

# SAFETY DATA SHEET



## 1. Identification

**Product identifier** Perfection Double Duty 28-2-10  
**Other means of identification** None.  
**Recommended use** Turf & Ornamental Product - Plant Nutrition  
**Recommended restrictions** None known.  
**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** Acute toxicity, inhalation Category 4  
**Environmental hazards** Not classified.  
**OSHA defined hazards** Not classified.

### Label elements



**Signal word** Warning  
**Hazard statement** Harmful if inhaled.  
**Precautionary statement**  
**Prevention** Avoid breathing dust. Use only outdoors or in a well-ventilated area.  
**Response** If inhaled: Remove person to fresh air and keep comfortable for breathing. Call a poison center/doctor if you feel unwell.  
**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       | 60 - < 70 |
| Potassium Chloride     |                          | 7447-40-7     | 10 - < 20 |
| Ammonium Sulfate       |                          | 7783-20-2     | 5 - < 10  |
| Iron Oxysulfate        |                          | Not Available | 3 - < 5   |
| Monoammonium Phosphate |                          | 7722-76-1     | 3 - < 5   |
| Potassium Sulfate      |                          | 7778-80-5     | 3 - < 5   |

| Chemical name                            | Common name and synonyms | CAS number | %       |
|--|--------------------------|------------|---------|
| Ferrous Sulfate                          |                          | 7720-78-7  | 1 - < 3 |
| Other components below reportable levels |                          |            | 3 - < 5 |

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

#### 4. First-aid measures

|   |   |
|---|---|
| <b>Inhalation</b>   | Remove victim to fresh air and keep at rest in a position comfortable for breathing. Oxygen or artificial respiration if needed. Call a poison center or doctor/physician if you feel unwell. |
| <b>Skin contact</b>   | Rinse with water. Get medical attention if irritation develops and persists.  |
| <b>Eye contact</b>  | Do not rub eyes. Rinse with water. Get medical attention if irritation develops and persists.   |
| <b>Ingestion</b>  | Rinse mouth. Get medical attention if symptoms occur.   |
| <b>Most important symptoms/effects, acute and delayed</b>                     | Dusts may irritate the respiratory tract, skin and eyes.  |
| <b>Indication of immediate medical attention and special treatment needed</b> | Provide general supportive measures and treat symptomatically. Keep victim warm. Keep victim under observation. Symptoms may be delayed.  |
| <b>General information</b>  | Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.  |

#### 5. Fire-fighting measures

|  |   |
|--|---|
| <b>Suitable extinguishing media</b>                                  | Water fog. Foam. Dry chemical powder. Carbon dioxide (CO <sub>2</sub> ).                      |
| <b>Unsuitable extinguishing media</b>                                | Do not use water jet as an extinguisher, as this will spread the fire.                        |
| <b>Specific hazards arising from the chemical</b>                    | During fire, gases hazardous to health may be formed.   |
| <b>Special protective equipment and precautions for firefighters</b> | Self-contained breathing apparatus and full protective clothing must be worn in case of fire. |
| <b>Fire fighting equipment/instructions</b>                          | Use water spray to cool unopened containers.  |
| <b>Specific methods</b>  | Use standard firefighting procedures and consider the hazards of other involved materials.    |
| <b>General fire hazards</b>  | No unusual fire or explosion hazards noted.   |

#### 6. Accidental release measures

|  |   |
|--|---|
| <b>Personal precautions, protective equipment and emergency procedures</b> | Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Wear appropriate protective equipment and clothing during clean-up. Avoid inhalation of dust. Use a NIOSH/MSHA approved respirator if there is a risk of exposure to dust/fume at levels exceeding the exposure limits. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.  |
| <b>Methods and materials for containment and cleaning up</b>               | Avoid dispersal of dust in the air (i.e., clearing dust surfaces with compressed air). Collect dust using a vacuum cleaner equipped with HEPA filter. Stop the flow of material, if this is without risk.<br><br>Large Spills: Wet down with water and dike for later disposal. Shovel the material into waste container. Following product recovery, flush area with water.<br><br>Small Spills: Sweep up or vacuum up spillage and collect in suitable container for disposal.<br><br>Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS. |
| <b>Environmental precautions</b>   | Avoid discharge into drains, water courses or onto the ground.  |

#### 7. Handling and storage

|   |   |
|---|---|
| <b>Precautions for safe handling</b>                                | Minimize dust generation and accumulation. Avoid breathing dust. Avoid prolonged exposure. Use only outdoors or in a well-ventilated area. Wear appropriate personal protective equipment. Observe good industrial hygiene practices. |
| <b>Conditions for safe storage, including any incompatibilities</b> | 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  |
|-----------------|------|----------|-------|
| Iron Oxysulfate | PEL  | 10 mg/m3 | Fume. |

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

| Components      | Type | Value    | Form                 |
|-----------------|------|----------|----------------------|
| Iron Oxysulfate | 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                 |
|---------------------------------|------|---------|----------------------|
| Ferrous Sulfate (CAS 7720-78-7) | TWA  | 1 mg/m3 |                      |
| Iron Oxysulfate                 | TWA  | 5 mg/m3 | Respirable fraction. |

**US. NIOSH: Pocket Guide to Chemical Hazards**

| Components                      | Type | Value   | Form           |
|---------------------------------|------|---------|----------------|
| Ferrous Sulfate (CAS 7720-78-7) | TWA  | 1 mg/m3 |                |
| Iron Oxysulfate                 | 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** Chemical respirator with organic vapor cartridge, full facepiece, dust and mist filter.

**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. Chemical respirator with organic vapor cartridge, full facepiece, dust and mist filter.

**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**

|                                     |                          |
|-------------------------------------|--------------------------|
| <b>Appearance</b>                   | Granular Blend           |
| <b>Physical state</b>               | Solid.                   |
| <b>Form</b>                         | Solid Granules           |
| <b>Color</b>                        | Various colored granules |
| <b>Odor</b>                         | None.                    |
| <b>Odor threshold</b>               | Not available.           |
| <b>pH</b>                           | Not available.           |
| <b>Melting point/freezing point</b> | Not available.           |

|   |                |
|---|----------------|
| <b>Initial boiling point and boiling range</b>      | Not available. |
| <b>Flash point</b>                                  | Not available. |
| <b>Evaporation rate</b>                             | Not available. |
| <b>Flammability (solid, gas)</b>                    | Not available. |
| <b>Upper/lower flammability or explosive limits</b> |                |
| <b>Flammability limit - lower (%)</b>               | Not available. |
| <b>Flammability limit - upper (%)</b>               | Not available. |
| <b>Explosive limit - lower (%)</b>                  | Not available. |
| <b>Explosive limit - upper (%)</b>                  | Not available. |
| <b>Vapor pressure</b>                               | Not available. |
| <b>Vapor density</b>                                | Not available. |
| <b>Relative density</b>                             | Not available. |
| <b>Solubility(ies)</b>                              |                |
| <b>Solubility (water)</b>                           | 50 %           |
| <b>Auto-ignition temperature</b>                    | Not available. |
| <b>Decomposition temperature</b>                    | Not available. |
| <b>Viscosity</b>                                    | Not available. |
| <b>Other information</b>                            |                |
| <b>Explosive properties</b>                         | Not explosive. |
| <b>Oxidizing properties</b>                         | Not oxidizing. |

## 10. Stability and reactivity

|   |  |
|---|--|
| <b>Reactivity</b>                         | The product is stable and non-reactive under normal conditions of use, storage and transport.    |
| <b>Chemical stability</b>                 | Material is stable under normal conditions.  |
| <b>Possibility of hazardous reactions</b> | No dangerous reaction known under conditions of normal use.                                      |
| <b>Conditions to avoid</b>                | Avoid temperatures exceeding the decomposition temperature. Contact with incompatible materials. |
| <b>Incompatible materials</b>             | Strong oxidizing agents.   |
| <b>Hazardous decomposition products</b>   | No hazardous decomposition products are known.   |

## 11. Toxicological information

### Information on likely routes of exposure

|                     |  |
|---------------------|--|
| <b>Inhalation</b>   | Harmful if inhaled.                    |
| <b>Skin contact</b> | Dust or powder may irritate the skin.  |
| <b>Eye contact</b>  | Dust may irritate the eyes.            |
| <b>Ingestion</b>    | 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**      Harmful if inhaled.

| <b>Product</b>                 | <b>Species</b> | <b>Test Results</b>    |
|--------------------------------|----------------|------------------------|
| Perfection Double Duty 28-2-10 |                |                        |
| <u><b>Acute</b></u>            |                |                        |
| <b>Dermal</b>                  |                |                        |
| <i>Solid</i>                   |                |                        |
| LD50                           | Rabbit         | > 2000 mg/kg, 24 hours |

| Product                                | Species        | Test Results           |
|--|----------------|------------------------|
| <b>Oral</b><br><i>Solid</i><br>LD50    | Rat            | > 10000 mg/kg          |
| <b>Components</b>                      | <b>Species</b> | <b>Test Results</b>    |
| Ammonium Sulfate (CAS 7783-20-2)       |                |                        |
| <b>Acute</b>                           |                |                        |
| <b>Dermal</b>                          |                |                        |
| LD50                                   | Mouse          | > 2000 mg/kg           |
|  | Rat            | > 2000 mg/kg           |
| <b>Oral</b>                            |                |                        |
| LD50                                   | Mouse          | > 2000 mg/kg           |
|  | Rat            | 4250 mg/kg             |
| Ferrous Sulfate (CAS 7720-78-7)        |                |                        |
| <b>Acute</b>                           |                |                        |
| <b>Dermal</b>                          |                |                        |
| LD50                                   | Rat            | > 2000 mg/kg, 24 Hours |
| <b>Oral</b>                            |                |                        |
| LD50                                   | Rat            | > 2000 mg/kg           |
| Iron Oxysulfate                        |                |                        |
| <b>Acute</b>                           |                |                        |
| <b>Oral</b>                            |                |                        |
| LD50                                   | Rat            | > 10000 mg/kg          |
| Monoammonium Phosphate (CAS 7722-76-1) |                |                        |
| <b>Acute</b>                           |                |                        |
| <b>Dermal</b>                          |                |                        |
| LD50                                   | Rabbit         | > 5000 mg/kg, 24 Hours |
|  | Rat            | > 5000 mg/kg, 24 Hours |
| <b>Inhalation</b>                      |                |                        |
| LC50                                   | Rat            | > 5 mg/l, 4 Hours      |
| <b>Oral</b>                            |                |                        |
| LD50                                   | Rat            | 3252 mg/kg             |
| Potassium Chloride (CAS 7447-40-7)     |                |                        |
| <b>Acute</b>                           |                |                        |
| <b>Oral</b>                            |                |                        |
| LD50                                   | Rat            | 3020 mg/kg             |
| Potassium Sulfate (CAS 7778-80-5)      |                |                        |
| <b>Acute</b>                           |                |                        |
| <b>Dermal</b>                          |                |                        |
| LD50                                   | Rat            | > 2000 mg/kg, 24 Hours |
| <b>Oral</b>                            |                |                        |
| LD50                                   | Rat            | > 2000 mg/kg           |
| Urea (CAS 57-13-6)                     |                |                        |
| <b>Acute</b>                           |                |                        |
| <b>Oral</b>                            |                |                        |
| LD50                                   | Mouse          | 13000 mg/kg            |
|  | Rat            | 15000 mg/kg            |
| <b>Other</b>                           |                |                        |
| LD50                                   | Mouse          | 9200 mg/kg             |
|  | Rat            | 8200 mg/kg             |

**Skin corrosion/irritation** Prolonged skin contact may cause temporary irritation.

|   |  |
|---|--|
| <b>Serious eye damage/eye irritation</b>                              | Direct contact with eyes may cause temporary irritation.   |
| <b>Respiratory or skin sensitization</b>                              |  |
| <b>Respiratory sensitization</b>                                      | Not a respiratory sensitizer.  |
| <b>Skin sensitization</b>   | This product is not expected to cause skin sensitization.  |
| <b>Germ cell mutagenicity</b>   | No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic. |
| <b>Carcinogenicity</b>  | Not classifiable as to carcinogenicity to humans.  |
| <b>IARC Monographs. Overall Evaluation of Carcinogenicity</b>         |  |
| Iron Oxysulfate (CAS Not Available)                                   | 3 Not classifiable as to carcinogenicity to humans.  |
| <b>OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)</b> |  |
| Not listed.   |  |
| <b>US. National Toxicology Program (NTP) Report on Carcinogens</b>    |  |
| Not listed.   |  |
| <b>Reproductive toxicity</b>  | This product is not expected to cause reproductive or developmental effects.                                     |
| <b>Specific target organ toxicity - single exposure</b>               | Not classified.  |
| <b>Specific target organ toxicity - repeated exposure</b>             | Not classified.  |
| <b>Aspiration hazard</b>  | Not an aspiration hazard.  |
| <b>Chronic effects</b>  | Prolonged inhalation may be harmful.   |

## 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.

| Product                        | Species |         | Test Results                      |
|--------------------------------|---------|---------|-----------------------------------|
| Perfection Double Duty 28-2-10 |         |         |                                   |
| <b>Aquatic</b>                 |         |         |                                   |
| Crustacea                      | EC50    | Daphnia | 404.0048 mg/l, 48 hours estimated |
| Fish                           | LC50    | Fish    | 634.3409 mg/l, 96 hours estimated |

|                                      |   |
|--------------------------------------|---|
| <b>Persistence and degradability</b> | No data is available on the degradability of any ingredients in the mixture.  |
| <b>Bioaccumulative potential</b>     | No data available.  |
| <b>Mobility in soil</b>              | No data available.  |
| <b>Other adverse effects</b>         | 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

|  |  |
|--|--|
| <b>Disposal instructions</b>                 | Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Dispose of contents/container in accordance with local/regional/national/international regulations.                         |
| <b>Local disposal regulations</b>            | Dispose in accordance with all applicable regulations.   |
| <b>Hazardous waste code</b>                  | The waste code should be assigned in discussion between the user, the producer and the waste disposal company.   |
| <b>Waste from residues / unused products</b> | 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). |
| <b>Contaminated packaging</b>                | 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

|             |                                   |
|-------------|-----------------------------------|
| <b>DOT</b>  | Not regulated as dangerous goods. |
| <b>IATA</b> | Not regulated as dangerous goods. |
| <b>IMDG</b> | 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 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)** One or more components of the mixture are not on the TSCA 8(b) inventory or are designated "inactive".

**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)**  
Ferrous Sulfate (CAS 7720-78-7) 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** Yes

**Classified hazard categories** Acute toxicity (any route of exposure)

### 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  | 3 - < 5  |
| 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  | 5 - < 10 |

### 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)** Not regulated.

### 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](http://www.P65Warnings.ca.gov).

Cadmium (CAS 7440-43-9)

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

**Issue date** 02-23-2021  
**Version #** 01  
**NFPA ratings** Health: 2  
Flammability: 0  
Instability: 0

**NFPA ratings**



**Disclaimer**

Not available.