AdBlue®

Product Description:

According to its chemical composition AdBlue® is a 32.5% high purity Urea solution with a constant level of quality, as per the ISO 22241 and DIN 70070. AdBlue® is a non-toxic and environmentally friendly product classified as the lowest category of hazard to the aquatic environment (Class 1 in Germany). The constant quality of AdBlue® can be ensured only if it has been formulated from Urea production, and then stored and handled in accordance with the CEFIC AUS 32 instructions. The main precondition for ensuring the top quality is a system of effective quality management (QM - Quality Management) in accordance with ISO 9001 standards.
Content of Nitrogen (N) in AdBlue® amounts to 14.95%.

Application:

AdBlue® is a harmless synthetic solution which is used as an exhaust emission reduction agent according to EGR1/DPF2/SCR3 technologies in heavy and some light vehicles with Euro 4*, Euro 5** i Euro 6*** diesel aggregates. **AdBlue® is not a diesel additive!** AdBlue® is kept in a separate tank and dispensed independently. Upstream of the catalytic converter (inverter) AdBlue® is chemically converted into ammonia, which (in the next step) in SCR - catalytic converter, breaks down harmful nitrogen oxides (NO_x) and turns them into nitrogen (N_2) and water (H_2O), which are natural air components and which we normally breathe. AdBlue® consumption equals about 5% of diesel fuel per 100 km.

*EU standards related to emissions for trucks and buses weighing more than 3.5 mt. * Euro 4 - regulations valid from 1 October 2005: a reduction of NOx emission limits by 30% to 3.5 and of soot particulate matter PM by 80% to 0.02. **Euro 5 - regulations valid from 1 October 2008: a further reduction of NOx emission limits by about 42% to 2.0. *** Euro 6 - regulations valid from 31.12.2013: reducing hydrocarbon HC by about 71% to 0.13, reduction of NOx by 80% to 0.4 and reducing particulate matter PM by 50% to 0.01.*

Storage and Shelf Life:

It is recommended to be stored in the original packaging, at a temperature from -11°C to +35°C, covered and protected from direct sunlight and other atmospheric effects. Packaging should be tightly closed. In the case of storage at a higher temperature, the content – Urea concentration is reduced.

storage temperature, °c	minimum shelf life, months
0-10	36
10-25	18
25-30	12
30-35	6
above 35	significantly reduced shelf life

Risk and Impact on Health and Environment:

In terms of the handling of AdBlue® any possibility that a slight amount of the product might contact the skin and generate adverse impacts upon human health may be excluded. The product is inflammable. In case of spilling, the product is not harmful to the environment.

ADECO d.o.o., Temerinski put 109, 21000 Novi Sad Tel. (021) 678 00 80 Fax: (021) 641 16 41
E-mail: export@adeco.rs www.adeco.rs www.adblue.rs

Physical and Chemical Properties:

	Characteristic, Unit	*Referential Values*	*Method*
1.	Urea Content, %	31,8 – 33,2	ISO 22241-2
2.	Density at 20 °C, g/cm^3	1,087 – 1,090	SRPS H.B8.030
3.	Refractive Index 20 °C	1,3817 – 1,3840	Refractometer
4.	Alkalinity as NH_3, %	max 0,2	ISO 1593
5.	Biuret, %	max 0,3	ISO 2754
6.	Aldehydes, ppm	max 5	ASTM E2313-08
7.	Insolubles, ppm	max 20	Gravimetry G4
8.	Phosphates (PO_4), ppm	max 0,5	EPA 300.0
	Metals:		
9.	Calcium (Ca), ppm	max 0,5	ISO 14911
10.	Iron (Fe), ppm	max 0,5	SRPS ISO 15586
11.	Copper (Cu), ppm	max 0,2	SRPS ISO 15586
12.	Zink (Zn), ppm	max 0,2	SRPS ISO 15586
13.	Chromium (Cr), ppm	max 0,2	SRPS ISO 15586
14.	Nickel (Ni), ppm	max 0,2	SRPS ISO 15586
15.	Aluminium (Al) , ppm	max 0,5	SRPS ISO 15586
16.	Magnezium (Mg), ppm	max 0,5	ISO 14911
17.	Sodium (Na), ppm	max 0,5	ISO 14911
18.	Potassium (K), ppm	max 0,5	ISO 14911

Standards and Specifications:

DIN V 70070; ISO 22241-1; AUS32 CEFIC.

Packaging: AdBlue is supplied in *dedicated* road tankers, IBC (Intermediate Bulk Containers), 208lt drums and 20, 10, 5 lt cans

All storage and handling facility should be dedicated and be made of proper materials:

- alloyed austenitic Cr-Ni-steels or Cr-Ni-Mo-steels according to EN 10088-1 or equivalent
- polymers like PE, PP and polyoxymethylene are suitable at temperatures up to 60°C. sealings may be made of PTFE or EPDM*

Non alloyed steels, zinc coated steels, copper, and alloys containing copper are not suitable due to their poor resistance towards urea, urea solution, or the ammonia dissolved therein. Any other material not cited above must be tested regarding corrosion resistance and possible influences on the product specification.

ADECO d.o.o., Temerinski put 109, 21000 Novi Sad Tel. (021) 678 00 80 Fax: (021) 641 16 41
E-mail: export@adeco.rs www.adeco.rs www.adblue.rs