



Technical Data Sheet

AdBlue[®]

NOx Reducing Agent for Heavy Duty Vehicles

AdBlue[®] is a high quality Urea solution manufactured with pure demineralized water and designated internationally as AUS-32 (Aqueous Urea Solution of 32.5%).

Application: AdBlue[®] is intended to be used as a reagent in the Selective Catalytic Reduction (SCR) technology for the reduction of NOx by injecting it into the exhaust gas after treatment system attached to the diesel vehicle engine.

Specification:

Characteristics:	Limits		Nominal value	Unit
	Min.	Max.		
Urea content:	31.8	33.2	32.5 %	(m/m)
Density at 20 °C:	1.0870	1.0930	1.0900	kg/m ³
Refractive index at 20 °C:	1.3814	1.3843	1.3829	
Alkalinity as NH ₃ :		0.2		% (m/m)
Biuret:		0.3		% (m/m)
Aldehydes:		5		mg/kg
Insolubles:		20		mg/kg
Phosphate (PO ₄):		0.5		mg/kg
Calcium:		0.5		mg/kg
Iron:		0.5		mg/kg
Copper:		0.2		mg/kg
Zink:		0.2		mg/kg
Chromium:		0.2		mg/kg
Nickel:		0.2		mg/kg
Aluminium		0.5		mg/kg
Magnesium:		0.5		mg/kg
Sodium:		0.5		mg/kg
Potassium:		0.5		mg/kg

The specification meets the requirements of ISO 22241-1:2006-10-15.

Sampling and testing according to the test methods in ISO 22241-2:2006-10-15 referred.



Physical properties:

Aspect: Colourless clear liquid, no or slight smell like ammonia

Viscosity (at 25 °C): approx. 1.4 mPa s

Incipient Crystallisation: -11.5 °C

Transportation and storage:

Insulated tank road vehicles and plastic tank pallets (IBC) are used for transportation.

To avoid crystal precipitation or hydrolysis of the product, storage and transportation in the temperature range between -5 °C and + 25 °C is recommended.

Prolonged storage at temperatures above 25 °C may lead to the decomposition of urea and increase of concentration because of evaporation of water when containers are vented.

Shelf life of AdBlue[®] is significantly dependent on the storage temperature as shown in the following table:

Max. constant storing temperature [°C]	Min. shelf life [Months]
≤ 10	36
≤ 25 a)	18
≤ 30	12
≤ 35	6
> 35	-- b)

a) To prevent decomposition of the AdBlue[®], prolonged transporting or storing above 25 °C should be avoided.

b) Significant loss of shelf life: check every batch before use.

The main factors taken into account to define the shelf life in the table are the ambient storing temperature and the initial alkalinity of AdBlue[®]. The difference in evaporation between vented and non-vented storing containers is an additional factor.

AdBlue[®] stored under normal conditions as stated above and in containments of suitable materials is stable for at least two years at 20 °C.

Completely solidified of AdBlue[®] at temperatures lower than - 11 °C has an approximately 7 % larger volume than the liquid and, therefore, May cause burst of fully filled containers. Solidified AdBlue[®],



which has been warmed up carefully at temperatures not exceeding 30 °C will not be impaired in quality and can be used as soon as the warmed up solution is free from solids.

In order to avoid excessive temperature rise AdBlue[®] should be protected from sun light.

Highly alloyed steels, Titan, HDPE, PP and Viton are suitable materials in contact with AdBlue[®]. The product is corrosive to steel, iron, nickel and nonferrous metals.

Safety Considerations:

AdBlue[®] is a non-toxic aqueous solution, harmless to humans or animals. It is friendly to the environment, biodegradable and is not ecotoxic. AdBlue[®] is a non-flammable solution and is not classified as hazardous for transport.

Note

The information and statements herein are believed to be reliable, but are not to be construed as a warranty or representation for which we assume legal responsibility. Users should undertake sufficient verification and testing to determine the suitability for their particular purpose of any information on products referred to herein.