SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier
Product form: Mixture
Product name: Diesel Exhaust Fluid

1.2. Relevant identified uses of the substance or mixture and uses advised against
Use of the substance/mixture:
- Solution for NOx reduction in SCR systems

1.3. Details of the supplier of the safety data sheet
Quality DEF Solutions, Inc.
471 South Hwy 16
San Saba, Texas, 76877 - USA
Office (325) 372-5766 -
www.qualitydefsolutions.com

1.4. Emergency telephone number
Emergency number
INFOTRAC: (800) 535-5053
For Chemical Emergency – Day or Night

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture
GHS-US classification
Not classified

2.2. Label elements
GHS-US labelling
No Labeling Applicable

2.3. Other hazards
Exposure may cause skin, eye, and respiratory irritation.

2.4. Unknown acute toxicity (GHS US)
No data available

SECTION 3: Composition/information on ingredients

3.1. Substances
Not applicable

3.2. Mixtures

<table>
<thead>
<tr>
<th>Name</th>
<th>Product identifier</th>
<th>% by wt</th>
<th>GHS-US classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>water</td>
<td>(CAS-No.) 7732-15-5</td>
<td>67.5</td>
<td>Not classified</td>
</tr>
<tr>
<td>urea</td>
<td>(CAS-No.) 57-13-6</td>
<td>32.5</td>
<td>Not classified</td>
</tr>
</tbody>
</table>

SECTION 4: First aid measures

4.1. Description of first aid measures
First-aid measures general:
- Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).
- Assure fresh air breathing. Allow the victim to rest.

First-aid measures after inhalation:
- Remove affected clothing and wash all exposed skin area with mild soap and water, followed by warm water rinse.

First-aid measures after skin contact:
- Rinse immediately with plenty of water. Obtain medical attention if pain, blinking or redness persists.

First-aid measures after eye contact:
- Rinse mouth. Do NOT induce vomiting. Obtain emergency medical attention.
4.2. Most important symptoms and effects, both acute and delayed
Symptoms/General: Not expected to present a significant hazard under anticipated conditions of normal use.
Symptoms/Inhalation: May cause respiratory irritation.
Symptoms/skin contact: May cause skin irritation.
Symptoms/eye contact: May cause eye irritation.
Symptoms/ingestion: May cause gastrointestinal irritation.

4.3. Indication of any immediate medical attention and special treatment needed
No additional information available

SECTION 5: Fire-fighting measures

5.1. Extinguishing media
Unsuitable extinguishing media: Do not use a heavy water stream. Use of heavy stream of water may spread fire.

5.2. Special hazards arising from the substance or mixture
Fire Hazard: This product is not flammable.
Explosion Hazard: Product is not explosive.
Reactivity: No dangerous reactions known under normal conditions of use.

5.3. Advice for firefighters
Firefighting instructions: Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Prevent firefighting water from entering the environment.
Protection during firefighting: Do not enter fire area without proper protective equipment, including respiratory protection.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures
General measures: Avoid breathing (vapor, mist). Avoid contact with eyes, skin, and clothing.

6.1.1. For non-emergency personnel
Emergency procedures: Evacuate unnecessary personnel.

6.1.2. For emergency responders
Protective equipment: Equip cleanup crew with proper protection.
Emergency procedures: Ventilate area.

6.2. Environmental precautions
Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters.

6.3. Methods and material for containment and cleaning up
For Containment: Contain any spills or leaks with dikes or absorbents to prevent migration and entry into sewers or streams.
Methods for cleaning up: Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. Collect spillage. Store away from other materials. For minor spillages wash down with excess of water. Mop up small spills.

6.4. Reference to other sections
See Heading 8. Exposure controls and personal protection.

SECTION 7: Handling and storage

7.1. Precautions for safe handling
Precautions for safe handling: Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Provide good ventilation in process area to prevent formation of vapor.

7.2. Conditions for safe storage, including any incompatibilities
Storage conditions: Keep only in the original container in a cool, well ventilated place away from Direct sunlight, Heat sources. Keep container closed when not in use.
Incompatible products: Strong bases. Strong acids.
Incompatible materials: Sources of ignition. Direct sunlight.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters
No additional information available

8.2. Appropriate engineering controls
Ensure adequate ventilation, especially in confined areas.

8.3. Individual protection measures/Personal protective equipment
Personal protective equipment:

Hand protection:
Wear protective gloves

Eye protection: Chemical goggles or safety glasses

Respiratory protection:
Wear appropriate mask

Other information:
Do not eat, drink or smoke during use.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties
Physical state: Liquid
Color: Colorless
Odor: characteristic ammonia odor
Odor threshold: No data available
pH: 9 - 10
Relative evaporation rate (butylacetate=1): < 1
Freezing point: -11 °C (12 °F)
Boiling point:
Quality DEF Solutions  
Safety Data Sheet  

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flash point</td>
<td>&gt; 100 °C (212 °F)</td>
</tr>
<tr>
<td>Auto-ignition temperature</td>
<td>No data available</td>
</tr>
<tr>
<td>Decomposition temperature</td>
<td>No data available</td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>No data available</td>
</tr>
<tr>
<td>Vapor pressure</td>
<td>No data available</td>
</tr>
<tr>
<td>Relative vapor density at 20 °C</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>Specific Gravity</td>
<td>0.8 H2O, &gt;1</td>
</tr>
<tr>
<td>Solubility</td>
<td>1.09</td>
</tr>
<tr>
<td>Log Pow</td>
<td>Soluble in water.</td>
</tr>
<tr>
<td>Water: 100 %</td>
<td>Log Kow</td>
</tr>
<tr>
<td>Viscosity, kinematic</td>
<td>No data available</td>
</tr>
<tr>
<td>Viscosity, dynamic</td>
<td>No data available</td>
</tr>
<tr>
<td>Explosive properties</td>
<td>No data available</td>
</tr>
<tr>
<td>Oxidizing properties</td>
<td>No data available</td>
</tr>
<tr>
<td>Explosive limits</td>
<td>No data available</td>
</tr>
</tbody>
</table>

9.2. Other information  
No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity  
No additional information available

10.2. Chemical stability  
Stable under normal conditions.

10.3. Possibility of hazardous reactions  
Not established.

10.4. Conditions to avoid  
No additional information available

10.5. Incompatible materials  

10.6. Hazardous decomposition products  
SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity: Not classified

<table>
<thead>
<tr>
<th>Substance</th>
<th>Toxicity Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Urea (57-13-6)</td>
<td></td>
</tr>
<tr>
<td>LD50 oral rat</td>
<td>8,471.00 mg/kg (Rat: OECD 401: Acute Oral Toxicity; Literature study; 14300 mg/kg bodyweight; Rat; Experimental value)</td>
</tr>
<tr>
<td>LD50 dermal rat</td>
<td>&gt; 3,200.00 mg/kg (Rat; Literature study)</td>
</tr>
<tr>
<td>LD50 dermal rabbit</td>
<td>&gt; 21,000.00 mg/kg (Rabbit; Literature study)</td>
</tr>
<tr>
<td>ATE US (oral)</td>
<td>8,471.00 mg/kg bodyweight</td>
</tr>
</tbody>
</table>

Skin corrosion/irritation: Not classified pH: 9 - 10

Serious eye damage/irritation: Not classified pH: 9 - 10

Respiratory or skin sensitization: Not classified

Germ cell mutagenicity: Not classified

Carcinogenicity: Not classified

Reproductive toxicity: Not classified

Specific target organ toxicity (single exposure): Not classified

Specific target organ toxicity (repeated exposure): Not classified

Aspiration hazard: Not classified

Potential adverse human health effects and symptoms: May cause respiratory, skin, eye, and gastrointestinal irritation.

SECTION 12: Ecological information

12.1. Toxicity

Ecology – General

12.2. Persistence and degradability

<table>
<thead>
<tr>
<th>Substance</th>
<th>Persistence and degradability</th>
</tr>
</thead>
</table>
12.3. Bioaccumulative potential

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>BCF fish 1</th>
<th>BCF other aquatic organisms 1</th>
<th>Log Pow</th>
<th>Bioaccumulative potential</th>
</tr>
</thead>
<tbody>
<tr>
<td>urea (57-13-6)</td>
<td>1.00 (BCF; 72 h; Brachydanio rerio)</td>
<td>11,700.00 (BCF)</td>
<td>&lt; -1.73 (Experimental value; EU Method A.8: Partition Coefficient)</td>
<td>Bioaccumulation: not applicable.</td>
</tr>
</tbody>
</table>

12.4. Mobility in soil

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>Mobility in soil</th>
</tr>
</thead>
<tbody>
<tr>
<td>urea (57-13-6)</td>
<td>Not applicable</td>
</tr>
</tbody>
</table>

12.5. Other adverse effects

- **Effect on ozone layer**: No additional information available
- **Effect on global warming**: No known effects from this product. No additional information available

**Other information**: Avoid release to the environment.

**SECTION 13: Disposal considerations**

13.1. Waste treatment methods

**Product/Packaging disposal recommendations**: Dispose of waste material in accordance with all local, regional, national, territorial and international regulations. As a non-hazardous liquid waste, it should be solidified with stabilizing agents such as sand, fly ash, or clay absorbent, so that no free liquid remains before disposal to an industrial waste landfill.

**Ecology - waste materials**: Avoid release to the environment.

**SECTION 14: Transport information**

**Department of Transportation (DOT)**

In accordance with DOT

- Not regulated

**ADR**

- Not regulated

**Transport by sea**

- Not regulated

**Air transport**

- Not regulated
### SECTION 15: Regulatory information

#### 15.1. US Federal regulations

<table>
<thead>
<tr>
<th>Diesel Exhaust Fluid</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>EPA TSCA Regulatory Flag</strong></td>
</tr>
<tr>
<td><strong>CERCLA RQ</strong></td>
</tr>
<tr>
<td><strong>SARA Section 302 Threshold Planning Quantity (TPQ)</strong></td>
</tr>
<tr>
<td><strong>SARA Section 311/312 Hazard Classes</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>urea (57-13-6)</th>
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<tbody>
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<td><strong>EPA TSCA Regulatory Flag</strong></td>
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<tr>
<td><strong>SARA Section 311/312 Hazard Classes</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>water (7732-18-5)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Listed on the United States TSCA (Toxic Substances Control Act) inventory</td>
</tr>
</tbody>
</table>

#### 15.2. International regulations

**CANADA**

<table>
<thead>
<tr>
<th>Diesel Exhaust Fluid</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>WHMIS Classification</strong></td>
</tr>
</tbody>
</table>

**EU-Regulations**

No additional information available

### National regulations

<table>
<thead>
<tr>
<th>Diesel Exhaust Fluid</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>DSL (Canada): The intentional ingredients of this product are listed</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>urea (57-13-6)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>DSL (Canada): The intentional ingredients of this product are listed</strong></td>
</tr>
<tr>
<td><strong>EINECS (Europe): The intentional ingredients of this product are listed</strong></td>
</tr>
</tbody>
</table>

#### 15.3. US State regulations

California Proposition 65 - This product does not contain any substance(s) known to the state of California to cause cancer, developmental toxicity and/or reproductive toxicity
SECTION 16: Other information

Revision date : 09/01/2017

NFPA health hazard : 1 - Materials that, under emergency conditions, can cause significant irritation.

NFPA fire hazard : 0 - Materials that will not burn under typical fire conditions, including intrinsically noncombustible materials such as concrete, stone, and sand.

NFPA reactivity : 0 - Material that in themselves are normally stable, even under fire conditions.

Hazard Rating
Health : 1 Slight Hazard - Irritation or minor reversible injury possible

Flammability : 0 Minimal Hazard - Materials that will not burn

Physical : 0 Minimal Hazard - Materials that are normally stable, even under fire conditions, and will NOT react with water, polymerize, decompose, condense, or self-react. Non-Explosives.

Personal protection : B - Safety glasses, Gloves

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