Safety Data Sheet **AdBlue**

Caspian Chemistry Co

Tel: +989128043899
Email: info@Caspianchemistry.com

Date : May 1st 2025

Section 1 : Identification of Substance

Description	AdBlue (AUS 32) / Aqua Urea Solution 32
1.1 Product Name :	Cleaning of waste gases / reduction of NOx
1.2 Product Use :	Aqueous Solution
1.3 Physical Form :	
1.4 Manufacturer :	Caspian Chemistry Co Tel: 98 9124045100 E-Mail : info@Caspianchemistry.com

Section 2 : Composition / Information on Ingredients

2.1 Composition :	It is a judicious blend of urea & De-Ionized water (CAS 57-13-6)

Section 3 : Hazards Identification

3.1 The product is not classified according to CLP regulation (EC) No.1272/2008

Tel: +989128043899 Email: info@Caspianchemistry.com

Section 4 : First Aid Measures

4.1 Description of first aid measures

- **General information:** remove contaminated clothing.
- **After inhalation:** supply fresh air; consult doctor in case of symptoms
- **After skin contact:** rinse with plenty of water; If skin irritation continues, consult a doctor.
- **After eye contact:** rinse open eye for several minutes under running water. If Symptoms persist consult doctor.
- **After swallowing:** Rinse out mouth and then drink plenty of water. Get Medical advice for safety reasons.

4.2 Most important symptoms and effects both acute and delayed: no Further relevant information available.

4.3 Indication of any immediate medical attention and special treatment Needed: no further relevant information available.

Section 5 : Fire Fighting Measures

5.1 Extinguishing Media

- **Suitable extinguishing agents:** Use fire fighting measures that suit the Environment.
- **For safety reasons unsuitable extinguishing agents:** none

5.2 Special hazards arising from the substance or Mixture

- **Can be released in case of fire:**
- Ammonia (NH_3)
- Nitrogen oxides (NOx)
- Carbon monoxide (CO) and Carbon dioxide (CO_2)

5.3 Advice for fire fighters

- **Protective equipment:** Put on breathing apparatus.
- **Additional information:** Dispose of fire debris and contaminated fire fighting water in accordance with official regulations.

Tel: +989128043899 Email: info@Caspianchemistry.com

Section 6 : Accidental Release Measures

6.1 Personal precautions, protective equipment and emergency procedures

- Ensure adequate ventilation.
- Particular danger of slipping on leaked/spilled product.
- Avoid contact with eyes.

6.2 Environmental precautions: Do not allow to enter drainage system, surface or ground water.

6.3 Methods and material for containment and cleaning up:

- Ensure adequate ventilation.
- Absorb with liquid-binding material (sand, diatomite, acid binders, universal Binders, sawdust).
- Dispose of the material collected according to local regulations.
- Wash area with plenty of water.

6.4 Reference to other sections

See Section 8 for information on personal protection equipment.

Section 7 : Handling & Storage

7.1 Precautions for safe handling

- Ensure good ventilation / exhaustion at the workplace.
- Avoid prolonged or repeated skin contact
- Avoid contact with eyes.

Information about protection against explosion and fires: the product is not Flammable

7.2 Conditions for safe storage, including any incompatibilities

Storage

- Requirements to be met by storerooms and containers:
- Observe all local and national regulations for storage of water polluting products.
- Use only containers specifically permitted for this substance/product.
- Store the material at temperatures as much low as possible, under roof in a well ventilated room and should not be exposed to direct sunlight

Tel: +989128043899 Email: info@Caspianchemistry.com

- **Further information about storage conditions:** Pls refer ISO 22241 Standard

- Keep the container tightly sealed.
- Storage temperature: -5 to 30°c (Urea Crystallization starts at -11.5°c)
- Shelf life will be 12 months from the manufacturing date, if stored in sealed manner under roof in properly ventilated area at ambient temperature without exposure to direct Sun light. A table prepared for shelf life as a function of storage temperature as per ISO 22241 is given here for ready reference.

Constant ambient storage temperature °C	Minimum shelf life months
≤10	36
≤25	18
≤30*	12
≤35	6
>35	Significant loss of shelf life : Check every batch before use
NOTE : The main factors taken into account to define the shelf life in this table are the ambient storage temperature and the initial alkalinity of AUS 32. The difference in evaporation between vented and non-vented storage containers is an additional factor *To prevent decomposition of AUS 32, prolonged transportation or storage above 30 °C should be avoided	

AdBlue solution can be fit for use even after its defined shelf life by sending sample to an authorized laboratory to conform to specification defined in the ISO 22241 standard.

7.3 Specific end use(s) No further relevant information available.

Section 8 : Exposure Controls / Personal Protection

Additional information about design of technical systems: No further data; see Item 7.

8.1 Control parameters
Components with critical values that require monitoring at the workplace:

- The product does not contain any relevant quantities of materials with critical Values that have to be monitored at the workplace.
- **Additional Information:** the list that were valid during the compilation was used as basis.

8.2 Exposure controls
Personal protective equipment
General protective and hygienic measures

Tel: +989128043899 Email: info@Caspianchemistry.com

- Keep away from foodstuffs, beverages and food.
- Instantly remove any contaminated garments.
- Avoid contact with the eyes.
- Avoid close or long term contact with the skin.
- Wash hands during breaks and at the end of the work.

Breathing equipment: Not necessary if room is well-ventilated.

Protection of hands:

- Protective gloves
- To avoid skin problems reduce the wearing of gloves to the required minimum.
- Check the permeability prior to each renewed use of the glove.
- The glove material has to be impermeable and resistant to the product/ the Substance/ the preparation. Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation.
- Sensibilization by the components in the glove materials is possible.

Material of gloves

- Natural rubber – NR
- The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material cannot be calculated in advance and has therefore to be checked prior to the application.

Penetration time of glove material

- The exact break through time has to be found out by the manufacturer of the Protective gloves and has to be observed.

Eye protection: Safety glasses recommended during refilling.

Body protection:

- Protective work clothing
- Body Protection must be chosen depending on activity and possible exposure.

Section 9 : Physical and Chemical Properties

9.1 Information on basic physical and chemical properties
General Information

Appearance:	
Form:	Liquid
Colour:	Clear Colourless
Smell:	Slightly Ammoniacal
***pH-value* (100 g/l) at 20℃**	10

Tel: +989128043899 Email: info@Caspianchemistry.com

Change in condition	
Melting point / Melting range:	-11°C
Boiling point / Boiling range:	103°C
Flash point	103°C
Surface tension :	65 mN/m @ 20°C min.
Decomposition temperature	Not Determined
Self-in flammability:	Product is not self igniting
Danger of Explosion:	Product is not explosive
Density at 20°C	1.087-1.093 g/cm³
Vapour Pressure @20.08°c above liquid AdBlue :	23.0(hPa)
Solubility in / Miscibility with	
Water:	Fully miscible
Dynamic Viscosity at 25°C:	~ 1.4 mPas

Section 10 : Stability and Reactivity

10.1 Reactivity

10.2 Chemical stability

Thermal decomposition/ condition to be avoided: no decomposition if used according to specifications.

10.3 Possibility of hazardous reactions

Reacts with strong oxidizing agents
Violent reaction with nitrites

10.4 Conditions to avoid: no further relevant information available

10.5 Hazardous decomposition products:

Nitrogen Oxides (NOx)
Ammonia (NH_3)
Carbon Monoxide (CO) and Carbon Dioxide (CO_2)

Section 11 : Toxicological Information

11.1 Information on toxicological effects
Acute toxicity:
LD/LC50 values that are relevant for classification:
57-13-6 Urea

Oral	LD50	14500 mg/kg (rat)

Tel: +989128043899 Email: info@Caspianchemistry.com

Primary irritant Effect:

- **On the skin:** no irritant effect
- **On the eye:** no irritant effect
- **Sensitization:** no sensitizing effect known

Additional toxicological information:
When used and handled according to specifications, the product does not have any Harmful effects according to our experience and the information provided to us.

CMR effects (Carcinogenetic, mutagenicity & toxicity for reproduction):
According to present knowledge no CMR-Effects known.

Section 12 : Ecological Information

12.1 Persistence and degradability: no further relevant information available
Other information: the product is Biodegradable.

12.2 Bio accumulative potential: no further relevant information available

12.3 Mobility in soil: no further relevant information available.

Additional ecological information:
General Notes: the product may not be released into the environment without Control.
Water hazard class 1 (Self-assessment): slightly hazardous for water

Section 13 : Disposal Considerations

Waste must be disposed off in accordance with central, state and local environmental Control regulations. Do not heat or cut empty container with electric or gas torch.

Absorb small spillages in sand and incinerate in safe area.

Section 14 : Transport Information

Air transport ICAO-TI and IATA DGR:

ICAO / IATA Class:		Not dangerous for IATA DGR Code
Dot	:	Not regulated
IMDG	:	Not regulated
ICAO/IATA Class	:	Not regulated

MSDS should preferably accompany consignment so that any en-route mishap can be Effectively contained. Product transportation is not regulated for land, sea or air

Tel: +989128043899 Email: info@Caspianchemistry.com

Transport. Flush small spillage with plenty of water.

Section 15 : Regulatory Information

Transport, use and disposal of these products is governed in accordance with central, State and local environment regulations.

Section 16 : Other Information

The above is offered in good faith and values given are typical and not product Specifications.
The data provided is without any warranty, express or implied, regarding its reactions and accuracy. It is the user's responsibility to determine safe conditions for use of this product in his plant / equipment and to assure liability for loss, injury, damage or Expense resulting from improper use of this product.

Tel: +989128043899 Email: info@Caspianchemistry.com

Parameter	Minimum	Maximum	Unit
Appearance	Colorless liquid with slight ammonia odor		
Freezing Point	-11	-11	°C
Boiling Point	100	100	°C
Basicity	9	10	pH
Flash Point	Not applicable (non-flammable)		
Water Solubility	100		g/l
Viscosity at 20°C	1.4	1.4	mPa.s
Urea Content	31.8	36	%
Density at 20°C	1.087	1.093	g/cm^3
Refracting Index at 20°C	1.3814	1.3843	
Alkalinity as NH_3		0.2	%
Biuret		0.3	%
Insolubles 20 mg/kg		20	mg/kg
Aldehyde 5 mg/kg		5	mg/kg
Phosphate (PO_4)		0.5	mg/kg
Calcium		0.5	mg/kg
Iron		0.5	mg/kg
Aluminum		0.5	mg/kg
Magnesium		0.5	mg/kg
Sodium		0.5	mg/kg
Potassium		0.5	mg/kg
Copper		0.2	mg/kg
Zinc		0.2	mg/kg
Chromium		0.2	mg/kg
Nickel		0.2	mg/kg