



TECHNICAL PRODUCTS



Meet IMO MARPOL Annex VI Regulations 13 and 14 requirements for
Nitrogen oxide emissions
Sulfur oxide emissions

EXHAUST EMISSION ABATEMENT



FULL RANGE OF CHEMICALS TO REDUCE EXHAUST EMISSIONS

CONFORM WITH IMO MARPOL
ANNEX VI REGULATIONS



SCR SYSTEMS

AUS AZ40 (40% aqueous urea solution for SCR systems, according to ISO 18611)

AUS AZ40 is a high purity urea reagent containing 40% urea and demineralized water. It is used for heavy-duty SCR systems and large vessels, achieving over 98% NO_x reduction in combustion processes. AUS AZ40 meets ISO and IMO Tier III requirements.

SCRUBBERS

AZ-Alkalis (Sodium Hydroxide 50% aqueous solution or Magnesium Oxide)

For the removal of SO_x emissions, SO_x scrubbers are utilized. A necessary alkali is automatically added to the scrubbing water circulation to maintain the process pH and consequently the SO_x removal efficiency. AZKem offers the necessary alkali chemical:

- Caustic Soda (Sodium Hydroxide, NaOH) 50% aqueous solution, or
- Magnesium Oxide (MgO), that is cheaper when operating in zero wastewater discharge areas (ports/coastlines), compared to the cost of using Caustic Soda.

BILGE SYSTEMS

Chemicals for Oily Water Separators

The chemicals used in oily water separator processes are:

- A coagulant, used for breaking the emulsified oil in the water into particles.
- A flocculant, used for collecting the particles into bigger flocks for easier separation.
- NaOH 50% solution (Caustic Soda), for pH control.

All three are offered by AZKem's wide range for emission abatement chemicals.

AZKEM ensures that your vessels comply with IMO NOx Tier III requirements

Product Description

AUS AZ40 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. AUS AZ40 meets ISO and IMO Tier III requirements.

AUS AZ40 ensures smooth system operation throughout the system's lifetime.

Technical Details

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.

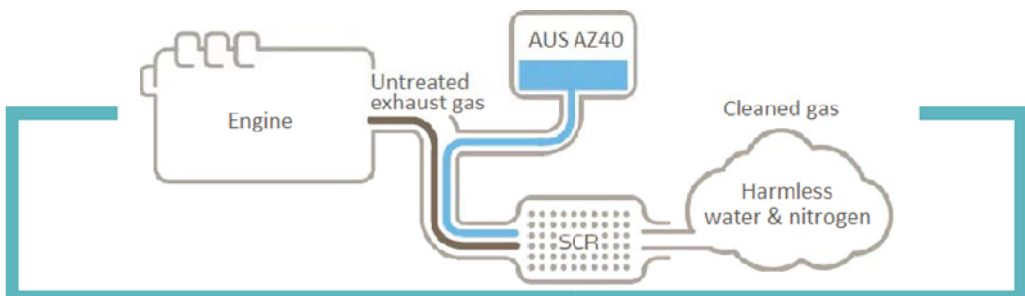
The most common reductant source used in SCR applications is urea, typically an aqueous solution of 40% urea in deionized water. This specific marine engine urea must comply with the ISO 18611 standard. Urea solutions of inferior quality may cause problems to the smooth operation of the SCR systems (e.g.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


Approvals

AUS AZ40 follows ISO 18611 standard and meets IMO Tier III requirements.

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.





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EXHAUST EMISSION ABATEMENT PRODUCTS

Chemicals for SCR Systems, Scrubbers and Bilge Systems

RAW MATERIALS AND COMMODITIES

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