

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

1.1. Product Identifier

Product form : Mixture
Product name : Ultra Clean DEF 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

Ultra Clean Liquids, LLC,
1300 Plant Road
Charleston, MO 63834, USA
T (888) 382-7968
www.theultraclean.com



1.4. Emergency Telephone Number

Emergency number : Chemtrec / (800) 424-9300

SECTION 2: Hazards identification

2.1. Classification of the substance mixture

GHS-US classification

Not classified

2.2. Label elements

GHS-US labeling

Signal word (GHS-US) : None
Hazard statements (GHS-US) : None
Precautionary statements (GHS-US) : None

2.3. Other hazards

No additional information available

2.4. Unknown acute toxicity (GHS US)

No data available

SECTION 3: Composition/information on ingredients

3.1. Substance

Not applicable

3.2. Mixture

Name	Product identifier	% by wt	GHS-US classification
water	(CAS No) 7732-18-5	67.5	Not classified
urea	(CAS No) 57-13-6	32.5	Not classified

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).
- First-aid measures after inhalation : Allow victim to breathe fresh air. Allow victim to rest.
- First-aid measures after skin contact : Remove affected clothing and wash all exposed skin area with mild soap and water, followed by warm water rinse.
- First-aid measures after eye contact : Rinse immediately with plenty of water. Obtain medical attention if pain, blinking or redness persist.
- First-aid measures after ingestion : Rinse mouth. Do NOT induce vomiting. Obtain emergency medical attention.

4.2. Most important symptoms and effects, both acute and delayed

- Symptoms/injuries : Not expected to present a significant hazard under anticipated conditions of normal use.

4.3. Indication of any immediate medical attention and special treatment needed

No additional information available

SECTION 5: Firefighting measures

5.1. Extinguishing media

- Suitable extinguishing media : Foam, Dry powder, Carbon dioxide, Sand.
- Unsuitable extinguishing media : Do not use a heavy water stream.

5.2. Special hazards arising from the substance or mixture

No additional information available

5.3. Advice for firefighters

- Firefighting instructions : Use water spray or fog for cooling containers. Exercise caution when fighting any chemical fire. Prevent fire-fighting water from entering 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 : The EPA has no established reportable quantity for spills for this material, secondary containment is not specified.

6.1.1. For non-emergency personnel

- Emergency procedures : Evacuate unnecessary personnel.

6.1.2. For emergency personnel

- 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 clean up

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 Section 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.

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

No additional information available

8.2. Exposure controls

Personal protective equipment : Avoid all unnecessary exposure. Gloves. Protective goggles.

Hand 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

8.1. Information on basic physical and chemical properties

Physical state : Liquid

Color : Colorless

Odor : characteristic of ammonia odor

Odor threshold : No data available

pH : 9 - 10

Relative evaporation rate (butylacetate=1) : < 1

Freezing point : -11 °C (12 °F)

Boiling point : > 100 OC (212 °F)

Flash point : No data available

Auto-ignition temperature : No data available

Decomposition temperature : No data available

Flammability (solid, gas) : No data available

Vapor pressure	: Not applicable
Relative vapor density at 20 °C	: 0.6 H ₂ O, >1
Specific Gravity	: 1.09
Solubility	: Soluble in water.
	: Water: 100%
Log Pow	: No data available
Log Kow	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosive properties	: No data available
Oxidizing properties	: No data available
Explosive limits	: No data available

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

Strong acids. Strong bases. Oxidizing agents (peroxides, chromates, dichromates).

10.5. Hazardous decomposition products

Carbon monoxide. Carbon dioxide. Fume.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity : Not classified

urea (57-13-6)

LD50 oral rat	8,471.00 mg/kg (Rat: OECD 401: Acute Oral Toxicity; Literature study; 14300 mg/kg bodyweight; Rat; Experimental value)
LD50 dermal rat	>3,200.00 mg/kg (Rat; Literature study)
LD50 dermal rabbit	> 21,000.00 mg/kg (Rabbit; Literature study)
ATE US (oral)	8,471.00 mg/kg bodyweight

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 organ toxicity (repeated exposure)	:	Not classified
Aspiration hazard	:	Not classified
Potential adverse human health effects and symptoms	:	Based on available data, the classification criteria are not met.

SECTION 12: Ecological information

12.1. Toxicity

urea (57-13-6)	
LC50 fish 1	> 6,810.00 mg/l (96 h; <i>Leuciscus idus</i> ; Nominal concentration)
EC50 Daphnia 1	> 10,000.00 mg/l (48 h; <i>Daphnia magna</i> ; Nominal concentration)
LC50 fish 2	17,500.00 mg/l (96 h; <i>Poecilia reticulata</i>)
EC50 Daphnia 2	>10,000.00 mg/l (24h; <i>Daphnia magna</i>)
TLM fish 1	17500 ppm (96 h; <i>Poecilia reticulata</i>)
Threshold Limit other aquatic organisms 1	120000 mg/l (16 h; Bacteria; Toxicity test)
Threshold Limit other aquatic organisms 2	>10000 mg/l (<i>Pseudomonas putida</i>)
Threshold limit algae 1	>10000 mg/l (168h; <i>Scenedesmus quadricauda</i> ; Growth rate)
Threshold limit algae 2	47 mg/l (192 h; <i>Microcystis aeruginosa</i> ; Growth rate)

12.2. Persistence and degradability

urea (57-13-6)	
Persistence and degradability	Inherently biodegradable. Hydrolysis in water. Highly mobile in soil.
ThOD	0.27 g O ₂ /g substance

12.3. Bioaccumulative potential

urea (57-13-6)	
BCF fish 1	1.00 (72 h; <i>Brachydanio rerio</i> ; Fresh water)
BCF other aquatic organisms 1	11,700.00 (<i>Chlorella</i> sp.)
Log Pow	< -1.73 (Experimental value; EU Method A.8: Partition Coefficient)
Bioaccumulative potential	Bioaccumulation: not applicable.

12.4. Mobility in soil

urea (57-13-6)

Mobility in soil	Not applicable
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12.5. Other adverse effects

Effect on ozone layer	:	No additional information available
Effect on global warming	:	No known ecological damage caused by this product. No additional information available
Other information	:	Avoid release to the environment.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste disposal recommendations	:	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

In accordance with DOT

Not a dangerous good in sense of transport regulations

Other information : Not regulated by DOT.

ADR

UN-No. (ADR) : Not regulated by ADR

Transport by sea

UN-No. (IMDG) : Not regulated by IMDG

Air Transport

UN-No. (IATA) : Not regulated by IATA

SECTION 15: Regulatory Information

15.1. US Federal regulations


Ultra Clean DEF Diesel Exhaust Fluid

EPA TSCA Regulatory Flag	Toxic Substances Control Act (TSCA): The intentional ingredients of this product are listed
RQ (Reportable quantity, section 304 of EPA's List of Lists)	None. This material is not classified as hazardous under U.S. EPA regulations.
SARA Section 302 Threshold Planning Quantity (TPQ)	No extremely hazardous substances are in this product.
SARA Section 311/312 Hazard Classes	Urea. No hazards resulting from the material as supplied.

urea (57-13-6)

EPA TSCA Regulatory Flag	Toxic Substances Control Act (TSCA): The intentional ingredients of this product are listed.
SARA Section 311/312 Hazard Classes	Immediate (acute) health hazard

SECTION 16: Other Information

NFPFA health hazard	: 1 - Exposure could cause Irritation but only minor injury even if no treatment is given	
NFPA fire hazard	: 0 - Materials that will not burn	
NFPA reactivity	: 0 - Normally stable, even under fire exposure conditions, and are not reactive with water.	
HMIS III 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, decompose, condense, or self-react. Non-Explosives.	
	B -Safety glasses, Gloves	

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