

# SP Bentgrass Formula 28-8-18 with UMAXX

## Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations  
Issue date: 9/24/2016 Revision date: 4/9/2025 Supersedes: 5/9/2024 Version: 2.0

### SECTION 1 Identification

#### 1.1. Product identifier

Product form : Mixture  
Product name : SP Bentgrass Formula 28-8-18 with UMAXX  
Product code : M77926

#### 1.2. Other means of identification

No additional information available

#### 1.3. Recommended use of the chemical and restrictions on use

No additional information available

#### 1.4. Supplier's details

Simplot AB Retail, Inc., DBA Simplot Turf and Horticulture  
P.O. Box 9296  
Boise, ID, 83707

#### 1.5. Emergency phone number

Emergency number : CHEMTREC 1-800-424-9300

### SECTION 2 Hazard Identification

#### 2.1. Classification of the substance or mixture

##### GHS US classification

Serious eye damage/eye irritation, Category 2B H320 Causes eye irritation.  
Full text of H statements : see section 16

#### 2.2. Label elements

##### GHS US labeling

Signal word (GHS US) : Warning  
Hazard statements (GHS US) : H320 - Causes eye irritation  
Precautionary statements (GHS US) : P264 - Wash hands, forearms and face thoroughly after handling.  
P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
P337+P313 - If eye irritation persists: Get medical advice or attention.

#### 2.3. Hazards associated with known or reasonably anticipated uses

No additional information available

#### 2.4. Hazards not otherwise classified

No additional information available

#### 2.5. Unknown acute toxicity

No additional information available

# SP Bentgrass Formula 28-8-18 with UMAXX

## Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

### SECTION 3 Composition/information on ingredients

#### 3.1. Substances

Not applicable

#### 3.2. Mixtures

Name	Product identifier	%	GHS US classification
urea (57-13-6)	CAS-No.: 57-13-6	44.89875 – 45.5895	Eye Irrit. 2B, H320
potassium nitrate	CAS-No.: 7757-79-1		Eye Irrit. 2B, H320
Monoammonium Phosphate	CAS-No.: 7722-76-1		Eye Irrit. 2B, H320 STOT SE 3, H335
Dicyandiamide	CAS-No.: 461-58-5	0.23025 – 1.15125	Eye Irrit. 2B, H320 STOT SE 3, H335
potassium sulfate	CAS-No.: 7778-80-5		Not classified
edta iron(iii) sodium salt	CAS-No.: 15708-41-5		Skin Irrit. 2, H315 Eye Irrit. 2B, H320 STOT SE 3, H335
Manganese EDTA	CAS-No.: 55448-20-9		Not classified
Zinc EDTA	CAS-No.: 14025-21-9		Not classified
Copper EDTA	CAS-No.: 14025-15-1		Not classified
Sodium Borate	CAS-No.: 12008-41-2		Acute Tox. 4 (Oral), H302
diatomaceous earth	CAS-No.: 61790-53-2	0.04605 – 0.0921	Eye Irrit. 2B, H320 STOT SE 3, H335
disodium molybdate	CAS-No.: 7631-95-0		Not classified
1-methyl-2-pyrrolidone	CAS-No.: 872-50-4	≤ 0.023025	Flam. Liq. 4, H227 Skin Irrit. 2, H315 Eye Irrit. 2A, H319 STOT SE 3, H335
N-(n-butyl)-thiophosphonic triamide	CAS-No.: 94317-64-3	< 0.023025	Eye Irrit. 2A, H319 Skin Sens. 1B, H317 Repr. 2, H361 STOT SE 3, H335 STOT RE 2, H373

Full text of hazard classes and H-statements : see section 16

### SECTION 4 First aid measures

#### 4.1. Description of necessary first-aid measures

First-aid measures general	: Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).
First-aid measures after inhalation	: Remove person to fresh air and keep comfortable for breathing. Allow affected person to breathe fresh air. Allow the victim to rest.
First-aid measures after skin contact	: Remove affected clothing and wash all exposed skin area with mild soap and water, followed by warm water rinse. Wash skin with plenty of water.

# SP Bentgrass Formula 28-8-18 with UMAXX

## Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

First-aid measures after eye contact	: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. 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.
First-aid measures after ingestion	: Rinse mouth. Do NOT induce vomiting. Obtain emergency medical attention. Call a poison center/doctor/physician if you feel unwell.

### 4.2. Most important symptoms/effects, acute and delayed

Potential Adverse human health effects and symptoms	: Based on available data, the classification criteria are not met.
Symptoms/effects after inhalation	: None under normal conditions. Dust of the product, if present, may cause respiratory irritation after an excessive inhalation exposure.
Symptoms/effects after skin contact	: None under normal conditions. Dust may cause irritation in skin folds or by contact in combination with tight clothing.
Symptoms/effects after eye contact	: Causes eye irritation. Mild eye irritation.
Symptoms/effects after ingestion	: None under normal conditions.

### 4.3. Indication of immediate medical attention and special treatment needed, if necessary

Other medical advice or treatment	: Treat symptomatically.
-----------------------------------	--------------------------

## SECTION 5: Fire-fighting measures

### 5.1. Suitable (and unsuitable) extinguishing media

Suitable extinguishing media	: Foam. Dry powder. Carbon dioxide. Water spray. Sand.
Unsuitable extinguishing media	: Do not use a heavy water stream.

### 5.2. Specific hazards arising from the chemical

Fire hazard	: No fire hazard.
Explosion hazard	: No direct explosion hazard.
Hazardous decomposition products in case of fire	: Toxic fumes may be released.

### 5.3. Special protective equipment and precautions for fire-fighters

Firefighting instructions	: Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Prevent fire-fighting water from entering environment. Do not enter fire area without proper protective equipment, including respiratory protection.
Protection during firefighting	: Do not enter fire area without proper protective equipment, including respiratory protection. Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

## SECTION 6 Accidental release measures

### 6.1. Personal precautions, protective equipment and emergency procedures

General measures	: Notify authorities if product enters sewers or public waters. Absorb spillage to prevent material-damage.
------------------	---

#### For non-emergency personnel

Protective equipment	: Wear recommended personal protective equipment.
Emergency procedures	: Ventilate spillage area. Evacuate unnecessary personnel. Avoid contact with skin and eyes.

#### For emergency responders

Protective equipment	: Do not attempt to take action without suitable protective equipment. Equip cleanup crew with proper protection. For further information refer to section 8: "Exposure controls/personal protection".
----------------------	--

# SP Bentgrass Formula 28-8-18 with UMAXX

## Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Emergency procedures	: Ventilate area. Evacuate unnecessary personnel.
Environmental precautions	: Avoid release to the environment. Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters.

### 6.2. Methods and materials for containment and cleaning up

For containment	: Using a clean shovel, put the material in a dry container and cover without compressing it.
Methods for cleaning up	: Mechanically recover the product. On land, sweep or shovel into suitable containers. Minimize generation of dust. Store away from other materials.
Other information	: Dispose of materials or solid residues at an authorized site.

See Heading 8, Exposure controls and personal protection, For further information refer to section 13

## SECTION 7 Handling and storage

### 7.1. Precautions for safe handling

Precautions for safe handling	: Ensure good ventilation of the work station. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Provide good ventilation in process area to prevent formation of vapor. Avoid contact with skin and eyes. Wear personal protective equipment.
Hygiene measures	: Do not eat, drink or smoke when using this product. Always wash hands after handling the product.
Additional hazards when processed	: Not expected to present a significant hazard under anticipated conditions of normal use.

### 7.2. Conditions for safe storage, including incompatibilities

Technical measures	: Keep in a cool, well-ventilated place away from heat.
Storage conditions	: Keep only in the original container in a cool, well ventilated place away from : Keep container closed when not in use.
Incompatible products	: Strong bases. Strong acids.
Incompatible materials	: Sources of ignition. Direct sunlight.
Packaging materials	: Store always product in container of same material as original container.

## SECTION 8 Exposure controls/personal protection

### 8.1. Control parameters

<b>disodium molybdate (7631-95-0)</b>	
<b>USA - ACGIH - Occupational Exposure Limits</b>	
ACGIH OEL TWA	0.5 mg/m <sup>3</sup> (Respirable fraction)
<b>edta iron(iii) sodium salt (15708-41-5)</b>	
<b>USA - ACGIH - Occupational Exposure Limits</b>	
ACGIH OEL TWA	1 mg/m <sup>3</sup>

### 8.2. Appropriate engineering controls

Appropriate engineering controls	: Ensure good ventilation of the work station.
Environmental exposure controls	: Avoid release to the environment.

### 8.3. Individual protection measures, such as personal protective equipment

#### Personal protective equipment:

Avoid all unnecessary exposure.

# SP Bentgrass Formula 28-8-18 with UMAXX

## Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

<b>Hand protection:</b>
Wear protective gloves.
<b>Eye protection:</b>
Chemical goggles or safety glasses. Safety glasses
<b>Skin and body protection:</b>
Wear suitable protective clothing
<b>Respiratory protection:</b>
Wear appropriate mask

### Personal protective equipment symbol(s):



### Other information:

Do not eat, drink or smoke during use.

## SECTION 9 Physical and chemical properties

### 9.1. Basic physical and chemical properties

Physical state	: Solid
Color	: Colorless
Odor	: characteristic
Odor threshold	: No data available
pH	: No data available
Melting point	: No data available
Freezing point	: Not applicable
Boiling point	: No data available
Flash point	: Not applicable
Flammability (solid, gas)	: Non flammable.
Vapor pressure	: No data available
Relative vapor density at 20°C	: No data available
Relative density	: No data available
Solubility	: No data available
Partition coefficient n-octanol/water (Log Pow)	: No data available
Auto-ignition temperature	: Not applicable
Decomposition temperature	: No data available
Viscosity, kinematic	: Not applicable
Explosion limits	: Not applicable
Particle characteristics	: No data available

<b>potassium nitrate</b>	
Particle characteristics	No data available

<b>Monoammonium Phosphate</b>	
Particle characteristics	No data available

<b>potassium sulfate</b>	
Particle characteristics	No data available

# SP Bentgrass Formula 28-8-18 with UMAXX

## Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Sodium Borate	
Particle characteristics	No data available

  

disodium molybdate	
Particle characteristics	No data available

  

Zinc EDTA	
Particle characteristics	No data available

  

Manganese EDTA	
Particle characteristics	No data available

  

Copper EDTA	
Particle characteristics	No data available

  

edta iron(iii) sodium salt	
Particle characteristics	No data available

  

Dicyandiamide	
Particle characteristics	No data available

  

1-methyl-2-pyrrolidone	
Particle characteristics	No data available

  

N-(n-butyl)-thiophosphonic triamide	
Particle characteristics	No data available

  

diatomaceous earth	
Particle characteristics	No data available

  

urea (57-13-6)	
Particle characteristics	No data available

### 9.2. Data relevant with regard to physical hazard classes (supplemental)

No additional information available

## SECTION 10 Stability and reactivity

### 10.1. Reactivity

The product is non-reactive under normal conditions of use, storage and transport.

### 10.2. Chemical stability

Not established.

# SP Bentgrass Formula 28-8-18 with UMAXX

## Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

### 10.3. Possibility of hazardous reactions

Not established.

### 10.4. Conditions to avoid

Direct sunlight. Extremely high or low temperatures.

### 10.5. Incompatible materials

Strong acids. Strong bases.

### 10.6. Hazardous decomposition products

fume. Carbon monoxide. Carbon dioxide.

## SECTION 11 Toxicological information

### 11.1. Information on toxicological effects

Acute toxicity (oral) : Not classified  
Acute toxicity (dermal) : Not classified  
Acute toxicity (inhalation) : Not classified

#### potassium nitrate (7757-79-1)

LD50 oral rat	3750 mg/kg (Rat)
LD50 dermal rat	> 5000 mg/kg
ATE US (oral)	3750 mg/kg body weight

#### Monoammonium Phosphate (7722-76-1)

LD50 oral rat	> 2000 mg/kg body weight (OECD 425: Acute Oral Toxicity: Up-and-Down Procedure, Rat, Male / female, Experimental value, Oral, 14 day(s))
LD50 dermal rabbit	> 5000 mg/kg Source: International Uniform Chemical Information Database
LC50 Inhalation - Rat	> 5 mg/l (OECD 403: Acute Inhalation Toxicity, 4 h, Rat, Male / female, Read-across, Inhalation (dust), 14 day(s))

#### potassium sulfate (7778-80-5)

LD50 oral rat	> 2000 mg/kg body weight (OECD 425: Acute Oral Toxicity: Up-and-Down Procedure, Rat, Male / female, Read-across, Oral, 14 day(s))
LD50 dermal rat	> 2000 mg/kg body weight (OECD 402: Acute Dermal Toxicity, 24 h, Rat, Male / female, Experimental value, Dermal, 14 day(s))

#### Sodium Borate (12008-41-2)

LD50 oral rat	2 g/kg
LD50 dermal rabbit	> 2000 mg/kg
ATE US (oral)	2000 mg/kg body weight

#### disodium molybdate (7631-95-0)

LD50 oral rat	4000 mg/kg (Rat, Oral)
LD50 dermal rat	> 2000 mg/kg (Rat, Dermal)
LC50 Inhalation - Rat	> 2.1 mg/l (4 h, Rat, Inhalation)
ATE US (oral)	4000 mg/kg body weight

# SP Bentgrass Formula 28-8-18 with UMAXX

## Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

<b>Dicyandiamide (461-58-5)</b>	
LD50 oral rat	> 30000 mg/kg body weight (Equivalent or similar to OECD 401, Rat, Female, Experimental value, Oral)
LD50 dermal rabbit	> 2000 mg/kg body weight (Equivalent or similar to OECD 402, 24 h, Rabbit, Male / female, Experimental value, Dermal, 14 day(s))
LC50 Inhalation - Rat	> 0.259 mg/l (Equivalent or similar to OECD 403, 4 h, Rat, Male / female, Experimental value, Inhalation (dust), 14 day(s))
<b>1-methyl-2-pyrrolidone (872-50-4)</b>	
LD50 oral rat	3914 mg/kg (Rat; Equivalent or similar to OECD 401; Literature study; 4150 mg/kg bodyweight; Rat; Experimental value)
LD50 dermal rat	7000 mg/kg (Rat; Literature study)
LD50 dermal rabbit	8000 mg/kg (Rabbit; Literature study; Equivalent or similar to OECD 402; >5000 mg/kg bodyweight; Rabbit; Experimental value)
LC50 Inhalation - Rat	> 5.1 mg/l/4h (Rat; Experimental value)
ATE US (oral)	3914 mg/kg body weight
ATE US (dermal)	7000 mg/kg body weight
<b>N-(n-butyl)-thiophosphonic triamide (94317-64-3)</b>	
LD50 oral rat	> 2000 mg/kg
LD50 dermal rat	> 2000 mg/kg
LD50 dermal rabbit	> 2000 mg/kg Source: Nicnas
LC50 Inhalation - Rat (Dust/Mist)	> 2.2 mg/l Source: ECHA
<b>urea (57-13-6) (57-13-6)</b>	
LD50 oral rat	8471 mg/kg (Rat; OECD 401: Acute Oral Toxicity; Literature study; 14300 mg/kg bodyweight; Rat; Experimental value)
LD50 dermal rat	> 3200 mg/kg (Rat; Literature study)
LD50 dermal rabbit	> 21000 mg/kg (Rabbit; Literature study)
ATE US (oral)	8471 mg/kg body weight
Skin corrosion/irritation	: Not classified
<b>potassium nitrate (7757-79-1)</b>	
pH	6 – 8 (5 %)
<b>Monoammonium Phosphate (7722-76-1)</b>	
pH	3.6 – 4 (1 %)
<b>potassium sulfate (7778-80-5)</b>	
pH	7 (Aqueous solution, 25 °C)
<b>disodium molybdate (7631-95-0)</b>	
pH	9 – 10 (5 %)
<b>Zinc EDTA (14025-21-9)</b>	
pH	6.5 (1 %)

# SP Bentgrass Formula 28-8-18 with UMAXX

## Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

<b>Dicyandiamide (461-58-5)</b>	
pH	No data available in the literature
<b>1-methyl-2-pyrrolidone (872-50-4)</b>	
pH	8 – 10 (10 %)
<b>urea (57-13-6) (57-13-6)</b>	
pH	7.2 (10 %)

Serious eye damage/irritation : Causes eye irritation.

<b>potassium nitrate (7757-79-1)</b>	
pH	6 – 8 (5 %)
<b>Monoammonium Phosphate (7722-76-1)</b>	
pH	3.6 – 4 (1 %)
<b>potassium sulfate (7778-80-5)</b>	
pH	7 (Aqueous solution, 25 °C)
<b>disodium molybdate (7631-95-0)</b>	
pH	9 – 10 (5 %)
<b>Zinc EDTA (14025-21-9)</b>	
pH	6.5 (1 %)
<b>Dicyandiamide (461-58-5)</b>	
pH	No data available in the literature
<b>1-methyl-2-pyrrolidone (872-50-4)</b>	
pH	8 – 10 (10 %)
<b>urea (57-13-6) (57-13-6)</b>	
pH	7.2 (10 %)

Respiratory or skin sensitization : Not classified

Germ cell mutagenicity : Not classified

Carcinogenicity : Not classified

Reproductive toxicity : Not classified

<b>N-(n-butyl)-thiophosphonic triamide (94317-64-3)</b>	
NOAEL (animal/female, F0/P)	17 mg/kg body weight Animal: rat, Animal sex: female, Guideline: OECD Guideline 416 (Two-Generation Reproduction Toxicity Study)

STOT-single exposure : Not classified

<b>Monoammonium Phosphate (7722-76-1)</b>	
STOT-single exposure	May cause respiratory irritation.
<b>edta iron(iii) sodium salt (15708-41-5)</b>	
STOT-single exposure	May cause respiratory irritation.

# SP Bentgrass Formula 28-8-18 with UMAXX

## Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

<b>Dicyandiamide (461-58-5)</b>	
STOT-single exposure	May cause respiratory irritation.
<b>1-methyl-2-pyrrolidone (872-50-4)</b>	
STOT-single exposure	May cause respiratory irritation.
<b>N-(n-butyl)-thiophosphonic triamide (94317-64-3)</b>	
STOT-single exposure	May cause respiratory irritation.
<b>diatomaceous earth (61790-53-2)</b>	
STOT-single exposure	May cause respiratory irritation.
STOT-repeated exposure	: Not classified
<b>N-(n-butyl)-thiophosphonic triamide (94317-64-3)</b>	
LOAEL (oral,rat,90 days)	17 mg/kg body weight Animal: rat, Animal sex: female, Guideline: EPA OPPTS 870.3100 (90-Day Oral Toxicity in Rodents)
NOAEL (oral,rat,90 days)	74 mg/kg body weight Animal: rat, Animal sex: male, Guideline: EPA OPPTS 870.3100 (90-Day Oral Toxicity in Rodents)
STOT-repeated exposure	May cause damage to organs through prolonged or repeated exposure.
Aspiration hazard	: Not classified
<b>SP Bentgrass Formula 28-8-18 with UMAXX</b>	
Viscosity, kinematic	Not applicable
<b>potassium nitrate (7757-79-1)</b>	
Viscosity, kinematic	No data available
<b>Monoammonium Phosphate (7722-76-1)</b>	
Viscosity, kinematic	No data available
<b>potassium sulfate (7778-80-5)</b>	
Viscosity, kinematic	Not applicable (solid)
<b>Sodium Borate (12008-41-2)</b>	
Viscosity, kinematic	No data available
<b>disodium molybdate (7631-95-0)</b>	
Viscosity, kinematic	No data available
<b>Zinc EDTA (14025-21-9)</b>	
Viscosity, kinematic	No data available
<b>Manganese EDTA (55448-20-9)</b>	
Viscosity, kinematic	No data available
<b>Copper EDTA (14025-15-1)</b>	
Viscosity, kinematic	No data available
<b>edta iron(iii) sodium salt (15708-41-5)</b>	
Viscosity, kinematic	No data available
<b>Dicyandiamide (461-58-5)</b>	
Viscosity, kinematic	Not applicable (solid)

# SP Bentgrass Formula 28-8-18 with UMAXX

## Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

<b>potassium nitrate (7757-79-1)</b>	
<b>1-methyl-2-pyrrolidone (872-50-4)</b>	
Viscosity, kinematic	1.7 mm <sup>2</sup> /s (25 °C)
<b>N-(n-butyl)-thiophosphonic triamide (94317-64-3)</b>	
Viscosity, kinematic	No data available
<b>diatomaceous earth (61790-53-2)</b>	
Viscosity, kinematic	No data available
<b>urea (57-13-6) (57-13-6)</b>	
Viscosity, kinematic	Not applicable (solid)

Potential Adverse human health effects and symptoms	: Based on available data, the classification criteria are not met.
Symptoms/effects after inhalation	: None under normal conditions. Dust of the product, if present, may cause respiratory irritation after an excessive inhalation exposure.
Symptoms/effects after skin contact	: None under normal conditions. Dust may cause irritation in skin folds or by contact in combination with tight clothing.
Symptoms/effects after eye contact	: Causes eye irritation. Mild eye irritation.
Symptoms/effects after ingestion	: None under normal conditions.

## SECTION 12 Ecological information

### 12.1. Ecotoxicity

Ecology - general	: The product is not considered harmful to aquatic organisms or to cause long-term adverse effects in the environment.
Hazardous to the aquatic environment, short-term (acute)	: Not classified
Hazardous to the aquatic environment, long-term (chronic)	: Not classified

<b>potassium nitrate (7757-79-1)</b>	
LC50 - Fish [1]	162 mg/l (96 h; Pisces; Lethal)
LC50 - Other aquatic organisms [1]	39 mg/l (96 h; Daphnia magna)
EC50 - Other aquatic organisms [1]	200 – 1000 mg/l (Plankton; Nocivity test)
LC50 - Fish [2]	1378 mg/l (Poecilia reticulata)
LC50 - Other aquatic organisms [2]	490 mg/l (48 h; Daphnia magna)
TLM - Fish [1]	3000 mg/l (96 h; Lepomis macrochirus)
TLM - Fish [2]	162 mg/l (96 h; Gambusia affinis)
Threshold limit - Other aquatic organisms [1]	39 mg/l (96 h; Daphnia magna)
Threshold limit - Other aquatic organisms [2]	490 mg/l (48 h; Daphnia magna)

<b>Monoammonium Phosphate (7722-76-1)</b>	
LC50 - Fish [1]	> 100 mg/l (OECD 203: Fish, Acute Toxicity Test, 96 h, Oncorhynchus mykiss, Static system, Fresh water, Experimental value, Nominal concentration)
EC50 - Crustacea [1]	> 100 mg/l Test organisms (species): Daphnia magna
EC50 72h - Algae [1]	> 100 mg/l Test organisms (species): Raphidocelis subcapitata (previous names: Pseudokirchneriella subcapitata, Selenastrum capricornutum)

# SP Bentgrass Formula 28-8-18 with UMAXX

## Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

<b>Monoammonium Phosphate (7722-76-1)</b>	
ErC50 algae	> 97.1 mg/l (OECD 201: Alga, Growth Inhibition Test, 72 h, Pseudokirchneriella subcapitata, Static system, Fresh water, Experimental value, GLP)
<b>potassium sulfate (7778-80-5)</b>	
LC50 - Fish [1]	680 mg/l (EPA 600/4-90/027, 96 h, Pimephales promelas, Static system, Fresh water, Experimental value, GLP)
EC50 72h - Algae [1]	2900 mg/l (Scenedesmus subspicatus, Literature study)
<b>disodium molybdate (7631-95-0)</b>	
LC50 - Fish [1]	644.2 mg/l (OECD 203: Fish, Acute Toxicity Test, 96 h, Pimephales promelas, Semi-static system, Fresh water, Experimental value)
EC50 72h - Algae [1]	356.9 mg/l (ISO 10253, Phaeodactylum, Static system, Salt water, Weight of evidence, Growth rate)
<b>edta iron(iii) sodium salt (15708-41-5)</b>	
LC50 - Fish [1]	> 100 mg/l (OECD 203: Fish, Acute Toxicity Test, 96 h, Oncorhynchus mykiss, Static system, Fresh water, Experimental value)
EC50 - Crustacea [1]	100.9 mg/l (OECD 202: Daphnia sp. Acute Immobilisation Test, 48 h, Daphnia magna, Static system, Fresh water, Experimental value)
<b>Dicyandiamide (461-58-5)</b>	
LC50 - Fish [1]	7700 ppm (96 h, Oncorhynchus mykiss, Static system, Fresh water, Experimental value, Nominal concentration)
EC50 - Crustacea [1]	3177 mg/l (OECD 202: Daphnia sp. Acute Immobilisation Test, 48 h, Daphnia magna, Static system, Fresh water, Experimental value, Locomotor effect)
<b>1-methyl-2-pyrrolidone (872-50-4)</b>	
LC50 - Fish [1]	3048 mg/l (96 h; Salmo gairdneri (Oncorhynchus mykiss); Cool water)
EC50 - Crustacea [1]	4897 mg/l (48 h; Daphnia magna)
LC50 - Fish [2]	832 mg/l (96 h; Lepomis macrochirus; Warm water)
EC50 - Crustacea [2]	4655 mg/l (Gammarus sp.)
Threshold limit - Algae [1]	> 500 mg/l (Scenedesmus subspicatus)
Threshold limit - Algae [2]	600.5 mg/l (72 h; Desmodesmus subspicatus; Growth rate)
<b>N-(n-butyl)-thiophosphonic triamide (94317-64-3)</b>	
LC50 - Fish [1]	1140 mg/l Source: NICNAS
EC50 - Crustacea [1]	290 mg/l Source: ECHA Chem
EC50 96h - Algae [1]	280 mg/l Source: NICNAS
<b>urea (57-13-6) (57-13-6)</b>	
LC50 - Fish [1]	> 6810 mg/l (96 h; Leuciscus idus; Nominal concentration)
EC50 - Crustacea [1]	> 10000 mg/l (48 h; Daphnia magna; Nominal concentration)
LC50 - Fish [2]	17500 mg/l (96 h; Poecilia reticulata)
EC50 - Crustacea [2]	> 10000 mg/l (24 h; Daphnia magna)
EC50 72h - Algae [1]	24541.9 mg/l Test organisms (species): Raphidocelis subcapitata (previous names: Pseudokirchneriella subcapitata, Selenastrum capricornutum)

# SP Bentgrass Formula 28-8-18 with UMAXX

## Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

<b>urea (57-13-6) (57-13-6)</b>	
EC50 96h - Algae [1]	42184 mg/l Source: Ecological Structure Activity Relationships
TLM - Fish [1]	17500 ppm (96 h; Poecilia reticulata)
Threshold limit - Other aquatic organisms [1]	120000 mg/l (16 h; Bacteria; Toxicity test)
Threshold limit - Other aquatic organisms [2]	> 10000 mg/l (Pseudomonas putida)
Threshold limit - Algae [1]	> 10000 mg/l (168 h; Scenedesmus quadricauda; Growth rate)
Threshold limit - Algae [2]	47 mg/l (192 h; Microcystis aeruginosa; Growth rate)

### 12.2. Persistence and degradability

<b>SP Bentgrass Formula 28-8-18 with UMAXX</b>	
Persistence and degradability	Not established.
<b>potassium nitrate (7757-79-1)</b>	
Persistence and degradability	Biodegradability: not applicable, Not established.
Biochemical oxygen demand (BOD)	Not applicable
Chemical oxygen demand (COD)	Not applicable
ThOD	Not applicable
BOD (% of ThOD)	Not applicable
<b>Monoammonium Phosphate (7722-76-1)</b>	
Persistence and degradability	Biodegradability in water: no data available, Not established.
Chemical oxygen demand (COD)	Not applicable (inorganic)
ThOD	Not applicable (inorganic)
<b>potassium sulfate (7778-80-5)</b>	
Persistence and degradability	Biodegradability: not applicable, Not established.
Chemical oxygen demand (COD)	Not applicable (inorganic)
ThOD	Not applicable (inorganic)
<b>Sodium Borate (12008-41-2)</b>	
Persistence and degradability	Not established.
<b>disodium molybdate (7631-95-0)</b>	
Persistence and degradability	Biodegradability: not applicable, Photolysis in water, Not established.
Chemical oxygen demand (COD)	Not applicable
ThOD	Not applicable
BOD (% of ThOD)	Not applicable
<b>Zinc EDTA (14025-21-9)</b>	
Persistence and degradability	Non degradable in the soil, Adsorbs into the soil, Not established.
<b>Manganese EDTA (55448-20-9)</b>	
Persistence and degradability	Not established.

# SP Bentgrass Formula 28-8-18 with UMAXX

## Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

<b>Copper EDTA (14025-15-1)</b>	
Persistence and degradability	Not established.
<b>edta iron(iii) sodium salt (15708-41-5)</b>	
Persistence and degradability	Biodegradable in water, Not established.
<b>Dicyandiamide (461-58-5)</b>	
Persistence and degradability	Not readily biodegradable in water, Non degradable in the soil, Photodegradation in the air, Not established.
<b>1-methyl-2-pyrrolidone (872-50-4)</b>	
Persistence and degradability	Readily biodegradable in water, Inherently biodegradable, Biodegradable in the soil, Photodegradation in the air, Not established.
Biochemical oxygen demand (BOD)	1.07 g O <sub>2</sub> /g substance
Chemical oxygen demand (COD)	1.56 g O <sub>2</sub> /g substance
ThOD	1.9 g O <sub>2</sub> /g substance
BOD (% of ThOD)	0.56 % ThOD
<b>N-(n-butyl)-thiophosphonic triamide (94317-64-3)</b>	
Persistence and degradability	Not established.
<b>diatomaceous earth (61790-53-2)</b>	
Persistence and degradability	Biodegradability: not applicable, Not established.
Chemical oxygen demand (COD)	Not applicable (inorganic)
ThOD	Not applicable (inorganic)
<b>urea (57-13-6) (57-13-6)</b>	
Persistence and degradability	Inherently biodegradable, Hydrolysis in water, Not established.
ThOD	0.27 g O <sub>2</sub> /g substance
<b>12.3. Bioaccumulative potential</b>	
<b>SP Bentgrass Formula 28-8-18 with UMAXX</b>	
Bioaccumulative potential	Not established.
<b>potassium nitrate (7757-79-1)</b>	
Bioaccumulative potential	No bioaccumulation data available. Not established.
<b>Monoammonium Phosphate (7722-76-1)</b>	
Bioaccumulative potential	Not bioaccumulative. Not established.
<b>potassium sulfate (7778-80-5)</b>	
Bioaccumulative potential	Not bioaccumulative. Not established.
<b>Sodium Borate (12008-41-2)</b>	
Bioaccumulative potential	Not established.
<b>disodium molybdate (7631-95-0)</b>	
BCF - Fish [1]	4.9 (28 day(s), Oncorhynchus tshawytscha, Fresh water, Weight of evidence)
BCF - Other aquatic organisms [1]	164.3 (Mollusca, Fresh water, Weight of evidence)

# SP Bentgrass Formula 28-8-18 with UMAXX

## Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

<b>disodium molybdate (7631-95-0)</b>	
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500). Not established.
<b>Zinc EDTA (14025-21-9)</b>	
Bioaccumulative potential	No bioaccumulation data available. Not established.
<b>Manganese EDTA (55448-20-9)</b>	
Bioaccumulative potential	Not established.
<b>Copper EDTA (14025-15-1)</b>	
Bioaccumulative potential	Not established.
<b>edta iron(iii) sodium salt (15708-41-5)</b>	
BCF - Fish [1]	1.1 – 1.8 (28 day(s), Lepomis macrochirus, Flow-through system, Fresh water, Experimental value)
Partition coefficient n-octanol/water (Log Pow)	-8.84 (Calculated)
Bioaccumulative potential	Bioaccumulation: not applicable. Not established.
<b>Dicyandiamide (461-58-5)</b>	
Partition coefficient n-octanol/water (Log Pow)	-1 (Experimental value, OECD 107: Partition Coefficient (n-octanol/water): Shake Flask Method, 20 °C)
Bioaccumulative potential	Bioaccumulation: not applicable. Not established.
<b>1-methyl-2-pyrrolidone (872-50-4)</b>	
Partition coefficient n-octanol/water (Log Pow)	-0.73 – -0.46 (Experimental value)
Bioaccumulative potential	Not bioaccumulative. Not established.
<b>N-(n-butyl)-thiophosphonic triamide (94317-64-3)</b>	
Partition coefficient n-octanol/water (Log Pow)	0.4444 Source: ECHA
Bioaccumulative potential	Not established.
<b>diatomaceous earth (61790-53-2)</b>	
Bioaccumulative potential	No bioaccumulation data available. Not established.
<b>urea (57-13-6) (57-13-6)</b>	
BCF - Fish [1]	1 (72 h; Brachydanio rerio; Fresh water)
BCF - Other aquatic organisms [1]	11700 (Chlorella sp.)
Partition coefficient n-octanol/water (Log Pow)	< -1.73 (Experimental value; EU Method A.8: Partition Coefficient)
Bioaccumulative potential	Bioaccumulation: not applicable. Not established.
<b>12.4. Mobility in soil</b>	
<b>Monoammonium Phosphate (7722-76-1)</b>	
Ecology - soil	No (test)data on mobility of the substance available.
<b>potassium sulfate (7778-80-5)</b>	
Ecology - soil	No (test)data on mobility of the substance available.

# SP Bentgrass Formula 28-8-18 with UMAXX

## Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

<b>edta iron(iii) sodium salt (15708-41-5)</b>	
Organic Carbon Normalized Adsorption Coefficient (Log Koc)	-2.32 – 1 (log Koc, Calculated value)
Ecology - soil	Highly mobile in soil.
<b>Dicyandiamide (461-58-5)</b>	
Surface tension	No data available in the literature
Organic Carbon Normalized Adsorption Coefficient (Log Koc)	0.638 – 0.951 (log Koc, SRC PCKOCWIN v2.0, Calculated value)
Ecology - soil	Highly mobile in soil.
<b>1-methyl-2-pyrrolidone (872-50-4)</b>	
Surface tension	0.407 N/m
<b>N-(n-butyl)-thiophosphonic triamide (94317-64-3)</b>	
Mobility in soil	4.311 Source: EPISUITE
<b>diatomaceous earth (61790-53-2)</b>	
Ecology - soil	No (test)data on mobility of the substance available.
<b>urea (57-13-6) (57-13-6)</b>	
Surface tension	No data available in the literature
Organic Carbon Normalized Adsorption Coefficient (Log Koc)	-1.43 – -1.19 (log Koc, Calculated value)
Ecology - soil	Highly mobile in soil.

### 12.5. Other adverse effects

Ozone	: Not classified
Fluorinated greenhouse gases	: No
Other information	: Avoid unintentional release to the environment.

## SECTION 13 Disposal considerations

Regional waste regulation	: Disposal must be done according to official regulations.
Waste treatment methods	: Dispose of contents/container in accordance with licensed collector's sorting instructions.
Sewage disposal recommendations	: Disposal must be done according to official regulations.
Product/Packaging disposal recommendations	: Dispose in a safe manner in accordance with local/national regulations. Disposal must be done according to official regulations.
Additional information	: Do not re-use empty containers.
Ecological waste information	: Avoid unintentional release to the environment.

## SECTION 14 Transport information

### 14.1. UN number

Not regulated for transport

### 14.2. UN Proper Shipping Name

Proper Shipping Name (DOT)	: Not applicable
Proper Shipping Name (TDG)	: Not applicable

# SP Bentgrass Formula 28-8-18 with UMAXX

## Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Proper Shipping Name (IMDG) : Not applicable  
Proper Shipping Name (IATA) : Not applicable

### 14.3. Transport hazard class(es)

**DOT**  
Transport hazard class(es) (DOT) : Not applicable

**TDG**  
Transport hazard class(es) (TDG) : Not applicable

**IMDG**  
Transport hazard class(es) (IMDG) : Not applicable

**IATA**  
Transport hazard class(es) (IATA) : Not applicable

### 14.4. Packing group

Packing group (DOT) : Not applicable  
Packing group (TDG) : Not applicable  
Packing group (IMDG) : Not applicable  
Packing group (IATA) : Not applicable

### 14.5. Environmental hazards

Other information : No supplementary information available.

### 14.6. Transport in bulk

Not applicable

### 14.7. Special precautions for user

**DOT**  
No data available

**TDG**  
No data available

**IMDG**  
No data available

**IATA**  
No data available

## SECTION 15 Regulatory information

### 15.1. Federal regulations

All components of this product are present and listed as Active on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory, except for:

Manganese EDTA	CAS-No. 55448-20-9	%
Contains chemical(s) subject to TSCA 12b export notification if product is shipped outside the U.S		
1-methyl-2-pyrrolidone	CAS-No. 872-50-4	≤ 0.023025%
N-(n-butyl)-thiophosphonic triamide	CAS-No. 94317-64-3	< 0.023025%

# SP Bentgrass Formula 28-8-18 with UMAXX

## Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

### 15.2. International regulations

#### CANADA

##### potassium nitrate (7757-79-1)

Listed on the Canadian DSL (Domestic Substances List)

##### Monoammonium Phosphate (7722-76-1)

Listed on the Canadian DSL (Domestic Substances List)

##### potassium sulfate (7778-80-5)

Listed on the Canadian DSL (Domestic Substances List)

##### disodium molybdate (7631-95-0)

Listed on the Canadian DSL (Domestic Substances List)

##### Zinc EDTA (14025-21-9)

Listed on the Canadian DSL (Domestic Substances List)

##### Manganese EDTA (55448-20-9)

Not listed on the Canadian DSL (Domestic Substances List)/NDSL (Non-Domestic Substances List)

##### Copper EDTA (14025-15-1)

Listed on the Canadian DSL (Domestic Substances List)

##### edta iron(iii) sodium salt (15708-41-5)

Listed on the Canadian DSL (Domestic Substances List)

##### Dicyandiamide (461-58-5)

Listed on the Canadian DSL (Domestic Substances List)

##### 1-methyl-2-pyrrolidone (872-50-4)

Listed on the Canadian DSL (Domestic Substances List)

##### N-(n-butyl)-thiophosphonic triamide (94317-64-3)

Listed on the Canadian DSL (Domestic Substances List)

##### diatomaceous earth (61790-53-2)

Listed on the Canadian NDSL (Non-Domestic Substances List)

##### urea (57-13-6) (57-13-6)

Listed on the Canadian DSL (Domestic Substances List)

#### EU-Regulations

No additional information available

# SP Bentgrass Formula 28-8-18 with UMAXX

## Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

### National regulations

#### Monoammonium Phosphate (7722-76-1)

Listed on INSQ (Mexican National Inventory of Chemical Substances)

#### urea (57-13-6) (57-13-6)

Listed on INSQ (Mexican National Inventory of Chemical Substances)

### 15.3. State regulations



#### WARNING:

This product can expose you to 1-methyl-2-pyrrolidone, which is known to the State of California to cause birth defects or other reproductive harm. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

Component	State or local regulations
potassium nitrate(7757-79-1)	U.S. - Massachusetts - Right To Know List; U.S. - New Jersey - Right to Know Hazardous Substance List; U.S. - Pennsylvania - RTK (Right to Know) List
1-methyl-2-pyrrolidone(872-50-4)	U.S. - Massachusetts - Right To Know List; U.S. - New Jersey - Right to Know Hazardous Substance List; U.S. - Pennsylvania - RTK (Right to Know) List
diatomaceous earth(61790-53-2)	U.S. - New Jersey - Right to Know Hazardous Substance List

## SECTION 16 Other information

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Revision date : 4/9/2025

Issue date : 9/24/2016

Data sources : REGULATION (EC) No 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 December 2008 on classification, labeling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006.

Other information : None.

Full text of hazard classes and H-statements	
H227	Combustible liquid
H302	Harmful if swallowed
H315	Causes skin irritation
H317	May cause an allergic skin reaction
H319	Causes serious eye irritation
H320	Causes eye irritation
H335	May cause respiratory irritation
H361	Suspected of damaging fertility or the unborn child
H373	May cause damage to organs through prolonged or repeated exposure

Safety Data Sheet (SDS), USA

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.