AUS40 (Urea 40%, high purity)

Description

UREA & TECHNICAL PRODUCTS **Product Code**: 710001

HIGH PURITY 40% AQUEOUS UREA SOLUTION FOR SCR SYSTEMS, ACCORDING TO ISO 18611

New Age Chemicals offers all necessary chemicals for the exhaust emissions abatement systems that ships utilize to reduce exhaust emissions. This way, your vessels meet IMO MARPOL Annex VI Regulations 13 and 14 requirements for nitrogen oxide emissions from diesel engines, and sulfur oxide emissions from all fuel-burning equipment on board.

DESCRIPTION

AUS40 is a high purity urea reagent that combines with NOx gas in the funnel, producing harmless nitrogen gas and water. Contains 40% urea and demineralized water. Its high concentration of urea makes it highly effective for heavy-duty SCR systems and large vessels, achieving over 98% NOx reduction in combustion processes. **AUS40** meets ISO and IMO Tier III requirements.

AUS40 ensures smooth system operation throughout the systemâ??s lifetime.

BACKGROUND

The IMO Tier 3 NOx emission standard entered into force in 1.1.2016. It applies for new marine diesel engines >130 kW installed in ships which keel laying date is 1.1.2016 or later when operating inside the North American ECA and the US Caribbean Sea ECA and for new marine diesel engines >130 kW installed in ships which keel laying date is 1.1.2021 or later inside North Sea and Baltic Sea ECA.

The best available technology for marine engines to control and reduce NOx emissions according to MARPOL regulations is Selective Catalytic Reduction (SCR). At SCR systems, the exhaust gases are mixed with a reductant and passed over a catalyst, for reducing NOx levels in the exhaust gases.

The most common reductant source used in SCR applications is urea, typically an aqueous solution of 40% urea in deionized water. This specific marine engine urea must comply with the ISO 18611 standard. Urea solutions of inferior quality may cause problems to the smooth operation of the SCR systems (e.g. insufficient system performance or improper dosing).

APPROVALS & SPECIFICATIONS

AUS40 follows ISO 18611 standard and meets IMO Tier III requirements.

Characteristics	Unit	Value	Test method
Urea Content	% (m/m)	39.0 â?? 41.0	ISO 18611-2, Annexes B & C
Density at 20^{o}C	kg/m^{3}	1105 â?? 1177	ISO 3675 or ISO 12185
Refractive Index at 20^{o}C	â??	1.3947 â?? 1.3982	ISO 18611-2, Annex C
Alkalinity as NH3	% (m/m)	<0.5	ISO 18611-2, Annex D
Biuret	% (m/m)	<0.5	ISO 18611-2, Annex E
Aldehydes	mg/kg	<100	ISO 18611-2, Annex F
Insoluble matter	mg/kg	<50	ISO 18611-2, Annex G
Phosphate (PO4)	mg/kg	<1.0	ISO 18611-2, Annex H
Calcium	mg/kg	<1.0	ISO 18611-2, Annex I
Iron	mg/kg	<1.0	ISO 18611-2, Annex I
Magnesium	mg/kg	<1.0	ISO 18611-2, Annex I
Sodium	mg/kg	<1.0	ISO 18611-2, Annex I
Potassium	mg/kg	<1.0	ISO 18611-2, Annex I
Identity	â??	Identical to reference	ISO 18611-2, Annex J

TECHNICAL DATA

AUS40 should be stored between 5^{o}C and 25^{o}C. Temperatures below 0^{o}C are to be avoided, as well as temperatures above 30^{o}C. **AUS40** begins to freeze at 0^{o}C; once thawed, it can be used again. **AUS40** should be stored in a closed, dry room with good ventilation. There is no specification for the maximum allowed quantity of stored **AUS40**.

AVAILABILITY

Depending on the port, it may be supplied in bulk by trucks, flexitanks and flexible intermediate bulk containers of 1 ton. If required, special arrangements for delivery in drums can be made.

The urea storage tank is to be protected from excessively high or low temperatures applicable to the particular urea concentration of the solution such as those specified in ISO 18611 for **AUS40**.

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email us: info@newagechem.com