vitro, OECD Guideline 435

Hydrated ammonium calcium nitrate double salt

non-irritant.

Equivalent/similar to OECD guideline 404

Based on available data for ingredients of the mixture, this product is classified and

labelled as Skin irritant, cat. 2, in accordance with Appendix A to 29CFR section

1910.1200.

Irritation to eyes

Result

Method

Potassium nitrate Ammonium nitrate

Urea phosphate

**Not-irritating** 

**OECD Guideline 405** 

Irritating (cat. 2)

**OECD Guideline 405** 

Hydrated ammonium calcium nitrate double salt

Irreversible effects (cat.1)

Skin irritation in vitro, OECD Guideline 435

Assessment / classification:

Irreversible effects (cat.1)

**OECD Guideline 405** Based on available data for ingredients of the mixture, this product is classified and

labelled as cat. 1, irreversible eye effects, in accordance with Appendix A to 29CFR

section 1910.1200.

Respiratory or skin sensitisation

Skin sensitization

Result

Main ingredients

not sensitizing. No information available.

Urea phosphate

Urea phosphate is classified as corrosive,

thus, no information on skin sensitization

is deemed necessary.

**OECD Guideline 429** 

Hydrated ammonium calcium nitrate double salt

not sensitizing.

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.

**Bacterial (Ames Test)** 

Chromosomal aberrations Mutation in mammal, cells

Main ingredients

negative

negative

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

OECD guideline 422.

Main ingredients

No adverse effects on fertility/development.

Assessment / classification:

Based on available data for the ingredients of the mixture, the classification criteria

are not met.



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# Specific target organ toxicity (single exposure)

The product does not contain relevant ingredients classified as Target Organ Toxicant after single exposure.

Practical experience / human evidence

Main ingredients

No relevant effect have been observed after single exposure to the main

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 after repeated exposure.

Organs affected:

**Effects** 

Main ingredients

None

No effects

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 potencial 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, the classification criteria is 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 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.



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# 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.

1477

**UN Proper Shipping Name** 

NITRATES, INORGANIC, N.O.S.

Hazard class
Packing group

5.1 III

Hazard label(s)

5.1 (oxidizer)

Special marking

No

**Special Provision** 

IB8; IP3; T1; TP33

International Maritime Organization (IMDG Code)

UN-No.

1477

**UN Proper Shipping Name** 

NITRATES, INORGANIC, N.O.S.

Hazard class
Packing group

5.1 III

Marine pollutant Hazard label(s) No

Special marking

5.1 (oxidizer)

Special marking
Special Provision

No 223

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

UN-No.

1477

**UN Proper Shipping Name** 

NITRATES, INORGANIC, N.O.S.

Hazard class
Packing group

5.1

r acking group

111

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

Yes (Eye damage, skin irritant)

**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)



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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 and ammonium nitrate are listed.

NFPA 704/2017: National Fire Protection Association

Health

3

Fire

0

Reactivity 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

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

Code), Chapter 33

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/NDSL

All ingredients are listed

European Union (EINECS)

All ingredients are listed

Japan (METI)

All ingredients are listed

#### 16. OTHER INFORMATION

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

**Data source** 

**REACH Registration Dossiers for major components** 

Prepared by

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Date of issue:

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Supersedes

April 2016

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## Indication of changes

Version 2

(November 2019) Hazard classification has been changed in accordance with the composition (section 2).

Product code/document code has changed.

All sections were revised and updated in accordance with the new hazard classification.

DNEL removed 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: NFPA 704 rule updated, NFPA 400 class included (section 15)

Version 1

(April 2016) New document