

Aqueous Urea Solution (32%) - Diesel Exhaust Fluid (DEF)

ACCORDING TO EC-REGULATIONS 1907/2006 (REACH), 1272/2008 (CLP) & 2020/878

SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1 Product identifier

Product Name Aqueous Urea Solution (32%) - Diesel Exhaust Fluid (DEF)

1.2 Relevant identified uses of the substance or mixture and uses advised against

Identified Use(s) Industrial use: Chemical has an application for reducing NO_x from exhaust gases of diesel engines in motor vehicles equipped with Selective Catalytic Reduction (SCR) systems.

Uses Advised Against None known.

1.3 Details of the supplier of the safety data sheet

Company Identification Qatar Fertiliser Company
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E-mail aawad@qafco.com.qa

Only representative of a non-Community manufacturer

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2595 BR, La Haye
Pays Bas

Telephone +31(0)70 219 7000

E-mail REACH@muntajatbv.com

Website www.muntajatbv.com

1.4 Emergency telephone number

National Poisons Information Service (Birmingham Centre) +44 111

For Spill, Leak, Fire, Exposure or Accident, Call CHEMTREC Day or Night Within USA and Canada: 1-800-424-9300

Outside USA and Canada: +1 703-741-5970 and +1-703-527-3887 (collect calls accepted)

SECTION 2: HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

Regulation (EC) No. 1272/2008 (CLP) Not classified as dangerous for supply/use.

2.2 Label elements

Product Name Aqueous Urea Solution (32%) - Diesel Exhaust Fluid (DEF)

Hazard Pictogram(s) None.

Signal Word(s) None.

Hazard Statement(s) None.

Precautionary Statement(s) None.

2.3 Other hazards

None known.

2.4 Additional Information

None.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances

Not applicable.

3.2 Mixtures

HAZARDOUS INGREDIENT(S)	CAS No.	EC No. / REACH Registration No.	%W/W	Hazard Statement(s)	Hazard Pictogram(s)
Water	7732-18-5	231-791-2	66.8 - 68.2	Not classified	None
Urea	57-13-6	200-315-5 01-2119463277-33-XXXX	31.8 - 33.2	Not classified	None
Ammonia	1336-21-6	215-647-6	≤0.2	Skin Corr. 1B H314 Aquatic Acute 1 H400	GHS05 GHS09

HAZARDOUS INGREDIENT(S)	CAS No.	Specific Concentration Limit	M-factor	ATE
Ammonia	1336-21-6	STOT SE 3 C>= 5.00 <= 100.00		

Contains no non-classified vPvB substances or substances with a Union workplace exposure limit.
For full text of H/P Statements see section 16.

SECTION 4: FIRST AID MEASURES

4.1 Description of first aid measures

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Inhalation	If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing. If symptoms persist, obtain medical attention.
Skin Contact	Wash skin with soap and water. If symptoms develop, obtain medical attention.
Eye Contact	Flush eyes with water for at least 15 minutes while holding eyelids open. If symptoms develop, obtain medical attention.
Ingestion	Wash out mouth with water. If symptoms persist, obtain medical attention.

4.2 Most important symptoms and effects, both acute and delayed

None anticipated. Treat symptomatically.

4.3 Indication of any immediate medical attention and special treatment needed

Unlikely to be required but if necessary, treat symptomatically.

SECTION 5: FIREFIGHTING MEASURES

5.1 Extinguishing media

Suitable extinguishing media As appropriate for surrounding fire. Water spray, dry powder or carbon dioxide. Fight larger fires with water spray or alcohol resistant foam.

Unsuitable extinguishing media Water jet spray

5.2 Special hazards arising from the substance or mixture

Decomposes in a fire giving off toxic fumes: Carbon monoxide, Carbon dioxide, Nitrogen oxides, Ammonia

5.3 Advice for firefighters

Fire fighters should wear complete protective clothing including self-contained breathing apparatus.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Provide adequate ventilation when using the material and follow the principles of good occupational hygiene to control personal exposures. Wear protective equipment to comply with good occupational hygiene practice. Wash hands and exposed skin after use.

6.2 Environmental precautions

Do not allow to enter drains, sewers or watercourses.

6.3 Methods and material for containment and cleaning up

Dilute with water. Adsorb spillages onto sand, earth or any suitable adsorbent material. Transfer to a container for disposal. Flush spill area with copious amounts of water.

6.4 Reference to other sections

See Also Section 8, 13.

SECTION 7: HANDLING AND STORAGE

7.1 Precautions for safe handling

General hygiene measures for the handling of chemicals are applicable. Wear appropriate personal protective equipment, avoid direct contact. Wash hands and exposed skin after use. Do not eat, drink or smoke at the work place.

7.2 Conditions for safe storage, including any incompatibilities

Keep container tightly closed, in a cool, well-ventilated place. Keep only in original container.

Storage temperature

Ambient. Recommended range of temperatures for storing is from -5°C to +25°C.

Storage life

Stable under normal conditions.

Incompatible materials

Strong oxidising agents, Acids, Alkalis, Metals (Copper, Brass, Aluminium and Zinc alloys, Carbon Steel, Lead, Magnesium alloys, Nickel, Silver), Acrolein, Mineral acids, Dimethyl sulphate, Mercury, Chlorine.

7.3 Specific end use(s)

Industrial use: Chemical has an application for reducing NO_x from exhaust gases of diesel engines in motor vehicles equipped with Selective Catalytic Reduction (SCR) systems.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

8.1.1 Occupational Exposure Limits

SUBSTANCE	CAS No.	LTEL (8 hr TWA ppm)	LTEL (8 hr TWA mg/m ³)	STEL (ppm)	STEL (mg/m ³)	Note
						None assigned

Region

Source

United Kingdom UK Workplace Exposure Limits EH40/2005 (Fourth edition, published 2020)

8.2 Exposure controls

8.2.1. Appropriate engineering controls Use with ventilation, local exhaust ventilation or breathing protection. A washing

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facility/water for eye and skin cleaning purposes should be present.

8.2.2. Personal protection equipment



Eye Protection

Wear protective eyeglasses for protection against liquid splashes.



Skin protection

Wear suitable gloves if prolonged skin contact is likely.
Breakthrough time of the glove material: refer to the information provided by the gloves' producer.



Respiratory protection

Wear suitable respiratory protective equipment if exposure to high levels of material is likely.



Thermal hazards

Not applicable.

8.2.3. Environmental Exposure Controls Do not allow to enter drains, sewers or watercourses.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Physical state	Liquid.
Colour	Colourless.
Odour	Ammonia odour.
Melting point/freezing point	~-11-12° C
Boiling point or initial boiling point and boiling range	>100° C
Flammability	Non-flammable.
Lower and upper explosion limit	Not available.
Flash Point	Not available.
Auto-ignition temperature	Not available.
Decomposition Temperature	Not available.
pH	7.5-9.5 @ 20° C
Kinematic Viscosity	Not available.
Solubility	Solubility (Water) : Completely miscible with water. Solubility (Other) : Not known.
Partition coefficient n-octanol/water (log value)	Log Pow : -1.73 (Urea)
Vapour pressure	Not available.
Density and/or relative density	Not available.
Relative vapour density	Not available.
Particle characteristics	Not applicable.

9.2 Other information

None.

SECTION 10: STABILITY AND REACTIVITY

10.1 Reactivity

None anticipated.

10.2 Chemical Stability

Stable under normal conditions.

10.3 Possibility of hazardous reactions

No hazardous reactions known if used for its intended purpose.
Reacts with sodium hypochlorite or calcium hypochlorite to form explosive nitrogen trichloride.

10.4 Conditions to avoid

Heat and direct sunlight.

10.5 Incompatible materials

Strong oxidising agents, Acids, Alkalis, Metals (Copper, Brass, Aluminium and Zinc alloys, Carbon Steel, Lead, Magnesium alloys, Nickel, Silver), Acrolein, Mineral

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acids, Dimethyl sulphate, Mercury, Chlorine.

10.6 Hazardous decomposition products

No hazardous decomposition products known.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008

Acute toxicity - Ingestion	Calculation method : Not classified. Urea: LD50 (oral, rat) mg/kg: 143000
Acute toxicity - Skin Contact	Calculation method : Not classified.
Acute toxicity - Inhalation	Calculation method : Not classified.
Skin corrosion/irritation	Calculation method : Not classified.
Serious eye damage/irritation	Calculation method : Not classified.
Skin sensitization data	Calculation method : Not classified. It is not a skin sensitiser.
Respiratory sensitization data	Calculation method : Not classified.
Germ cell mutagenicity	Calculation method : Not classified. There is no evidence of mutagenic potential.
Carcinogenicity	Calculation method : Not classified. No evidence of carcinogenicity.
Reproductive toxicity	Calculation method : Not classified. No evidence of reproductive effects.
Lactation	Calculation method : Not classified.
STOT - single exposure	Calculation method : Not classified.
STOT - repeated exposure	Calculation method : Not classified.
Aspiration hazard	Calculation method : Not classified.

11.2 Information on other hazards

Not known.

SECTION 12: ECOLOGICAL INFORMATION

12.1 Toxicity

Toxicity - Aquatic invertebrates	Low toxicity to invertebrates.
Toxicity - Fish	Low toxicity to fish.
Toxicity - Algae	Low toxicity to algae.
Toxicity - Sediment Compartment	Not classified.
Toxicity - Terrestrial Compartment	Not classified.

12.2 Persistence and degradability

No information on this formulation.
Urea: Readily biodegradable.

12.3 Bioaccumulative potential

No information on this formulation.
Urea: Low bioaccumulation potential.

12.4 Mobility in soil

Miscible with water. The product is predicted to have high mobility in soil.

12.5 Results of PBT and vPvB assessment

Not classified as PBT or vPvB.

12.6 Endocrine disrupting properties

None known.

12.7 Other adverse effects

Not known.

SECTION 13: DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Dispose of empty containers and wastes safely.

13.2 Additional Information

Disposal should be in accordance with local, state or national legislation.

SECTION 14: TRANSPORT INFORMATION

Not classified as hazardous for transport.

14.1 UN number or ID number

Not applicable

14.2 UN proper shipping name

Not applicable

14.3 Transport hazard class(es)

Not applicable

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14.4 Packing group	Not applicable
14.5 Environmental hazards	Not classified as a Marine Pollutant.
14.6 Special precautions for user	Not known
14.7 Maritime transport in bulk according to IMO instruments	Not known

SECTION 15: REGULATORY INFORMATION

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

European Regulations - Authorisations and/or Restrictions on Use

Candidate List of Substances of Very High Concern for Authorisation Not listed

REACH: ANNEX XIV list of substances subject to authorisation Not listed

REACH: Annex XVII Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles Ammonia (1336-21-6)

Community Rolling Action Plan (CoRAP) Not listed

Regulation (EU) N° 2019/1021 of the European Parliament and of the Council on persistent organic pollutants Not listed

Regulation (EC) N° 1005/2009 on substances that deplete the ozone layer Not listed

Regulation (EU) N° 649/2012 of the European Parliament and of the Council concerning the export and import of hazardous chemicals Not listed

National regulations

Other Not known.

15.2 Chemical Safety Assessment

A REACH chemical safety assessment has not been carried out.

SECTION 16: OTHER INFORMATION

The following sections contain revisions or new statements: 1-16

LEGEND

Hazard Pictogram(s)	GHS05: GHS: Corrosion GHS09: GHS: Environment
Hazard classification	Skin Corr. 1B : Skin corrosion/irritation, Category 1B Aquatic Acute 1 : Hazardous to the aquatic environment, Acute, Category 1
Hazard Statement(s)	H314: Causes severe skin burns and eye damage. H400: Very toxic to aquatic life.
Acronyms	ATE : Acute Toxicity Estimate CAS : Chemical Abstracts Service CLP : Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures EC : European Community LTEL : Long term exposure limit PBT : Persistent, Bioaccumulative and Toxic REACH : Registration, Evaluation, Authorisation and Restriction of Chemicals STEL : Short term exposure limit STOT : Specific Target Organ Toxicity UN : United Nations vPvB : very Persistent and very Bioaccumulative
Key literature references and sources for data used to compile the SDS	Regulation (EC) No. 1272/2008 (CLP)
Training Advice	Regular safety training as appropriate
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