

WINFIELD™

Safety Data Sheet Gravity G 8-2-12 w PCSCU & 2% Iron

SECTION 1: Identification

1.1 Product identifier

Product name Gravity G 8-2-12 w PCSCU & 2% Iron

1.2 Other means of identification

Granular fertilizer

1.3 Recommended use of the chemical and restrictions on use

For turf/ornamental fertilizer applications. See product label for application instructions.

1.4 Supplier's details

Name WINFIELD SOLUTIONS, LLC
Address P.O. Box 64589
St. Paul, MN 55164-0589

Telephone Non-Emergency Business Inquires: 1-855-494-6343
Mon - Fri 8am - 5pm (Central Standard Time)

1.5 Emergency phone number(s)

MEDICAL EMERGENCY TELEPHONE NUMBER: 1-877-424-7452 (24hrs)
**FOR EMERGENCY, SPILL, LEAK, FIRE, EXPOSURE, OR ACCIDENT,
CALL: CHEMTREC 1-800-424-9300 (24 hours)**

SECTION 2: Hazard identification

General hazard statement

Avoid creating dust when handling, using or storing. Use outdoors or in well ventilated area to avoid exposure to dust.

2.1 Classification of the substance or mixture

GHS classification in accordance with: OSHA (29 CFR 1910.1200)

- Serious eye damage/eye irritation, Cat. 2B
- Specific target organ toxicity (single exposure), Cat. 3
- Skin corrosion/irritation, Cat. 2

2.2 GHS label elements, including precautionary statements

Pictogram

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Signal word

Warning

Hazard statement(s)

H315 Causes skin irritation
 H320 Causes eye irritation
 H335 May cause respiratory irritation

Precautionary statement(s)

P261 Avoid breathing dust/fume/gas/mist/vapors/spray.
 P264 Wash hands thoroughly after handling.
 P271 Use only outdoors or in a well-ventilated area.
 P280 Wear protective gloves.
 P302+P352 IF ON SKIN: Wash with plenty of water/...
 P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
 P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing.
 P312 Call a POISON CENTER/doctor/.../ if you feel unwell.
 P321 Specific treatment (see First Aid section).
 P332+P313 If skin irritation occurs: Get medical advice/attention.
 P337+P313 If eye irritation persists: Get medical advice/attention.
 P362+P364 Take off contaminated clothing and wash it before reuse.
 P403+P233 Store in a well-ventilated place. Keep container tightly closed.
 P405 Store locked up.
 P501 Dispose of contents/container according to local regulations

2.3 Other hazards which do not result in classification

No data available

SECTION 3: Composition/information on ingredients

3.2 Mixtures

This Safety Data Sheet is not a guarantee of product specification or NPK value(s).

Hazardous components

Component	Concentration
Limestone (CAS no.: 1317-65-3)	40.59 - 46.035 % (weight)
Potassium chloride (CAS no.: 7447-40-7; EC no.: 231-211-8)	20 - 20.5 % (weight)
Urea (CAS no.: 57-13-6)	14.405 - 16.325 % (weight)
Iron oxide (CAS no.: 1332-37-2)	3.45 - 4.865 % (weight)
Diammonium phosphate (CAS no.: 7783-28-0)	4.3 - 4.5 % (weight)
Zinc oxide (CAS no.: 1314-13-2; EC no.: 215-222-5; Index no.: 030-013-00-7)	1.38 - 2.085 % (weight)
Manganese (II) oxide (CAS no.: 1344-43-0)	1.38 - 2.085 % (weight)
Sulfur (CAS no.: 7704-34-9; EC no.: 231-722-6; Index no.: 016-094-00-1)	0.532 - 1.755 % (weight)
Ferrous sulfate (CAS no.: 7782-63-0; EC no.: 231-753-5; Index no.: 026-003-01-4)	0.69 - 1.39 % (weight)
Manganese (II) Sulfate (CAS no.: 7785-87-7; EC no.: 232-089-9; Index no.: 025-003-00-4)	0.414 - 0.695 % (weight)
Copper sulfate (CAS no.: 7758-99-8; EC no.: 231-847-6; Index no.: 029-023-00-4)	0.414 - 0.695 % (weight)
Quartz (CAS no.: 14808-60-7; EC no.: 238-878-4)	< 0.465 % (weight)

Trade secret statement (OSHA 1910.1200(i))

*The specific chemical identities and/or actual concentrations or actual concentration ranges for one or more listed components are being withheld as trade secrets under the US regulation 29 CFR 1910.1200(i).

Note: The balance of the ingredients are not classified as hazardous or are below the concentration limit to be classified as hazardous, under the criteria of the Federal OSHA Hazard Communication

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Standard 29CFR 1910.1200.

SECTION 4: First-aid measures

4.1 Description of necessary first-aid measures

General advice	Consult a physician. Show this safety data sheet to the doctor in attendance.
If inhaled	Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Use oxygen as required, provided by a qualified operator. Get medical attention if irritation develops and persists
In case of skin contact	Wash off immediately with plenty of water for at least 15 minutes. Take off contaminated clothing and shoes immediately. Wash contaminated clothing before re-use. Get medical attention if irritation develops and persists.
In case of eye contact	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Get medical attention if irritation develops and persists.
If swallowed	Call a poison center or doctor if you feel unwell. If vomiting occurs naturally, have victim lean forward to reduce the risk of aspiration. Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person.

4.2 Most important symptoms/effects, acute and delayed

INHALATION: May cause respiratory irritation.

SKIN: Skin irritation

EYES: Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result.

INGESTION: May cause discomfort if swallowed. May be harmful if swallowed in large quantities.

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

Notes to physician: Treat symptomatically.

SECTION 5: Fire-fighting measures

5.1 Suitable extinguishing media

Use extinguishing agent suitable for type of surrounding fire. Avoid excessive water to minimize runoff. Prevent firefighter water from entering the environment.

Small fires: Water spray, foam, dry chemical or CO₂

Large fires: Water spray, fog or foam.

5.2 Specific hazards arising from the chemical

Container may rupture on heating. Cool closed containers exposed to fire with water spray. Do not allow run-off from firefighting to enter drains or water courses. Explosive reactions with oxidizing agents such as potassium chlorate and/or peroxides. In case of fire hazardous decomposition products may be produced such as:

Ammonia

Carbon monoxide

Carbon dioxide (CO₂)

Potassium chloride: Hydrogen chloride gas, Potassium oxides

Copper(II) sulfate pentahydrate: Sulphur oxides, Copper oxides

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Zinc oxide: Zinc/zinc oxides

5.3 Special protective actions for fire-fighters

In the event of fire and/or explosion do not breathe fumes. In the case of respirable dust and/or fumes, use self-contained breathing apparatus and dust impervious protective suit.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Wear personal protective equipment. Unprotected persons must be kept away. Evacuate personnel to safe areas. Provide adequate ventilation. Avoid dust formation. Avoid breathing dust.

6.2 Environmental precautions

Fertilizers will dissolve and disperse in water and promote algae growth, Notify downstream water users of any release that may affect water quality

6.3 Methods and materials for containment and cleaning up

Do not flush into surface water or sanitary sewer system. Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Clean contaminated surface thoroughly. Pick up and arrange disposal without creating dust. Use a suitable vacuum cleaner.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Keep out of reach of children. Do not swallow. Avoid breathing dust or mist. Avoid contact with eyes, skin, and clothing. Keep away from heat, sparks and flame. Good housekeeping and controlling of dusts are necessary for safe handling of product. Wash thoroughly after handling. Eating, drinking and smoking is prohibited when handling product. Use with adequate ventilation. Provide exhaust ventilation if dust is formed. Handle in accordance with good industrial hygiene and safety practice.

7.2 Conditions for safe storage, including any incompatibilities

Keep containers tightly closed in a dry, cool and well-ventilated place. Containers should be protected against falling down. Containers which are opened must be carefully resealed and kept upright to prevent leakage. Store away from incompatible substances. Avoid generation and spreading of dust.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

CAS: 1314-13-2

Zinc oxide, Total dust

NIOSH: 5 mg/m³, (C) 15 mg/m³ REL inhalation; OSHA: 15 mg/m³ PEL inhalation

CAS: 1317-65-3

Limestone, Total dust

Ca/OSHA: 10 mg/m³ PEL inhalation; NIOSH: 10 mg/m³ REL inhalation; OSHA: 15 mg/m³ PEL inhalation

CAS: 14808-60-7 (EC: 238-878-4)

Silica, crystalline

ACGIH: 0.025 mg/m³ (resp.) for α -quartz and cristobalite TLV® inhalation; NIOSH: 0.05 mg/m³ REL inhalation;

OSHA: 10 mg/m³ respirable 30 mg/m³ total PEL-TWA inhalation

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CAS: 7704-34-9 (EC: 231-722-6)

Sulfur

ACGIH: 10mg/m³ TWA; OSHA: 15 mg/md PEL-TWA

CAS: 7758-99-8 (EC: 231-847-6)

Copper(II) sulfate pentahydrate

NIOSH: 1 mg/m³ REL-TWA inhalation

CAS: 7783-28-0

Ammonium phosphate dibasic

ACGIH: 10 mg/m³ TWA inhalation; OSHA:
15 mg/m³ TWA inhalation

8.2 Appropriate engineering controls

Use adequate general or local exhaust ventilation to keep airborne concentrations below the permissible exposure limits.

8.3 Individual protection measures, such as personal protective equipment (PPE)

Eye/face protection

Wear as appropriate: Safety glasses with side-shields

Skin protection

Gloves: Gloves must be inspected prior to use. Replace when worn. Wash hands before breaks and at the end of workday.

Body protection

Wear appropriate protective clothing to prevent skin exposure.

Remove and wash contaminated clothing before re-use. Wash working clothes separately.

Respiratory protection

A NIOSH approved air purifying respirator with a type 95 (R or P) particulate filter may be used under conditions where airborne concentrations are expected to exceed exposure limits or respiratory irritation is experienced.

Protection provided by air purifying respirators is limited (see manufacturer's respirator selection guide). A respiratory protection program that meets OSHA's 29 CFR 1910.134 and ANSI Z88.2 requirements must be followed if workplace conditions warrant a respirator use.

SECTION 9: Physical and chemical properties

Information on basic physical and chemical properties

Appearance/form (physical state, color, etc.)	Multi-color granules
Odor	No data available.
Odor threshold	No data available.
pH	No data available.
Melting point/freezing point	No data available.
Initial boiling point and boiling range	No data available.
Flash point	No data available.
Evaporation rate	No data available.
Flammability (solid, gas)	No data available.
Upper/lower flammability limits	No data available.
Upper/lower explosive limits	No data available.
Vapor pressure	No data available.
Vapor density	No data available.
Relative density	No data available.
Solubility(ies)	No data available.

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Partition coefficient: n-octanol/water	No data available.
Auto-ignition temperature	No data available.
Decomposition temperature	No data available.
Viscosity	No data available.
Explosive properties	No data available.
Oxidizing properties	No data available.

Other safety information

Bulk Density: 76.0

SECTION 10: Stability and reactivity

10.1 Reactivity

Stable under recommended storage and use conditions. Some components may react if exposed to incompatible materials.

10.2 Chemical stability

Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions

Hazardous polymerization does not occur.

10.4 Conditions to avoid

Contact with incompatible materials. Keep away from open flames, hot surfaces and sources of ignition.

10.5 Incompatible materials

Contact with powerful oxidizing agents such as fluorine, boron trifluoride, chlorine trifluoride, manganese trifluoride, and oxygen difluoride may cause fire and/or explosions. Some components of limestone may react vigorously with water and strong acids.

Potassium chloride: Strong acids, Strong oxidizing agents

Copper(II) sulfate pentahydrate: Powdered metals, Anhydrous copper(II) sulfate, reacts violently with:, hydroxylamine, Magnesium

Silica, crystalline : Hydrogen fluoride

10.6 Hazardous decomposition products

The decomposition of fertilizer products may result in the generation of some or all of the following: ammonia, formaldehyde, biuret, chlorine, cyanic acid, and cyanide, and oxides of carbon, nitrogen, phosphorus, potassium, sulfur, and chlorine, and oxides of alkaline earth metals, and certain heavier metals used as nutrients in fertilizer products, such as copper, iron, manganese, and zinc, and other irritating and toxic fumes and gases.

SECTION 11: Toxicological information

Information on toxicological effects

Acute toxicity

Ammonium phosphate dibasic
LD50 Oral - Rat - 6500 nmg/kg

Ammonium phosphate dibasic

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LD50 Skin - Rabbit - > 2,000 mg/kg

Copper(II) sulfate pentahydrate
LD50 Oral - Rat - 482 mg/kg

Potassium chloride
LD50 Oral - Rat - 2600 mg/kg
Citation: The National Institute for Occupational Safety and Health (NIOSH)
<https://www.cdc.gov/niosh-rtecs/TS7AD550.html>

Sulfur
LD50 Skin - Rat - >2000 mg/kg - 24 hr

Sulfur
LD50 Inhalation - Rat - > 5.43 g/m³ - 4 hr

Sulfur
LD50 Oral - Rat - > 2000 mg/kg

UREA
LD50 Oral - Rat - > 8471 mg/kg

Zinc oxide
LD50 Oral - Mouse - 7,950 mg/kg

Zinc oxide
LC50 Inhalation - Mouse - 2,500 mg/m³

Skin corrosion/irritation

Irritating to skin. Signs/symptoms may include localized redness, swelling, and itching.

Serious eye damage/irritation

Causes eye irritation. Signs/symptoms may include redness, swelling, pain, tearing, and blurred or hazy vision.

Respiratory or skin sensitization

May cause respiratory irritation. May cause allergy or asthma symptoms or breathing difficulties if inhaled

Germ cell mutagenicity

No data available

Carcinogenicity

Limestone may contain small amounts of crystalline and amorphous silica as a natural impurity. The International Agency for Cancer Research (IARC) has classified crystalline silica as a carcinogen to humans (Group 1), and amorphous silica as not classifiable as to its carcinogenicity to humans (Group 3). See "Silica, Some Silicates, Coal dust and para-Aramid Fibrils in IARC Monographs on the Evaluation of Carcinogenic Risks to Humans", (Vol. 68).

Reproductive toxicity

No data available

STOT-single exposure

May cause respiratory irritation. May cause drowsiness or dizziness

STOT-repeated exposure

May cause damage to organs through prolonged or repeated exposure

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Aspiration hazard

No data available.

SECTION 12: Ecological information

Toxicity

Ammonium phosphate dibasic: Slightly toxic to practically non-toxic to aquatic organisms based on the Federal Insecticide Fungicide and Rodenticide Act (FIFRA) acute toxicity ratings.

Calcium carbonate (Natural)

LC50 - Oncorhynchus mykiss (rainbow trout) - > 10000 mg/l - 96 hr

Copper(II) sulfate pentahydrate

EC50 - Daphnia magna (water flea) - 0.024 mg/l - 48 h

Potassium chloride

LC50 - Pimephales promelas (fathead minnow) - 880 mg/l - 96 h

Potassium chloride

EC50 - Daphnia magna (water flea) - >440 mg/l - 48 h

Remarks: (OECD Test Guideline 202)

UREA

EC50 - Daphnia magna (water flea) - > 10000 mg/l - 96 hr

UREA

LC50 - Leuciscus idus (golden orfe) - >6810 mg/l - 96 hr

Zinc oxide

LC50 - Oncorhynchus mykiss (rainbow trout) - 1.1 mg/l - 96 h

Zinc oxide

EC50 - Daphnia magna (water flea) - 0.098 mg/l - 48 h

Persistence and degradability

Ammonium phosphate dibasic: Phosphates are converted to calcium or iron/aluminum phosphates or are incorporated with the organic soil matter.

Bioaccumulative potential

Not expected to bioconcentrate or bioaccumulate.

Mobility in soil

This product is water soluble and may disperse in soil

Results of PBT and vPvB assessment

No data available.

Other adverse effects

May be toxic to aquatic life. In sufficient quantity may deplete oxygen required by aquatic life. May cause eutrophication of ponds and lakes.

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SECTION 13: Disposal considerations

Disposal of the product

Dispose in accordance with all applicable regulations. Recover or recycle if possible. Properly characterize all waste materials.

Disposal of contaminated packaging

Empty containers should be taken to an approved waste handling site for recycling or disposal.

Waste treatment

Consult federal, state/provincial and local regulations regarding the proper disposal of this material.

Sewage disposal

Prevent material from entering sewers, storm drains, other unauthorized treatment drainage systems, and natural waterways.

SECTION 14: Transport information

14.1 UN Number	None
14.2 UN Proper Shipping Name	None
14.3 Transport hazard class(es)	None
14.4 Packing group	None
14.5 Environmental hazards	None
14.6 Special precautions for user	None
14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code	None

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations specific for the product in question

California Prop. 65 Components

WARNING! This product contains a chemical known to the State of California to cause cancer.

Quartz (crystalline silica)

CAS-No. 14808-60-7

CERCLA

Not listed

Massachusetts Right To Know Components

Chemical name: Cupric sulfate

CAS number: 7758-98-7

Chemical name: Ferrous sulfate

CAS number: 7720-78-7

Chemical name: Zinc oxide

CAS number: 1314-13-2

Chemical name: Quartz

CAS number: 14808-60-7

New Jersey Right To Know Components

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Chemical name: Cupric sulfate
CAS number: 7758-98-7

Common name: ZINC OXIDE
CAS number: 1314-13-2

Common name: SILICA, QUARTZ
CAS number: 14808-60-7

Pennsylvania Right To Know Components

Chemical name: Cupric sulfate
CAS number: 7758-98-7

Chemical name: Sulfuric acid, iron(2+) salt (1:1)
CAS number: 7720-78-7

Chemical name: Zinc oxide
CAS number: 1314-13-2

Chemical name: Quartz
CAS number: 14808-60-7

Chemical name: Limestone
CAS number: 1317-65-3

Chemical name: Sulfur
CAS number: 7704-34-9

SARA 302 Components

No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 311/312 Hazards

Immediate (acute) health hazard

SARA 313 Components

This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

Toxic Substances Control Act (TSCA) Inventory

Components Listed

SECTION 16: Other information

This safety data sheet was developed from safety data sheets of suppliers of the constituent materials identified herein and does not relate to the use of such materials in combination with any other material or beyond its intended use. This information is based on our present knowledge and is provided according to the relevant national regulations.

16.1 Further information/disclaimer

This information is intended as a characterization of the product in order to provide guidance for the relevant safety issues. However, this document does not provide any warranty, expressed or implied, regarding the properties of the product. No warranty is expressed or implied with respect to the completeness or ongoing accuracy of the

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information contained in this data sheet, and Ferti Technologies. disclaims all liability for reliance on such information. This data sheet is not a guarantee of safety. Users are responsible for ensuring that they have all current information necessary to safely use the product described by this data sheet for their specific purposes.

16.2 Preparation information

The classification of the mixture was set based on the regulation (US) HazCom 1910.1200 [HCS 2012].