

SAFETY DATA SHEET



1. Identification

Product identifier Perfection Royal Green 20-3-16
Other means of identification None.
Recommended use Turf & Ornamental Product - Plant Nutrition
Recommended restrictions The ingredients used to produce this material contain crystalline silica in a form not-respirable or carcinogenic due to its manufacturing method and structure. Do not attempt to grind or mill this product.

Manufacturer/Importer/Supplier/Distributor information

Manufacturer

Company name Wilbur-Ellis Company LLC
Address 3300 S. Parker Rd Ste. 500
Aurora, CO 80014
United States
Telephone Branded Products (800) 500-1698
Information
E-mail SDS@wilburellis.com
Emergency phone number Chemtrec - Domestic (800) 424-9300
Chemtrec - International +1 703-741-5970

2. Hazard(s) identification

Physical hazards Not classified.
Health hazards Not classified.
Environmental hazards Not classified.
OSHA defined hazards Not classified.

Label elements

Hazard symbol None.
Signal word None.
Hazard statement The mixture does not meet the criteria for classification.
Precautionary statement
Prevention Observe good industrial hygiene practices.
Response Wash hands after handling.
Storage Store away from incompatible materials.
Disposal Dispose of waste and residues in accordance with local authority requirements.

Hazard(s) not otherwise classified (HNOC) None known.

Supplemental information None.

3. Composition/information on ingredients

Mixtures

Chemical name	Common name and synonyms	CAS number	%
Urea		57-13-6	30 - < 40
Potassium Chloride		7447-40-7	20 - < 30
Ammonium Sulfate		7783-20-2	10 - < 20
Monoammonium Phosphate		7722-76-1	5 - < 10
Calcium Carbonate		471-34-1	3 - < 5
Iron Sucrate		Not Available	3 - < 5
Calcium Sulfate, Dihydrate		10101-41-4	1 - < 3
Copper Sulfate Pentahydrate		7758-98-7	< 1
Zinc Sulfate Monohydrate		7733-02-0	< 1

Material name: Perfection Royal Green 20-3-16

5201 Version #: 02 Revision date: 03-16-2022 Issue date: 02-02-2021

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Chemical name	Common name and synonyms	CAS number	%
Ferrous Sulfate 30%		7720-78-7	< 0.3
Other components below reportable levels			1 - < 3

Composition comments Occupational Exposure Limits for impurities, if present, are listed in Section 8.

4. First-aid measures

Inhalation	Move to fresh air. Call a physician if symptoms develop or persist.
Skin contact	Wash off with soap and water. Get medical attention if irritation develops and persists.
Eye contact	Do not rub eyes. Rinse with water. Get medical attention if irritation develops and persists.
Ingestion	Rinse mouth. Get medical attention if symptoms occur.
Most important symptoms/effects, acute and delayed	Dusts may irritate the respiratory tract, skin and eyes.
Indication of immediate medical attention and special treatment needed	Treat symptomatically.
General information	Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

5. Fire-fighting measures

Suitable extinguishing media	Water fog. Foam. Dry chemical powder. Carbon dioxide (CO2).
Unsuitable extinguishing media	Do not use water jet as an extinguisher, as this will spread the fire.
Specific hazards arising from the chemical	During fire, gases hazardous to health may be formed.
Special protective equipment and precautions for firefighters	Self-contained breathing apparatus and full protective clothing must be worn in case of fire.
Fire fighting equipment/instructions	Use water spray to cool unopened containers.
Specific methods	Use standard firefighting procedures and consider the hazards of other involved materials.
General fire hazards	No unusual fire or explosion hazards noted.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures	Keep unnecessary personnel away. Wear appropriate protective equipment and clothing during clean-up. Use a NIOSH/MSHA approved respirator if there is a risk of exposure to dust/fume at levels exceeding the exposure limits. For personal protection, see section 8 of the SDS.
Methods and materials for containment and cleaning up	Avoid the generation of dusts during clean-up. Collect dust using a vacuum cleaner equipped with HEPA filter. Stop the flow of material, if this is without risk. Large Spills: Wet down with water and dike for later disposal. Shovel the material into waste container. Following product recovery, flush area with water. Small Spills: Sweep up or vacuum up spillage and collect in suitable container for disposal. For waste disposal, see section 13 of the SDS.
Environmental precautions	Avoid discharge into drains, water courses or onto the ground.

7. Handling and storage

Precautions for safe handling	Minimize dust generation and accumulation. Provide appropriate exhaust ventilation at places where dust is formed. Avoid prolonged exposure. Practice good housekeeping.
Conditions for safe storage, including any incompatibilities	Store in tightly closed container. Store in a well-ventilated place. Store away from incompatible materials (see Section 10 of the SDS).

8. Exposure controls/personal protection

Occupational exposure limits

The following constituents are the only constituents of the product which have a PEL, TLV or other recommended exposure limit. At this time, the other constituents have no known exposure limits.

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Components	Type	Value	Form
Calcium Carbonate (CAS 471-34-1)	PEL	5 mg/m3	Respirable fraction.
		15 mg/m3	Total dust.
Iron Sucrate	PEL	10 mg/m3	Fume.

US. OSHA Table Z-3 (29 CFR 1910.1000)

Components	Type	Value	Form
Iron Sucrate	TWA	5 mg/m3	Respirable fraction.
		15 mg/m3	Total dust.
		50 mppcf	Total dust.
		15 mppcf	Respirable fraction.

US. ACGIH Threshold Limit Values

Components	Type	Value	Form
Calcium Sulfate, Dihydrate (CAS 10101-41-4)	TWA	10 mg/m3	Inhalable fraction.
Copper Sulfate Pentahydrate (CAS 7758-98-7)	TWA	1 mg/m3	Dust and mist.
		0.2 mg/m3	Fume.
Ferrous Sulfate 30% (CAS 7720-78-7)	TWA	1 mg/m3	
Iron Sucrate	TWA	5 mg/m3	Respirable fraction.

US. NIOSH: Pocket Guide to Chemical Hazards

Components	Type	Value	Form
Calcium Carbonate (CAS 471-34-1)	TWA	5 mg/m3	Respirable.
		10 mg/m3	Total
Copper Sulfate Pentahydrate (CAS 7758-98-7)	TWA	1 mg/m3	Dust and mist.
		0.1 mg/m3	Fume.
Ferrous Sulfate 30% (CAS 7720-78-7)	TWA	1 mg/m3	
Iron Sucrate	TWA	5 mg/m3	Dust and fume.

US. Workplace Environmental Exposure Level (WEEL) Guides

Components	Type	Value	Form
Urea (CAS 57-13-6)	TWA	10 mg/m3	Total particulate.

Biological limit values

No biological exposure limits noted for the ingredient(s).

Appropriate engineering controls

Good general ventilation should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. If engineering measures are not sufficient to maintain concentrations of dust particulates below the Occupational Exposure Limit (OEL), suitable respiratory protection must be worn. If material is ground, cut, or used in any operation which may generate dusts, use appropriate local exhaust ventilation to keep exposures below the recommended exposure limits.

Individual protection measures, such as personal protective equipment

Eye/face protection Wear safety glasses with side shields (or goggles).

Skin protection

Hand protection Wear appropriate chemical resistant gloves.

Other Wear suitable protective clothing.

Respiratory protection Use a NIOSH/MSHA approved respirator if there is a risk of exposure to dust/fume at levels exceeding the exposure limits.

Thermal hazards	Wear appropriate thermal protective clothing, when necessary.
General hygiene considerations	Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

9. Physical and chemical properties

Appearance	Granular Blend
Physical state	Solid.
Form	Solid Granules
Color	Various colored granules
Odor	None.
Odor threshold	Not available.
pH	Not available.
Melting point/freezing point	Not available.
Initial boiling point and boiling range	Not available.
Flash point	Not available.
Evaporation rate	Not available.
Flammability (solid, gas)	Not available.
Upper/lower flammability or explosive limits	
Flammability limit - lower (%)	Not available.
Flammability limit - upper (%)	Not available.
Explosive limit - lower (%)	Not available.
Explosive limit - upper (%)	Not available.
Vapor pressure	Not available.
Vapor density	Not available.
Relative density	Not available.
Solubility(ies)	
Solubility (water)	80 %
Auto-ignition temperature	Not available.
Decomposition temperature	Not available.
Viscosity	Not available.
Other information	
Explosive properties	Not explosive.
Oxidizing properties	Not oxidizing.

10. Stability and reactivity

Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport.
Chemical stability	Material is stable under normal conditions.
Possibility of hazardous reactions	No dangerous reaction known under conditions of normal use.
Conditions to avoid	Avoid temperatures exceeding the decomposition temperature. Contact with incompatible materials.
Incompatible materials	Strong oxidizing agents.
Hazardous decomposition products	Irritating and/or toxic fumes and gases may be emitted upon the product's decomposition.

11. Toxicological information

Information on likely routes of exposure

Inhalation	Dust may irritate respiratory system. Prolonged inhalation may be harmful.
Skin contact	Dust or powder may irritate the skin.
Eye contact	Dust may irritate the eyes.

Ingestion	Expected to be a low ingestion hazard.
Symptoms related to the physical, chemical and toxicological characteristics	Dusts may irritate the respiratory tract, skin and eyes.

Information on toxicological effects

Acute toxicity Not known.

Product	Species	Test Results
Perfection Royal Green 20-3-16		
<u>Acute</u>		
Dermal		
<i>Solid</i>		
LD50	Rabbit	> 2000 mg/kg, 24 hours
Oral		
<i>Solid</i>		
LD50	Rat	10000 mg/kg
Components	Species	Test Results
Ammonium Sulfate (CAS 7783-20-2)		
<u>Acute</u>		
Dermal		
LD50	Mouse	> 2000 mg/kg
	Rat	> 2000 mg/kg
Oral		
LD50	Mouse	> 2000 mg/kg
	Rat	4250 mg/kg
Calcium Carbonate (CAS 471-34-1)		
<u>Acute</u>		
Dermal		
LD50	Rat	> 2000 mg/kg, 24 Hours
Oral		
LD50	Rat	> 2000 mg/kg
Calcium Sulfate, Dihydrate (CAS 10101-41-4)		
<u>Acute</u>		
Oral		
LD50	Mouse, Rat	4704 mg/kg
Copper Sulfate Pentahydrate (CAS 7758-98-7)		
<u>Acute</u>		
Dermal		
LD50	Rat	> 2000 mg/kg, 24 Hours
Oral		
LD50	Rat	482 mg/kg
Ferrous Sulfate 30% (CAS 7720-78-7)		
<u>Acute</u>		
Dermal		
LD50	Rat	> 2000 mg/kg, 24 Hours
Oral		
LD50	Rat	> 2000 mg/kg
Iron Sucrate		
<u>Acute</u>		
Oral		
LD50	Rat	> 10000 mg/kg

Components	Species	Test Results
Monoammonium Phosphate (CAS 7722-76-1)		
<u>Acute</u>		
Dermal		
LD50	Rabbit	> 5000 mg/kg, 24 Hours
	Rat	> 5000 mg/kg, 24 Hours
Inhalation		
LC50	Rat	> 5 mg/l, 4 Hours
Oral		
LD50	Rat	3252 mg/kg
Potassium Chloride (CAS 7447-40-7)		
<u>Acute</u>		
Oral		
LD50	Rat	3020 mg/kg
Urea (CAS 57-13-6)		
<u>Acute</u>		
Oral		
LD50	Mouse	13000 mg/kg
	Rat	15000 mg/kg
Other		
LD50	Mouse	9200 mg/kg
	Rat	8200 mg/kg
Zinc Sulfate Monohydrate (CAS 7733-02-0)		
<u>Acute</u>		
Dermal		
LD50	Rabbit	> 2000 mg/kg, 24 Hours
Oral		
LD50	Mouse	1891 mg/kg
	Rat	2280 mg/kg
Other		
LD50	Mouse	316 mg/kg
	Rat	200 mg/kg
Skin corrosion/irritation	Prolonged skin contact may cause temporary irritation.	
Serious eye damage/eye irritation	Direct contact with eyes may cause temporary irritation.	
Respiratory or skin sensitization		
Respiratory sensitization	Not a respiratory sensitizer.	
Skin sensitization	This product is not expected to cause skin sensitization.	
Germ cell mutagenicity	No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.	
Carcinogenicity	Not classifiable as to carcinogenicity to humans.	
IARC Monographs. Overall Evaluation of Carcinogenicity		
Iron Sucrate (CAS Not Available)	3 Not classifiable as to carcinogenicity to humans.	
OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)		
Not listed.		
US. National Toxicology Program (NTP) Report on Carcinogens		
Not listed.		
Reproductive toxicity	This product is not expected to cause reproductive or developmental effects.	
Specific target organ toxicity - single exposure	Not classified.	
Specific target organ toxicity - repeated exposure	Not classified.	

Aspiration hazard	Not an aspiration hazard.
Chronic effects	Prolonged inhalation may be harmful.
Further information	This product has no known adverse effect on human health.

12. Ecological information

Ecotoxicity	The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.
Persistence and degradability	No data is available on the degradability of any ingredients in the mixture.
Bioaccumulative potential	No data available.
Mobility in soil	No data available.
Other adverse effects	No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

13. Disposal considerations

Disposal instructions	Collect and reclaim or dispose in sealed containers at licensed waste disposal site.
Local disposal regulations	Dispose in accordance with all applicable regulations.
Hazardous waste code	The waste code should be assigned in discussion between the user, the producer and the waste disposal company.
Waste from residues / unused products	Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).
Contaminated packaging	Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal.

14. Transport information

DOT
Not regulated as dangerous goods.

IATA
Not regulated as dangerous goods.

IMDG
Not regulated as dangerous goods.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code
Not applicable.

15. Regulatory information

US federal regulations
This product is not known to be a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200. All components are listed on or exempted from the U.S. EPA TSCA Inventory List.

Toxic Substances Control Act (TSCA)
All components of the mixture on the TSCA 8(b) inventory are designated "active".

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Ammonium Sulfate (CAS 7783-20-2) 1.0 % One-Time Export Notification only.

CERCLA Hazardous Substance List (40 CFR 302.4)

Copper Sulfate Pentahydrate (CAS 7758-98-7) Listed.
Ferrous Sulfate 30% (CAS 7720-78-7) Listed.
Zinc Sulfate Monohydrate (CAS 7733-02-0) Listed.

SARA 304 Emergency release notification

Not regulated.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)

Not listed.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

SARA 302 Extremely hazardous substance

Not listed.

SARA 311/312 Hazardous chemical No

SARA 313 (TRI reporting)

Chemical name	CAS number	% by wt.
AMMONIA (INCLUDES ANHYDROUS AMMONIA AND AQUEOUS AMMONIA FROM WATER DISSOCIABLE AMMONIUM SALTS AND OTHER SOURCES; 10% OF TOTAL AQUEOUS AMMONIA IS REPORTABLE UNDER THIS LISTING)	7722-76-1	5 - < 10
AMMONIA (INCLUDES ANHYDROUS AMMONIA AND AQUEOUS AMMONIA FROM WATER DISSOCIABLE AMMONIUM SALTS AND OTHER SOURCES; 10% OF TOTAL AQUEOUS AMMONIA IS REPORTABLE UNDER THIS LISTING)	7783-20-2	10 - < 20
COPPER COMPOUNDS (WITH EXCEPTIONS)	7758-98-7	< 1
ZINC COMPOUNDS	7733-02-0	< 1

Other federal regulations**Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List**

Not regulated.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Not regulated.

Safe Drinking Water Act (SDWA)

Contains component(s) regulated under the Safe Drinking Water Act.

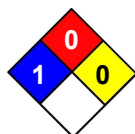
US state regulations**California Proposition 65**

WARNING: This product can expose you to cadmium, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

Cadmium (CAS 7440-43-9)

16. Other information, including date of preparation or last revision

Issue date 02-02-2021
Revision date 03-16-2022
Version # 02
NFPA ratings Health: 1
Flammability: 0
Instability: 0

NFPA ratings**Disclaimer**

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