

Product Data Sheet

Urea – AdBlue / DEF Grade (ISO 22241, AUS 32)

Description

Description	AdBlue/DEF Grade Urea Solution is a high-purity aqueous urea solution (31.8–33.2% w/w, AUS 32) manufactured and certified to ISO 22241-1/-2, for use as Diesel Exhaust Fluid (DEF) in Selective Catalytic Reduction (SCR) systems. It carries a substantially tighter biuret ceiling (max 0.3%) and strict trace-metal limits compared to standard technical-grade urea, since biuret and metal contamination can foul the SCR catalyst and degrade NOx-reduction performance.
Applications	Diesel Exhaust Fluid (DEF/AdBlue) for SCR-equipped diesel trucks, buses and off-road equipment Emission compliance for BS-VI, Euro VI and Tier 4 diesel engine standards Stationary diesel generator SCR systems
Grade	AdBlue / DEF Grade, ISO 22241-1/-2 Certified Specification (AUS 32)
CAS No.	57-13-6 (urea, in deionised water solution)

Key Benefits

1. Certified ISO 22241 compliance ensuring compatibility with SCR systems and DEF injection equipment
2. Ultra-low biuret and trace-metal content protects SCR catalyst life and NOx-reduction efficiency
3. Consistent urea concentration (31.8–33.2%) for optimal, predictable dosing performance
4. Produced from high-purity technical urea and deionised water to ISO 22241 impurity limits
5. Supports growing demand from emission-compliance mandates across commercial fleets

Chemical Analysis & Physical Data

Typical Specification

Characteristic	Test Method	Unit	Specification (ISO 22241-2)
Description	—	–	Clear or slightly yellow liquid, odourless or having slight scent of ammonia
Refractive Index (20°C)	ISO 22241-2 B&C	nD	1.3814 – 1.3843
Urea Content	ISO 22241-2 Annex C	wt%	31.8 – 33.2
Specific Gravity (20°C)	ISO 3675 / 1218	g/cm ³	1.087 – 1.093
Alkalinity (as NH ₃)	ISO 22241-2 Annex D	wt%	Max. 0.2
Biuret Content	ISO 22241-2 Annex E	wt%	Max. 0.3
Aldehyde Content	ISO 22241-2 Annex F	mg/kg	Max. 5
Insoluble Particle Content	ISO 22241-2 Annex G	mg/kg	Max. 20
Phosphate Content	ISO 22241-2 Annex I	mg/kg	Max. 0.5
Calcium / Iron / Magnesium / Sodium / Potassium	ISO 22241-2 Annex I	mg/kg	Max. 0.5 each
Copper / Zinc / Chromium / Nickel / Aluminium	ISO 22241-2 Annex I	mg/kg	Max. 0.2 each

Packaging

Packaging 20 L / 25 L Jerry Cans
 200 L Drums
 1,000 L IBC Totes
 Bulk tanker delivery available for fleet/fuel-station volumes

Storage & Handling

1. Store in a cool, shaded area away from direct sunlight – UV exposure and heat can degrade solution quality over time
2. Solution freezes at approximately -11°C and expands on freezing – use freeze-tolerant containers/lines and heated storage in cold climates; freezing does not damage the product, but tanks/lines must accommodate expansion
3. Avoid contact with copper, brass, zinc and certain other metals – these can corrode or catalyse decomposition of the solution; use compatible materials (stainless steel, HDPE) for storage and dispensing equipment
4. Keep containers tightly closed to prevent contamination and evaporation, which can shift urea concentration outside the certified range
5. Segregate from standard technical-grade urea and other chemicals to prevent cross-contamination

Quality Assurance

1. Every batch is tested against the full ISO 22241-2 specification above before dispatch
2. A batch-specific Certificate of Analysis (COA) accompanies each shipment, reporting urea content, biuret, aldehyde and trace element results against this TDS
3. COA available on request prior to shipment for buyer pre-approval
4. Third-party inspection (SGS/Intertek) can be arranged on request for regulated-market shipments

Disclaimer: The information provided in this document is based on our current knowledge and is intended as a general guide. Ochnology Solution Pvt. Ltd. reserves the right to modify specifications without prior notice. Buyers are advised to conduct their own testing for specific applications. A batch-specific Certificate of Analysis (COA) is available on request for each shipment.