1. PRODUCT IDENTIFICATION

Product Name: **TOUCHDOWN TOTAL**

EPA Signal Word: Caution

Active Ingredient(%): Glyphosate (36.5%)

Chemical Name: N-(phosphonomethyl) glycine, in the form of the monopotassium salt

Chemical Class: Herbicide

EPA Registration Number(s): 100-1169

Section(s) Revised: 1, 11

2. COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Material</th>
<th>OSHA PEL</th>
<th>ACGIH TLV</th>
<th>Other</th>
<th>NTP/IARC/OSHA Carcinogen</th>
</tr>
</thead>
<tbody>
<tr>
<td>Glyphosate (36.5%)</td>
<td>Not Established</td>
<td>Not Established</td>
<td>Not Established</td>
<td>No</td>
</tr>
</tbody>
</table>

Ingredients not precisely identified are proprietary or non-hazardous. Values are not product specifications.

Syngenta Hazard Category: B, S

3. HAZARDS IDENTIFICATION

**Symptoms of Acute Exposure**

Causes mild eye and skin irritation.

**Hazardous Decomposition Products**

Flammable hydrogen gas may be formed on contact with incompatible metals. See "Conditions to Avoid", Section 10. Can decompose at high temperatures forming toxic gases.

**Physical Properties**

Appearance: Brown liquid
Odor: Sweet

**Unusual Fire, Explosion and Reactivity Hazards**

This product may form flammable and explosive hydrogen gas when in contact with galvanized or unlined steel. During a fire, irritating and possibly toxic gases may be generated by thermal decomposition or combustion.

4. FIRST AID MEASURES

Have the product container, label or Material Safety Data Sheet with you when calling Syngenta (800-888-8372), a poison control center or doctor, or going for treatment.

**Ingestion:**

If swallowed: Call Syngenta (800-888-8372), a poison control center or doctor immediately for treatment advice. Have the person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so after calling 800-888-8372 or by a poison control center or doctor. Do not give anything by mouth to an unconscious person.

**Eye Contact:**

If in eyes: Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after 5 minutes, then continue rinsing eye. Call Syngenta (800-888-8372), a poison control center
5. FIRE FIGHTING MEASURES

Fire and Explosion
Flash Point (Test Method): > 221°F
Flammable Limits (% in Air): Lower: % Not Applicable  Upper: % Not Applicable
Autoignition Temperature: 914 °F
Flammability: Not Applicable

Unusual Fire, Explosion and Reactivity Hazards
This product may form flammable and explosive hydrogen gas when in contact with galvanized or unlined steel. During a fire, irritating and possibly toxic gases may be generated by thermal decomposition or combustion.

In Case of Fire
Use dry chemical, foam or CO2 extinguishing media. Wear full protective clothing and self-contained breathing apparatus. Evacuate nonessential personnel from the area to prevent human exposure to fire, smoke, fumes or products of combustion. Prevent use of contaminated buildings, area, and equipment until decontaminated. Water runoff can cause environmental damage. If water is used to fight fire, dike and collect runoff.

6. ACCIDENTAL RELEASE MEASURES

In Case of Spill or Leak
Control the spill at its source. Contain the spill to prevent from spreading or contaminating soil or from entering sewage and drainage systems or any body of water. Clean up spills immediately, observing precautions outlined in Section 8. Cover entire spill with absorbent material and place into compatible disposal container. Scrub area with hard water detergent (e.g. commercial products such as Tide, Joy, Spic and Span). Pick up wash liquid with additional absorbent and place into compatible disposal container. Once all material is cleaned up and placed in a disposal container, seal container and arrange for disposition.

7. HANDLING AND STORAGE

Spray solutions of this product should be mixed, stored and applied using only plastic, plastic-lined steel, stainless steel or fiberglass containers. Concentrate should not be stored in galvanized steel, carbon steel, aluminum or unlined steel containers.

Store the material in a well-ventilated, secure area out of reach of children and domestic animals. Do not store food, beverages or tobacco products in the storage area. Prevent eating, drinking, tobacco use, and cosmetic application in areas where there is a potential for exposure to the material. Wash thoroughly with soap and water after handling.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

THE FOLLOWING RECOMMENDATIONS FOR EXPOSURE CONTROLS/PERSONAL PROTECTION ARE INTENDED FOR THE MANUFACTURE, FORMULATION, PACKAGING AND USE OF THIS PRODUCT.

FOR COMMERCIAL APPLICATIONS AND/OR ON-FARM APPLICATIONS CONSULT THE PRODUCT LABEL.

Ingestion: Prevent eating, drinking, tobacco usage and cosmetic application in areas where there is a potential for exposure to the material. Wash thoroughly with soap and water after handling.

Eye Contact: Where eye contact is likely, use chemical splash goggles.
Skin Contact: Where contact is likely, wear chemical-resistant (such as nitrile or butyl) gloves, coveralls, socks and chemical-resistant footwear. For overhead exposure, wear chemical-resistant headgear.

Inhalation: A respirator is not normally required when handling this substance. Use effective engineering controls to comply with occupational exposure limits.

In case of emergency spills, use a NIOSH approved respirator with any N, R, P or HE filter.

9. PHYSICAL AND CHEMICAL PROPERTIES

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>Brown liquid</td>
</tr>
<tr>
<td>Odor</td>
<td>Sweet</td>
</tr>
<tr>
<td>Melting Point</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>Boiling Point</td>
<td>Not Available</td>
</tr>
<tr>
<td>Specific Gravity/Density</td>
<td>1.37 g/cm³ @ 68°F (20°C)</td>
</tr>
<tr>
<td>pH</td>
<td>5 (1% solution @ 77°F (25°C) (Typical)</td>
</tr>
<tr>
<td>Solubility in H2O</td>
<td>Miscible in/with water</td>
</tr>
<tr>
<td>Vapor Pressure</td>
<td>Not Available</td>
</tr>
</tbody>
</table>

10. STABILITY AND REACTIVITY

<table>
<thead>
<tr>
<th>Category</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stability</td>
<td>Stable under normal use and storage conditions.</td>
</tr>
<tr>
<td>Hazardous Polymerization</td>
<td>Will not occur.</td>
</tr>
<tr>
<td>Conditions to Avoid</td>
<td>Concentrate should not be stored in galvanized steel, carbon steel, aluminum or unlined steel containers. Spray solutions should not be mixed, stored or applied in containers other than plastic, plastic-lined steel, stainless steel or fiberglass.</td>
</tr>
<tr>
<td>Materials to Avoid</td>
<td>See &quot;Conditions to Avoid&quot;, Section 10.</td>
</tr>
<tr>
<td>Hazardous Decomposition Products</td>
<td>Flammable hydrogen gas may be formed on contact with incompatible metals. See &quot;Conditions to Avoid&quot;, Section 10. Can decompose at high temperatures forming toxic gases.</td>
</tr>
</tbody>
</table>

11. TOXICOLOGICAL INFORMATION

<table>
<thead>
<tr>
<th>Category</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute Toxicity/Irritation Studies (Finished Product)</td>
<td>Practically Non-Toxic</td>
</tr>
<tr>
<td>Ingestion</td>
<td>Oral (LD50 Rat) : &gt; 5,000 mg/kg body weight</td>
</tr>
<tr>
<td>Dermal</td>
<td>Practically Non-Toxic</td>
</tr>
<tr>
<td>Dermal (LD50 Rat)</td>
<td>&gt; 5,050 mg/kg body weight</td>
</tr>
<tr>
<td>Inhalation</td>
<td>Practically Non-Toxic</td>
</tr>
<tr>
<td>Inhalation (LC50 Rat)</td>
<td>&gt; 5.08 mg/l air - 4 hours</td>
</tr>
<tr>
<td>Eye Contact</td>
<td>Mildly Irritating (Rabbit)</td>
</tr>
<tr>
<td>Skin Contact</td>
<td>Slightly Irritating (Rabbit)</td>
</tr>
<tr>
<td>Skin Sensitization</td>
<td>Not a skin sensitizer in animal tests.</td>
</tr>
<tr>
<td>Chronic/Subchronic Toxicity Studies</td>
<td>Glyphosate: Oral administration of 20,000 ppm potassium salt of glyphosate for 28 consecutive days was only associated with a slight reduction in bodyweight gain. Other findings at this dose level were not considered to be of toxicological significance. The no-observed-adverse-effect level (NOAEL) was considered to be 6,000 ppm. Oral administration of 20,000 ppm potassium salt of glyphosate for 14 consecutive days was</td>
</tr>
</tbody>
</table>
not associated with any changes which were considered to be of toxicological significance. The no-observed-adverse-effect level (NOAEL) was 20,000 ppm. Oral administration of 3,000, 10,000 or 30,000 ppm potassium salt of glyphosate in the diet for at least 90 days was not associated with any evidence of toxicity. The clear no observed effect level for the study was 30,000 ppm. This dose level was equivalent to an overall mean dose of 1009.3 mg/kg/day for males and 999.1 mg/kg/day for females.

**Carcinogenicity**
- Glyphosate: Not available

**Other Toxicity Information**
- None

**Toxicity of Other Components**
- Not Applicable

**Target Organs**
- **Active Ingredients**
  - Glyphosate: Skin
- **Inert Ingredients**
  - Not Applicable

### 12. ECOLOGICAL INFORMATION

**Summary of Effects**
- Glyphosate: Harmful to aquatic organisms.

**Eco-Acute Toxicity**
- Glyphosate: Rainbow Trout 96-hour LC50 (calculated) Approx 280 mg/l
  - Bluegill Sunfish 96-hour LC50 (calculated) Approx 100 mg/l
  - Green Algae 72-hour ErC50 (calculated) Approx 39 mg/l
  - Daphnia magna 48-hour EC50 (calculated) > 1,000 mg/l
  - Green Algae 72-hour EbC50 (calculated) Approx 37 mg/l

**Eco-Chronic Toxicity**
- Glyphosate: Not Available

**Environmental Fate**
- Glyphosate: Information applies to glyphosate acid: Substance is soluble in water. Substance has low mobility in soil. There is evidence of photodegradation in water. (acid pH) Substance is substantially biodegradable in soil. (aerobic conditions)

### 13. DISPOSAL CONSIDERATIONS

**Disposal**
- Do not reuse product containers. Dispose of product containers, waste containers, and residues according to local, state, and federal health and environmental regulations.
- Characteristic Waste: Not Applicable
- Listed Waste: Not Applicable

### 14. TRANSPORT INFORMATION

**DOT Classification**
- Ground Transport - NAFTA
  - Not regulated.
15. REGULATORY INFORMATION

B/L Freight Classification
Herbicides, NOI (NMC Class 60)

Comments
None.

EPCRA SARA Title III Classification
Section 311/312 Hazard Classes: Acute Health Hazard
Section 313 Toxic Chemicals: Not Applicable

California Proposition 65
Not Applicable

CERCLA/SARA 302 Reportable Quantity (RQ)
None

RCRA Hazardous Waste Classification (40 CFR 261)
Not Applicable

TSCA Status
Exempt from TSCA, subject to FIFRA

16. OTHER INFORMATION

NFPA Hazard Ratings
<table>
<thead>
<tr>
<th>Health:</th>
<th>Flammability:</th>
<th>Instability:</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1</td>
<td>0</td>
</tr>
</tbody>
</table>

HMIS Hazard Ratings
<table>
<thead>
<tr>
<th>Health:</th>
<th>Flammability:</th>
<th>Reactivity:</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1</td>
<td>0</td>
</tr>
</tbody>
</table>

For non-emergency questions about this product call:
1-800-334-9481

Original Issued Date: 02/17/2005
Revision Date: 03/07/2005
Replaces:

The information and recommendations contained herein are based upon data believed to be correct. However, no guarantee or warranty of any kind, expressed or implied, is made with respect to the information contained herein.

RSVP# : Not Applicable

End of MSDS