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#### AdBlue AUS 32 Din 70070 ISO 22241.

Specification	Minimum	Maximum	Weight
Urea Content	31.8	33.2	%
Density @ 20°C	1.0870	1.0930	g/cm <sup>3</sup>
Refracting index @ 20°C	1.3814	1.3843	
Alkalinity as NH <sub>3</sub>		0.2	%
Biuret		0.3	%
Aldehyde 5 mg/kg		5	mg/kg
Insolubles 20 mg/kg		20	mg/kg
Phosphate (PO <sub>4</sub> )		0.5	mg/kg
Calcium		0.5	mg/kg
Iron		0.5	mg/kg
Copper		0.2	mg/kg
Zinc		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 for AdBlue is defined within ISO22241, all batches of AdBlue produced to this standard must be independently tested and verified in accordance with the terms of the AdBlue license.

What's most important about AdBlue is what's not in it, as impurities influence the operation of the SCR system, see the section titled Importance of Quality for more details.

#### **Physical and Chemical Properties of AdBlue**

Appearance: Colourless Liquid with slight ammonia odour

Freezing point: -11°C
Boiling point: 100°C
pH: 9-10

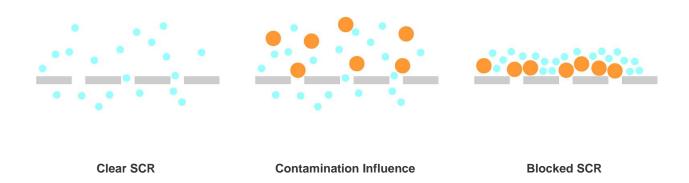
Flash point: not applicable (non-flammable)

Density: 1.088g/cm<sup>3</sup> Water solubility: 100g/l

Viscosity: 1.4 mPa.s @ 20°C

### Importance of Quality

SCR systems are sensitive to potential chemical impurities in the urea solution. In order to ensure that the SCR system continues to work effectively, care must be taken to ensure the purity of the catalyst and the reducing agent. Even small amounts of contaminant can severely impact the performance of the SCR system.



## **Applicable Standards**

Fortunately a series of ISO standards are in place to ensure that the quality and purity of AdBlue is maintained throughout the production, distribution and handling process.

#### BS ISO 22241 Diesel engines. NOx reduction agent AUS 32

- BS ISO 22241-1:2006 Quality Requirements
- BS ISO 22241-2:2006 Test methods
- BS ISO 22241-3:2017 Handling, transportation, and storage
- BS ISO 22241-4:2009 Refilling interface
- BS ISO 22241-5:2012 Refilling interface for passenger cars

Simply translated, fleet managers and operators are able to protect their vehicles by ensuring that the AdBlue they are using is produced to ISO22241-1 and that the storage and handling equipment used meets ISO22241-3.