1. Identification

Product identifier: DE-FENSE

Other means of identification:
- Product code: F135022/25/38
- Recommended use: Floor Finish
- Recommended restrictions: None known.

Manufacturer/Importer/Supplier/Distributor information:
- Manufacturer: Franklin Cleaning Technology
  - Address: One Fuller Way, Great Bend, KS 67530, United States
  - Telephone: Customer Service (800) 810-4829
  - E-mail: Not available.
  - Emergency phone number: CHEMTREC (800) 424-9300
  - Emergency (620) 792-1711
  - 24 hour Emergency (800) 424-9300

2. Hazard(s) identification

Physical hazards: Not classified.
Health hazards: Not classified.
Environmental hazards: Not classified.
OSHA defined hazards: Not classified.

Label elements:
- Hazard symbol: None.
- Signal word: Warning
- Hazard statement: May cause mild eye and skin irritation. The mixture does not meet the criteria for classification.
- Precautionary statement:
  - Prevention: Observe good industrial hygiene practices.
  - Response: Wash hands after handling.
  - 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

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>Common name and synonyms</th>
<th>CAS number</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>DIETHYLENE GLYCOL MONOETHYL ETHER</td>
<td></td>
<td>111-90-0</td>
<td>3 - &lt; 5</td>
</tr>
<tr>
<td>TRIBUTOXYETHYLPHOSPHATE</td>
<td></td>
<td>78-51-3</td>
<td>1 - &lt; 3</td>
</tr>
<tr>
<td>AMMONIUM HYDROXIDE</td>
<td></td>
<td>1336-21-6</td>
<td>&lt; 0,2</td>
</tr>
</tbody>
</table>

Other components below reportable levels: 90 - 100

*Designates that a specific chemical identity and/or percentage of composition has been withheld as a trade secret.

4. First-aid measures

Inhalation: Move to fresh air. Call a physician if symptoms develop or persist.
Skin contact
Wash off with soap and water. Get medical attention if irritation develops and persists.

Eye contact
Rinse with water. Get medical attention if irritation develops and persists.

Ingestion
Rinse mouth. Get medical attention if symptoms occur.

Most important symptoms/effects, acute and delayed
Direct contact with eyes may cause temporary irritation.

Indication of immediate medical attention and special treatment needed
Treat symptomatically.

General information
Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

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. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. 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. Following product recovery, flush area with water.

Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). 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 prolonged exposure. Observe good industrial hygiene practices.

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

8. Exposure controls/personal protection
Occupational exposure limits

<table>
<thead>
<tr>
<th>Components</th>
<th>Type</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>AMMONIUM HYDROXIDE (CAS 1336-21-6)</td>
<td>PEL</td>
<td>35 mg/m3</td>
</tr>
<tr>
<td></td>
<td></td>
<td>50 ppm</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Components</th>
<th>Type</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>AMMONIUM HYDROXIDE (CAS 1336-21-6)</td>
<td>STEL</td>
<td>35 ppm</td>
</tr>
<tr>
<td></td>
<td>TWA</td>
<td>25 ppm</td>
</tr>
</tbody>
</table>
US. NIOSH: Pocket Guide to Chemical Hazards

<table>
<thead>
<tr>
<th>Components</th>
<th>Type</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>AMMONIUM HYDROXIDE (CAS 1336-21-6)</td>
<td>STEL</td>
<td>27 mg/m3</td>
</tr>
<tr>
<td></td>
<td></td>
<td>35 ppm</td>
</tr>
<tr>
<td></td>
<td>TWA</td>
<td>18 mg/m3</td>
</tr>
<tr>
<td></td>
<td></td>
<td>25 ppm</td>
</tr>
</tbody>
</table>

US. Workplace Environmental Exposure Level (WEEL) Guides

<table>
<thead>
<tr>
<th>Components</th>
<th>Type</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>DIETHYLENE GLYCOL MONOETHYL ETHER (CAS 111-90-0)</td>
<td>TWA</td>
<td>140 mg/m3</td>
</tr>
<tr>
<td></td>
<td></td>
<td>25 ppm</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.

Individual protection measures, such as personal protective equipment:
- **Eye/face protection**: Wear safety glasses with side shields (or goggles).
- **Skin protection**:
  - **Hand protection**: Wear appropriate chemical resistant gloves.
  - **Other**: Wear suitable protective clothing.
- **Respiratory protection**: In case of insufficient ventilation, wear suitable respiratory equipment.
- **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:

- **Appearance**: Liquid.
- **Physical state**: Liquid.
- **Form**: Liquid. Emulsion
- **Color**: Off-white.
- **Odor**: Matches to Standard
- **Odor threshold**: Not available.
- **pH**: 9
- **Melting point/freezing point**: Not available.
- **Initial boiling point and boiling range**: Not available.
- **Flash point**: Not available.
- **Evaporation rate**: Not available.
- **Flammability (solid, gas)**: Not available.
- **Upper/lower flammability or explosive limits**:
  - **Flammability limit - lower (%)**: Not available.
  - **Flammability limit - upper (%)**: Not available.
  - **Explosive limit - lower (%)**: Not available.
  - **Explosive limit - upper (%)**: Not available.
- **Vapor pressure**: 0.00001 hPa estimated
- **Vapor density**: Not available.
- **Relative density**: Not available.
Solubility(ies)
Solubility (water) Not available.
Partition coefficient (n-octanol/water) Not available.
Auto-ignition temperature Not available.
Decomposition temperature Not available.
Viscosity Not available.
Other information
Density 8.55 lbs/gal estimated
Percent volatile 82.25 % estimated
Pounds per gallon 8.55 lb/gal
Specific gravity 1.03 estimated
VOC (Weight %) 0.1 % estimated

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.
Incompatible materials Strong oxidizing agents.
Hazardous decomposition products No hazardous decomposition products are known.

11. Toxicological information
Information on likely routes of exposure
Ingestion Expected to be a low ingestion hazard.
Inhalation Prolonged inhalation may be harmful.
Skin contact No adverse effects due to skin contact are expected.
Eye contact Direct contact with eyes may cause temporary irritation.

Information on toxicological effects
Acute toxicity Not available.

<table>
<thead>
<tr>
<th>Product</th>
<th>Species</th>
<th>Test Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>DE-FENSE (CAS Mixture)</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>Rabbit</td>
<td>14615.3848 g/kg estimated</td>
</tr>
<tr>
<td>Oral</td>
<td></td>
<td></td>
</tr>
<tr>
<td>LD50</td>
<td>Mouse</td>
<td>168.0464 g/kg estimated</td>
</tr>
<tr>
<td></td>
<td>Rat</td>
<td>8307.6924 ml/kg estimated</td>
</tr>
<tr>
<td>Other</td>
<td></td>
<td></td>
</tr>
<tr>
<td>LD50</td>
<td>Mouse</td>
<td>10989.7412 mg/kg estimated</td>
</tr>
<tr>
<td></td>
<td>Rat</td>
<td>52270.2148 mg/kg estimated</td>
</tr>
</tbody>
</table>

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

Skin corrosion/irritation Prolonged skin contact may cause temporary irritation.
Serious eye damage/eye irritation Direct contact with eyes may cause temporary irritation.
Respiratory or skin sensitization Not available.
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.

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

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.

<table>
<thead>
<tr>
<th>Product</th>
<th>Species</th>
<th>Test Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>DE-FENSE (CAS Mixture)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Aquatic</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fish</td>
<td>LC50</td>
<td>Fish</td>
</tr>
<tr>
<td></td>
<td></td>
<td>713.6168 mg/l, 96 hours estimated</td>
</tr>
</tbody>
</table>

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

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)
- DIETHYLENE GLYCOL MONOETHYL ETHER
  -0.54
- TRIBUTOXYETHYLPHOSPHATE
  3.75

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.

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
This substance/mixture is not intended to be transported in bulk.
15. Regulatory information

US federal regulations

All components are listed or exempted from listing on the U.S. EPA TSCA Inventory List. This product is not known to be a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

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

CERCLA Hazardous Substance List (40 CFR 302.4)

AMMONIUM HYDROXIDE (CAS 1336-21-6) Listed.
DIETHYLENE GLYCOL MONOETHYL ETHER (CAS 111-90-0) Listed.
TRIBUTOXYPHTHALYLPHOSPHATE (CAS 78-51-3) 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 - No
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)

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>CAS number</th>
<th>% by wt.</th>
</tr>
</thead>
<tbody>
<tr>
<td>DIETHYLENE GLYCOL MONOETHYL ETHER</td>
<td>111-90-0</td>
<td>3 - &lt; 5</td>
</tr>
<tr>
<td>Zinc ammonia carbonate complex</td>
<td>38714-47-5</td>
<td>&lt; 1</td>
</tr>
</tbody>
</table>

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List
DIETHYLENE GLYCOL MONOETHYL ETHER (CAS 111-90-0)
TRIBUTOXYPHTHALYLPHOSPHATE (CAS 78-51-3)

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. Massachusetts RTK - Substance List
AMMONIUM HYDROXIDE (CAS 1336-21-6)

US. New Jersey Worker and Community Right-to-Know Act
AMMONIUM HYDROXIDE (CAS 1336-21-6)
DIETHYLENE GLYCOL MONOETHYL ETHER (CAS 111-90-0)
TRIBUTOXYPHTHALYLPHOSPHATE (CAS 78-51-3)

US. Pennsylvania Worker and Community Right-to-Know Law
AMMONIUM HYDROXIDE (CAS 1336-21-6)
DIETHYLENE GLYCOL MONOETHYL ETHER (CAS 111-90-0)
TRIBUTOXYPHTHALYLPHOSPHATE (CAS 78-51-3)

US. Rhode Island RTK
AMMONIUM HYDROXIDE (CAS 1336-21-6)
DIETHYLENE GLYCOL MONOETHYL ETHER (CAS 111-90-0)
TRIBUTOXYPHTHALYLPHOSPHATE (CAS 78-51-3)

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.

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

Issue date 11-20-2014
The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its 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.