1. Identification

Product identifier LINK DEEP ROOT W/QUALITY PLUS
Other means of identification None.
Recommended use Ag Product - Plant Nutrition
Recommended restrictions None known.

Manufacturer/Importer/Supplier/Distributor information

Manufacturer
Company name Wilbur Ellis Company
Address Wilbur Ellis Company - Agribusiness Division
8131 W. Grandbridge Blvd, Suite 200
Kennewick, WA 99336
United States

Telephone Branded Products Information (800) 500-1698
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, oral Category 4
Skin corrosion/irritation Category 2
Serious eye damage/eye irritation Category 2

Environmental hazards Not classified.
OSHA defined hazards Not classified.

Label elements

Signal word Warning
Hazard statement Harmful if swallowed. Causes skin irritation. Causes serious eye irritation.
Precautionary statement
Prevention Wash thoroughly after handling. Do not eat, drink or smoke when using this product. Wear protective gloves. Wear eye/face protection.
Response IF SWALLOWED: Call a poison center or doctor or doctor if you feel unwell. If on skin: Wash with plenty of water. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Rinse mouth. If skin irritation occurs: Get medical attention. If eye irritation persists: Get medical attention. Take off contaminated clothing and wash before reuse.
Storage Store away from incompatible materials.
Disposal Dispose of contents and container in accordance with government regulations.

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

Supplemental information 2.27% of the mixture consists of component(s) of unknown acute oral toxicity.

3. Composition/information on ingredients

Mixtures

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>Common name and synonyms</th>
<th>CAS number</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Urea</td>
<td></td>
<td>57-13-6</td>
<td>10 - &lt; 20</td>
</tr>
<tr>
<td>Chemical name</td>
<td>Common name and synonyms</td>
<td>CAS number</td>
<td>%</td>
</tr>
<tr>
<td>-------------------------------</td>
<td>--------------------------</td>
<td>-------------</td>
<td>------</td>
</tr>
<tr>
<td>EDTA Acid</td>
<td></td>
<td>60-00-4</td>
<td>5 - &lt; 10</td>
</tr>
<tr>
<td>Potassium Hydroxide</td>
<td></td>
<td>1310-58-3</td>
<td>5 - &lt; 10</td>
</tr>
<tr>
<td>Phosphorous Acid</td>
<td></td>
<td>13598-36-2</td>
<td>3 - &lt; 5</td>
</tr>
<tr>
<td>Potassium Carbonate</td>
<td></td>
<td>584-08-7</td>
<td>3 - &lt; 5</td>
</tr>
<tr>
<td>Ammonium Nitrate</td>
<td></td>
<td>6484-52-2</td>
<td>1 - &lt; 3</td>
</tr>
<tr>
<td>Other components below reportable levels</td>
<td></td>
<td>50 - &lt; 60</td>
<td></td>
</tr>
</tbody>
</table>

Percentage ranges of composition to protect confidentiality or due to batch variation.

This product is a neutralized solution of the ingredients listed above, and other non-hazardous or below reportable threshold ingredients.

4. First-aid measures

Inhalation
Move to fresh air. Call a physician if symptoms develop or persist.

Skin contact
Remove contaminated clothing. Wash with plenty of soap and water. If skin irritation occurs: Get medical attention. Wash contaminated clothing before reuse.

Eye contact
Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention if irritation develops and persists.

Ingestion
Rinse mouth. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs. Get medical attention if you feel unwell.

Most important symptoms/effects, acute and delayed
Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Skin irritation. May cause redness and pain.

Indication of immediate medical attention and special treatment needed
Provide general supportive measures and treat symptomatically. Keep victim warm. Keep victim under observation. Symptoms may be delayed.

General information
Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Show this safety data sheet to the doctor in attendance.

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
Move containers from fire area if you can do so without risk.

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. Keep people away from and upwind of spill/leak. Keep out of low areas. Wear appropriate protective equipment and clothing during clean-up. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.

Methods and materials for containment and cleaning up
Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Cover with plastic sheet to prevent spreading. Absorb in vermiculite, dry sand or earth and place into containers. Prevent entry into waterways, sewer, basements or confined areas. Following product recovery, flush area with water.

Small Spills: Wipe up with inert absorbent material. Clean surface thoroughly to remove residual contamination.

Environmental precautions
Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS.

Avoid discharge into drains, water courses or onto the ground.
7. Handling and storage

Precautions for safe handling
Avoid contact with eyes, skin, and clothing. Avoid prolonged exposure. Do not taste or swallow. When using, do not eat, drink or smoke. Provide adequate ventilation. Wear appropriate personal protective equipment. Wash hands thoroughly after handling. Observe good industrial hygiene practices.

Conditions for safe storage, including any incompatibilities
Store in original tightly closed container. Store away from incompatible materials (see Section 10 of the SDS).

8. Exposure controls/personal protection

Occupational exposure limits

<table>
<thead>
<tr>
<th>US. ACGIH Threshold Limit Values Components</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Potassium Hydroxide (CAS 1310-58-3) Ceiling</td>
<td>2 mg/m³</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>US. NIOSH: Pocket Guide to Chemical Hazards Components</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Potassium Hydroxide (CAS 1310-58-3) TWA</td>
<td>2 mg/m³</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>US. Workplace Environmental Exposure Level (WEEL) Guides Components</th>
<th>Value</th>
<th>Form</th>
</tr>
</thead>
<tbody>
<tr>
<td>Urea (CAS 57-13-6) TWA</td>
<td>10 mg/m³</td>
<td>Total particulate.</td>
</tr>
</tbody>
</table>

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

Appropriate engineering controls
Good general ventilation (typically 10 air changes per hour) 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. Eye wash facilities and emergency shower must be available when handling this product.

Individual protection measures, such as personal protective equipment

Eye/face protection
Face shield is recommended. Wear safety glasses with side shields (or goggles).

Skin protection

Hand protection
Wear appropriate chemical resistant gloves.

Other
Wear appropriate chemical resistant clothing.

Respiratory protection
In case of insufficient ventilation, wear suitable respiratory equipment.

Thermal hazards
Wear appropriate thermal protective clothing, when necessary.

General hygiene considerations
Keep away from food and drink. 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

<table>
<thead>
<tr>
<th>Appearance</th>
<th>Brown liquid.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical state</td>
<td>Liquid.</td>
</tr>
<tr>
<td>Form</td>
<td>Liquid.</td>
</tr>
<tr>
<td>Color</td>
<td>Brown</td>
</tr>
<tr>
<td>Odor</td>
<td>Amine-like.</td>
</tr>
<tr>
<td>Odor threshold</td>
<td>Not available.</td>
</tr>
<tr>
<td>pH</td>
<td>Not available.</td>
</tr>
<tr>
<td>Melting point/freezing point</td>
<td>Not available.</td>
</tr>
<tr>
<td>Initial boiling point and boiling range</td>
<td>Not available.</td>
</tr>
<tr>
<td>Flash point</td>
<td>Not available.</td>
</tr>
<tr>
<td>Evaporation rate</td>
<td>Not available.</td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>Not available.</td>
</tr>
</tbody>
</table>
Upper/lower flammability or explosive limits

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flammability limit - lower (%)</td>
<td>Not available</td>
</tr>
<tr>
<td>Flammability limit - upper (%)</td>
<td>Not available</td>
</tr>
<tr>
<td>Explosive limit - lower (%)</td>
<td>Not available</td>
</tr>
<tr>
<td>Explosive limit - upper (%)</td>
<td>Not available</td>
</tr>
</tbody>
</table>

Vapor pressure, Vapor density, Relative density, Solubility(ies), Partition coefficient (n-octanol/water), Auto-ignition temperature, Decomposition temperature, Viscosity, Other information:

- Density: 11.01 lb/gal
- Specific gravity: 1.32

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: Contact with incompatible materials.
- 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: Prolonged inhalation may be harmful.
  - Skin contact: Causes skin irritation.
  - Eye contact: Causes serious eye irritation.
  - Ingestion: Harmful if swallowed.

- Symptoms related to the physical, chemical and toxicological characteristics: Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Skin irritation. May cause redness and pain.

- Information on toxicological effects:
  - Acute toxicity: Harmful if swallowed.

<table>
<thead>
<tr>
<th>Component</th>
<th>Species</th>
<th>Test Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ammonium Nitrate (CAS 6484-52-2)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Acute</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dermal</td>
<td></td>
<td></td>
</tr>
<tr>
<td>LD50</td>
<td>Rat</td>
<td>&gt; 5000 mg/kg, 24 Hours</td>
</tr>
<tr>
<td>Oral</td>
<td></td>
<td></td>
</tr>
<tr>
<td>LD50</td>
<td>Rat</td>
<td>2950 mg/kg</td>
</tr>
</tbody>
</table>
Components | Species | Test Results
--- | --- | ---
EDTA Acid (CAS 60-00-4) |  |  
Acute |  |  
Oral | Rat | 4500 mg/kg
Phosphorous Acid (CAS 13598-36-2) |  |  
Acute |  |  
Oral | Rat | 1580 mg/kg
Potassium Carbonate (CAS 584-08-7) |  |  
Acute |  |  
Dermal | Rabbit | > 2000 mg/kg, 24 Hours
Inhalation |  |  
LC50 | Rat | > 4.96 mg/l, 4.5 Hours
Oral | Rat | 1983 mg/kg
Potassium Hydroxide (CAS 1310-58-3) |  |  
Acute |  |  
Oral | Rat | 388 mg/kg
Urea (CAS 57-13-6) |  |  
Acute |  |  
Oral | Mouse | 13000 mg/kg
Rat | 15000 mg/kg
Other | Mouse | 9200 mg/kg
Rat | 8200 mg/kg

* Estimates for product may be based on additional component data not shown.

Skin corrosion/irritation | Causes skin irritation.
Serious eye damage/eye irritation | Causes serious eye irritation.
Respiratory or skin sensitization |  
Respiratory sensitization | Not available.
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 | This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.
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 available.
Chronic effects | 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.
Persistence and degradability
No data is available on the degradability of this product.

Bioaccumulative potential
No data available.

Partition coefficient n-octanol / water (log Kow)
Urea -2.11

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. Dispose of contents and container in accordance with government regulations.

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
Empty containers should be taken to an approved waste handling site for recycling or disposal. Since emptied containers may retain product residue, follow label warnings even after container is emptied.

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 established.

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 on the U.S. EPA TSCA Inventory List.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)
Not regulated.

CERCLA Hazardous Substance List (40 CFR 302.4)
EDTA Acid (CAS 60-00-4) Listed.
Potassium Hydroxide (CAS 1310-58-3) Listed.

SARA 304 Emergency release notification
Not regulated.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)
Not listed.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories
Immediate Hazard - Yes
Delayed Hazard - No
Fire Hazard - No
Pressure Hazard - No
Reactivity Hazard - No

SARA 302 Extremely hazardous substance
Not listed.

SARA 311/312 Hazardous chemical
No

SARA 313 (TRI reporting)
Not regulated.
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

US. California Controlled Substances. CA Department of Justice (California Health and Safety Code Section 11100)
Not listed.

US. Massachusetts RTK - Substance List
Ammonium Nitrate (CAS 6484-52-2)
EDTA Acid (CAS 60-00-4)
Potassium Hydroxide (CAS 1310-58-3)

US. New Jersey Worker and Community Right-to-Know Act
Ammonium Nitrate (CAS 6484-52-2)
EDTA Acid (CAS 60-00-4)
Phosphorous Acid (CAS 13598-36-2)
Potassium Hydroxide (CAS 1310-58-3)

US. Pennsylvania Worker and Community Right-to-Know Law
Ammonium Nitrate (CAS 6484-52-2)
EDTA Acid (CAS 60-00-4)
Potassium Hydroxide (CAS 1310-58-3)

US. Rhode Island RTK
Ammonium Nitrate (CAS 6484-52-2)
EDTA Acid (CAS 60-00-4)
Potassium Hydroxide (CAS 1310-58-3)

US. California Proposition 65
California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65): This material is not known to contain any chemicals currently listed as carcinogens or reproductive toxins.

International Inventories

<table>
<thead>
<tr>
<th>Country(s) or region</th>
<th>Inventory name</th>
<th>On inventory (yes/no)*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Australia</td>
<td>Australian Inventory of Chemical Substances (AICS)</td>
<td>Yes</td>
</tr>
<tr>
<td>Canada</td>
<td>Domestic Substances List (DSL)</td>
<td>Yes</td>
</tr>
<tr>
<td>China</td>
<td>Inventory of Existing Chemical Substances in China (IECSC)</td>
<td>Yes</td>
</tr>
<tr>
<td>Korea</td>
<td>Existing Chemicals List (ECL)</td>
<td>Yes</td>
</tr>
<tr>
<td>New Zealand</td>
<td>New Zealand Inventory</td>
<td>Yes</td>
</tr>
<tr>
<td>Philippines</td>
<td>Philippine Inventory of Chemicals and Chemical Substances (PICCS)</td>
<td>Yes</td>
</tr>
<tr>
<td>United States &amp; Puerto Rico</td>
<td>Toxic Substances Control Act (TSCA) Inventory</td>
<td>Yes</td>
</tr>
</tbody>
</table>

*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s).

A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

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

Issue date: 05-13-2015
Version #: 01
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