SAFETY DATA SHEET

1. Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier
Trade Name: Brandt® Consan® Turf
Product Code: 09052

1.2 Relevant identified uses of the substance or mixture and uses advised against
Uses of the Substance/Mixture: EPA Registration Number: 10324-94-48813
Turf fungicide. This product is intended to be diluted prior to use. For further information refer to the
EPA Registered product label. Uses other than those identified are not recommended.

1.3 Details of the supplier of the safety data sheet
Company: Brandt Consolidated, Inc.
2935 South Koke Mill Road Springfield, IL 62711
United States
Phone: 217-547-5800
Email: mads@brandt.co
Prepared by: EH&S / Regulatory Department
Date prepared: 5/19/2015

1.4 Emergency telephone
Emergency telephone number: 800-424-9300 (CHEMTREC)

2. Hazards identification

2.1 Emergency overview
Appearance: Clear solution with characteristic odor
Precautionary statements: Causes severe skin burns and serious eye damage
Harmful if swallowed

GHS classification
Health
Serious eye damage/eye irritation Category 1
Skin corrosion/irritation Category 1B
Acute toxicity (oral) Category 4
Acute toxicity (dermal) Category 4

2.2 GHS label elements, including precautionary statements

Hazard pictograms/symbols

Signal Word: DANGER!
Hazard Statements: H302: Harmful if swallowed
H312: Harmful in contact with skin
H314: Causes severe skin burns and eye damage
Precautionary Statements:
Prevention
P262: Do not get in eyes, on skin, or on clothing
P264: Wash affected areas thoroughly after handling
P270: Do not eat, drink or smoke when using this product
P280: Wear protective gloves and eye, face and foot protection
Response
P301+312+330+331: IF SWALLOWED: Rinse mouth. Call a POISON CENTER or doctor/physician if you feel unwell. Do NOT induce vomiting.
P303+361+353: IF ON SKIN (or hair): Remove immediately all contaminated clothing. Rinse skin with water
P304+340: IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing
P305+351+338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
P310: Immediately call a POISON CENTER or doctor/physician
P363: Wash contaminated clothing before reuse
Storage
P233: Keep container tightly closed
P234: Keep only in original container
P501: Dispose of contents and container to an approved waste disposal plant

2.3 Other hazards
No information available
3. Composition/information on ingredients

3.1 Information on components and impurities

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>CAS number(s)</th>
<th>GHS Classification</th>
<th>Concentration, %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alkyl (C12-18) dimethylbenzyl ammonium chloride</td>
<td>68391-01-5</td>
<td>Serious eye damage/eye irritation: Category 1, Skin corrosion/irritation: Category 1B, Acute toxicity (oral): Category 3, Acute toxicity (dermal): Category 3; H301, H314, H318</td>
<td>&gt;=20.0-&lt;=21.0</td>
</tr>
<tr>
<td>Alkyl (C12-14) dimethylethylbenzyl ammonium chloride</td>
<td>85409-23-0</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Other components: Not classified Balance

4. First aid measures

4.1 Description of first-aid measures

General advice: Show this material safety data sheet to medical personnel. Do not leave affected person unattended. Isolate exposed apparel for laundry before re-use.

Eye contact: Rinse eyes with water. Remove any contact lenses, and continue flushing eyes with running water for at least 15 minutes. Hold eyelids apart to ensure rinsing of the entire surface of the eyes and lids with water. Seek medical attention if irritation develops or persists.

Skin contact: Take off contaminated clothing and shoes immediately. Wash affected areas with plenty of water. Seek medical attention if irritation develops or persists.

Ingestion: Do NOT induce vomiting. Do not give anything by mouth to an unconscious or convulsing person. Rinse mouth with water. Seek medical attention.

If inhaled: Remove from area to fresh air. Seek medical attention if respiratory irritation develops or if breathing becomes difficult.

4.2 Most important symptoms and effects, both acute and delayed

Risks: The most important known symptoms and effects are described in the labeling (section 2.2) and/or in section 11. Corrosive effects. Symptoms may include stinging, tearing, redness, swelling and blurred vision. Permanent eye damage including blindness could result. Prolonged or repeated skin contact may aggravate existing skin conditions. Inhalation of mists may aggravate existing chronic respiratory conditions such as asthma, emphysema or bronchitis.

4.3 Indication of any immediate medical attention and special treatment needed

Note to physician: All treatments should be based on observed signs and symptoms of distress in the patient. Consideration should be given to the possibility that overexposure to materials other than this product may have occurred. Treat symptomatically.

5. Firefighting measures

Flash Point and Method: None

5.1 Extinguishing media

Suitable extinguishing media: The product is not flammable
Use media suitable for the material that is burning.

Unsuitable extinguishing media: No data available

5.2 Special hazards arising from the substance or mixture

Special hazards during fire fighting: Container may rupture on heating.

On combustion or on thermal decomposition: May include carbon oxides, nitrogen oxides

5.3 Advice for firefighters

Special protective equipment for firefighters: As in any fire, wear NIOSH/MSHA approved, pressure-demand self-contained breathing apparatus and full protective gear.

Specific firefighting methods: No special methods required. Move containers from area if it can be done without risk. Cool fire-exposed containers with water from side. Contain the extinguishing fluids by diking.

6. Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Spill area may be slippery. Wear appropriate protective equipment (See Section 8).

6.2 Environmental precautions

Avoid contact of spilled material and runoff with soil and surface waterways

6.3 Methods and material for containment and cleaning up

Recovery: Stop leak if safe to do so. Absorb spills with vermiculite, fuller’s earth, or sand. Shovel up and place in a non-metal waste container for disposal. Dike large spills with soil or sandbags to contain it and prevent its spread. Keep in suitable, properly labeled, closed containers for disposal.

Decontamination/cleaning: Wash non-recoverable remainder with large amounts of water. Clean contaminated surfaces thoroughly. Recover the cleaning water for subsequent disposal.

Disposal: Dispose of in accordance with local regulations

Additional advice: Spill area may be slippery

6.4 Reference to other sections

No information available
7. Handling and storage

7.1 Precautions for safe handling
Technical measures: Does not require any specific or particular measures
Advice on safe handling and usage: Wear appropriate protective equipment including long chemical resistant gloves, chemical splash goggles and protective footwear. Handle in accordance with good industrial hygiene and safety practice. Do not spray toward face. Wash affected areas after use. Do not taste or swallow. Avoid breathing vapors or mists. Use only with adequate ventilation. Product residue may remain on/ in empty containers. All precautions for handling the product must be used in handling the empty container and residue. FOR COMMERCIAL AND INDUSTRIAL USE ONLY.

7.2 Conditions for safe storage, including any incompatibilities
Technical measures for storage: Does not require any specific or particular measures
Storage conditions
Recommended: Keep container tightly closed. Opened containers must be carefully resealed and kept upright to prevent leakage.
Incompatible products: Hazardous reactions may occur on contact with certain chemicals. Refer to the list of incompatible materials section 10: “Incompatible materials”

7.3 Specific end use(s)
No information available

8. Exposure controls/personal protection

Introductory remarks:
These recommendations provide general guidance for handling this product. Because specific work environments and material handling practices vary, safety procedures should be developed for each intended application. While developing safe handling procedures, do not overlook the need to clean equipment and piping systems for maintenance and repairs. Waste resulting from these procedures should he handled in accordance with Section 13: Disposal considerations.
Assistance with selection, use and maintenance of worker protection equipment is generally available from equipment manufacturers

8.1 Control parameters
Components with workplace control parameters

<table>
<thead>
<tr>
<th>Components</th>
<th>Value</th>
<th>Control parameters</th>
<th>Basis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not reportable</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

8.2 Exposure controls

Control measures
Engineering measures: Good general ventilation should be sufficient to control airborne levels. Respiratory protection is not required if good ventilation is maintained.

Personal protective equipment
Respiratory protection: In operations where mists are generated, wear a NIOSH/MSHA approved respirator that has been selected by a technically qualified person for the specific work conditions.
Hand protection: Wear long chemical resistant gloves. Observe instructions regarding permeability and breakthrough time provided by the supplier of the gloves. Also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion and contact time. Gloves should be discarded and replaced if there is any indication of degradation or chemical breakthrough.
Eye protection: Wear chemical splash goggles.
Skin and body protection: Wear footwear protecting against chemicals, and impervious clothing. Choose body protection according to the amount and concentration of the substances in the workplace.
Hygiene measures: Personal hygiene is an important work practice exposure control measure and the following general measures should be taken when working with or handling this material:
1) Do not store, use, and/or consume foods, beverages, tobacco products, or cosmetics in areas where this material is stored.
2) Wash hands and face carefully before eating, drinking, using tobacco, applying cosmetics, or using the toilet.
3) Wash exposed skin promptly to remove accidental splashes or contact with material.
Protective measures: Ensure that eyewash stations and safety showers are close to the workstation location, and that emergency equipment is immediately accessible with instructions for use.
The protective equipment must be selected in accordance with current local standards and in following proper use instructions from the supplier of the protective equipment.
Selection of appropriate personal protective equipment should be based on an evaluation of the performance characteristics of the protective equipment relative to the task(s) to be performed, conditions present, duration of use, and the potential hazards, and/or risks that may occur during use.
9. Physical and chemical properties

Physical and chemical properties listed represent typical properties and should not be considered product specifications.

9.1 Information on basic physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>Clear solution</td>
</tr>
<tr>
<td>Odor</td>
<td>Characteristic odor</td>
</tr>
<tr>
<td>Odor Threshold</td>
<td>No information available</td>
</tr>
<tr>
<td>pH</td>
<td>6.5-8.5</td>
</tr>
<tr>
<td>Freezing point</td>
<td>No information available</td>
</tr>
<tr>
<td>Melting point/range</td>
<td>No information available</td>
</tr>
<tr>
<td>Boiling point/boiling range</td>
<td>&gt;100°C</td>
</tr>
<tr>
<td>Flash point</td>
<td>Does not flash</td>
</tr>
<tr>
<td>Evaporation rate</td>
<td>No information available</td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Flammability/Explosive limit</td>
<td>No information available</td>
</tr>
<tr>
<td>Auto-ignition temperature</td>
<td>No information available</td>
</tr>
<tr>
<td>Vapor pressure</td>
<td>No information available</td>
</tr>
<tr>
<td>Vapor density</td>
<td>No information available</td>
</tr>
<tr>
<td>Density</td>
<td>0.99 g/ml, 8.2 lbs/gal (25°C)</td>
</tr>
<tr>
<td>Water solubility</td>
<td>Soluble</td>
</tr>
<tr>
<td>Solubility in other solvents</td>
<td>No information available</td>
</tr>
<tr>
<td>Partition coefficient: n-octanol/water</td>
<td>No information available</td>
</tr>
<tr>
<td>Thermal decomposition</td>
<td>No information available</td>
</tr>
<tr>
<td>Viscosity</td>
<td>Low viscosity</td>
</tr>
<tr>
<td>Explosive properties</td>
<td>No information available</td>
</tr>
<tr>
<td>Oxidizing properties</td>
<td>No information available</td>
</tr>
</tbody>
</table>

9.2 Other information

No information available

10. Stability and reactivity

10.1 Reactivity

No information available

10.2 Chemical stability

Stable and non-reactive under normal conditions of use, storage and transport

10.3 Possibility of hazardous reactions

No information available

10.4 Conditions to avoid

No information available

10.5 Incompatible materials

Anionic surfactants

10.6 Hazardous decomposition products

Oxides of carbon and nitrogen

11. Toxicological information

Product Summary:
Causes severe skin burns and serious eye damage. Harmful if swallowed. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea. Ingestion may produce burns to the lips, oral cavity, upper airway, esophagus and possibly digestive tract. Vapors and spray mist may irritate throat and respiratory system and cause coughing.

No data available for the teratogenicity, mutagenicity, or reproductive toxicity of this product. No data available to designate the product as causing specific target organ toxicity through repeated exposure. No data available to designate product as an aspiration hazard.

Information on likely routes of exposure:

<table>
<thead>
<tr>
<th>Route</th>
<th>Effect</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eye contact</td>
<td>Corrosive. Causes serious eye damage. Symptoms may include pain, burning sensation, redness, watering, blurred vision or loss of vision.</td>
</tr>
<tr>
<td>Skin contact</td>
<td>Corrosive. Causes severe burns. Symptoms may include burns, blisters, redness and pain (which may be delayed).</td>
</tr>
<tr>
<td>Ingestion</td>
<td>Harmful is swallowed. Causes burns/serious damage to mouth, throat and stomach. Symptoms may include vomiting, nausea, and/or feeling of general unwellness.</td>
</tr>
<tr>
<td>Inhalation</td>
<td>May cause irritation and corrosive effects to nose, throat and respiratory tract. Symptoms may include coughing and difficulty breathing.</td>
</tr>
<tr>
<td>Sensitization</td>
<td>No known effects</td>
</tr>
</tbody>
</table>

11.1 Information on toxicological effects

Acute toxicity

<table>
<thead>
<tr>
<th>Route</th>
<th>Dose (mg/kg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute oral</td>
<td>LD₅₀ 507</td>
</tr>
<tr>
<td>Acute dermal</td>
<td>LD₂₅ &gt;2,000</td>
</tr>
<tr>
<td>Acute inhalation</td>
<td>No information available</td>
</tr>
<tr>
<td>Acute toxicity (other)</td>
<td>No information available</td>
</tr>
</tbody>
</table>

Skin corrosion/irritation

<table>
<thead>
<tr>
<th>Route</th>
<th>Effect</th>
</tr>
</thead>
<tbody>
<tr>
<td>Skin irritation</td>
<td>Corrosive. Causes severe burns</td>
</tr>
</tbody>
</table>

Serious eye damage/eye irritation

<table>
<thead>
<tr>
<th>Route</th>
<th>Effect</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eye irritation</td>
<td>Corrosive. Causes serious eye damage</td>
</tr>
</tbody>
</table>
Respiratory or skin sensitization
Sensitization: Not classified as sensitizing by skin contact

Mutagenicity
Genotoxicity in vitro: No information available
Genotoxicity in vivo: No information available

Carcinogenicity
Carcinogenicity: This product does not contain any ingredient designated as probable or suspected human carcinogens by IARC, ACGIH

Toxicity for reproduction and development
Toxicity to reproduction/fertility: No information available
Developmental toxicity/teratogenicity: No information available

Specific Target Organ Toxicity (STOT)
STOT-single exposure: No information available
STOT-repeated exposure: No information available

Aspiration toxicity
Aspiration toxicity: No information available

Other Hazards
No information available

12. Ecological information

12.1 Toxicity
Aquatic toxicity: Toxic to aquatic life

12.2 Persistence and degradability
Biodegradation: No information available

12.3 Bioaccumulative potential
Partition coefficient: n-octanol/water: No bioaccumulation is to be expected (log Pow<4)
Bioconcentration factor (BCF): No information available

12.4 Mobility in soil
Known distribution to environmental compartments: No information available

12.5 Results of PBT and vPvB assessment
No information available

12.6 Other adverse effects
Environmental assessment: No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this product.

13. Disposal considerations

13.1 Waste treatment methods
PESTICIDE DISPOSAL: Pesticide wastes are acutely hazardous. Improper disposal of excess pesticide, spray mixture or rinsate is a violation of Federal law. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental control agency, or the Hazardous Waste Representative at the nearest EPA Regional Office for guidance.
Product disposal: Observe all applicable federal, state, and local regulations
Packaging: Remove all residue when emptying

14. Transportation information

DOT Hazard Classification: UN number: 1903
UN proper shipping name: DISINFECTANTS, LIQUID, CORROSIVE, N.O.S. (QUATERNARY AMMONIUM COMPOUND)
Transport hazard class(es): 8
Packing group (if applicable): II

15. Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture
Notification status: Not applicable

<table>
<thead>
<tr>
<th>CERCLA (RQ)</th>
<th>Ingredient(s)</th>
<th>CAS#</th>
<th>Weight</th>
<th>CERCLA RQ</th>
<th>Section 302 TPQ</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not listed</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>SARA/EPCRA Extremely Hazardous Substances (302/304)</th>
<th>Ingredient(s)</th>
<th>CAS#</th>
<th>Weight</th>
<th>RQ</th>
<th>TPQ</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not listed</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### SARA Hazard Categories (311/312)

<table>
<thead>
<tr>
<th></th>
<th>Fire</th>
<th>Reactive</th>
<th>Acute health hazard</th>
<th>Chronic health hazard</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
</tr>
</tbody>
</table>

### SARA Toxic Substances (313)
The following components are subject to SARA Section 313 reporting requirements

<table>
<thead>
<tr>
<th>Ingredient(s)</th>
<th>CAS#</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not listed</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### CAA (311) Volatile Organic compounds

<table>
<thead>
<tr>
<th>Ingredient(s)</th>
<th>CAS#</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not listed</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### 15.2 FIFRA Information

EPA Pesticide Registration Number 10324-94-48813

This chemical is a pesticide product registered by the Environmental Protection Agency and is subject to certain labeling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information required for safety data sheets, and for workplace labels of non-pesticide chemicals. Following is the hazard information as required on the pesticide label:

**DANGER. Keep Out of Reach of Children.** Corrosive. Causes irreversible eye damage and skin burns. Harmful if swallowed or absorbed through the skin. Do not get in eyes, on skin or clothing. Wear goggles or face shield and rubber gloves and protective clothing when handling. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet. Remove contaminated clothing and wash clothing before reuse.

### 16. Other information

<table>
<thead>
<tr>
<th>NFPA-Classification</th>
<th>HMIS-Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Health</td>
<td>Health</td>
</tr>
<tr>
<td>Flammability</td>
<td>Flammability</td>
</tr>
<tr>
<td>Instability or Reactivity</td>
<td>Reactivity</td>
</tr>
<tr>
<td>HMIS PPE</td>
<td>B</td>
</tr>
</tbody>
</table>

B = Safety glasses, Gloves

### Key or legend to abbreviations and acronyms used in the safety data sheet

<table>
<thead>
<tr>
<th>Acronym</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACGIH</td>
<td>American Conference of Governmental Industrial Hygienists</td>
</tr>
<tr>
<td>CAS</td>
<td>Chemical Abstracts Service (Chemical Abstracts)</td>
</tr>
<tr>
<td>CAA</td>
<td>Clean Air Act (US)</td>
</tr>
<tr>
<td>CERCLA</td>
<td>Comprehensive Environmental Response, Compensation, and Liability Act (US)</td>
</tr>
<tr>
<td>EHS</td>
<td>Environmental Health &amp; Safety</td>
</tr>
<tr>
<td>EPA</td>
<td>Environmental Protection Agency (US)</td>
</tr>
<tr>
<td>FIFRA</td>
<td>Federal Insecticide Fungicide Rodenticide Act (US)</td>
</tr>
<tr>
<td>HAP</td>
<td>Hazardous Air Pollutant (US)</td>
</tr>
<tr>
<td>MSHA</td>
<td>Mine Safety and Health Act (US)</td>
</tr>
<tr>
<td>OSHA</td>
<td>Occupational Safety and Health Administration (US)</td>
</tr>
<tr>
<td>PPE</td>
<td>Personal Protective Equipment</td>
</tr>
<tr>
<td>RACTOR</td>
<td>Risk Assessment Toxicological Research Organization</td>
</tr>
<tr>
<td>SARA</td>
<td>Superfund Amendment and Reauthorization Act (US)</td>
</tr>
<tr>
<td>WSH</td>
<td>Work Safety and Health</td>
</tr>
</tbody>
</table>

### Disclaimer:

This document was created for reference purposes only. Based on the US EPA approved basic formulation. The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of this publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

M20151030