



Ammonia Solution Tender Technical Product Specification and Technical Requirements

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1. TECHNICAL PRODUCT SPECIFICATION

The Supplier shall provide Ammonia Solution that complies with the following technical specification:

Parameters	Units	Specification
Concentration	%	25% (min)
Chlorides as Cl	ppm m/m	0.5 (max)
Sulphates as SO ₄	ppm m/m	4.0 (max)
Sodium as Na	ppm m/m	1.0 (max)
Iron as Fe	ppm m/m	0.2 (max)
Lead as Pb	ppm m/m	1.0 (max)
Arsenic as As	ppm m/m	0.05 (max)
Non-volatile Matter	ppm m/m	25 (max)
Reducing Substances as O	ppm m/m	8.0 (max)
Appearance		Clear colourless liquid ammonia solution. No sediment or visible impurities

Note that this compliance shall be demonstrated by the Supplier providing a product specification from the manufacturer demonstrating compliance to all parameters listed in Eskom specification for Ammonia. (Note that a Material Safety Data Sheet will not be accepted).

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2. TECHNICAL REQUIREMENTS

1. The Supplier shall inspect each off-loading facility prior to the first delivery of the chemical in order to confirm tanker access to the off-loading facility and to confirm compatibility with power station connections, including, but not limited to, chemical off-loading and air supply couplings and flange sizes.
2. Eskom shall inform the Supplier of any modification to the off-loading facility. Where necessary, the Supplier shall inspect the off-loading facility to assess the impact of the modification and to ensure compatibility.
3. The Supplier shall not use a calf for the delivery of the chemical.
4. Every tanker shall be in possession of the following documentation:
 - a. Material Safety Data Sheet
 - b. Product Specification
5. The Supplier shall arrange for safety induction of all individuals delivering chemicals to power stations.
6. The Supplier shall ensure that bulk chemical deliveries are made by personnel trained in safety precautions specific for handling the delivered chemical, and that delivery personnel abide by Supplier and the Eskom safety procedures, including the use of required personnel protective equipment.
7. Deliveries shall only be accepted during the following working hours during the week, namely between 08:00 to 15:00, except for Fridays where deliveries shall only be accepted up to 10:00. During emergency situations, after hour deliveries can be accommodated with prior arrangement with the power station.
8. Eskom shall inform the Supplier in cases where a split delivery is planned. The anticipated off-loading time for a single point of delivery is 3 hours. Eskom shall record the time that documents are delivered to the Water Treatment Plant Control Room.
9. The Supplier shall report to the Water Treatment Plant Control Room on arrival, with all documentation required.
10. The following documentation shall be shown to the Eskom personnel in the Water Treatment Plant Control Room upon arrival at the power station:
 - a. Competency declaration for the person responsible for off-loading and sampling of bulk chemical being delivered

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- b. Tanker Inspection Form, confirming:
 - i. Vehicle road worthiness
 - ii. Functionality of air/pump off-loading system
 - iii. Condition of flexible pipes and connections (cleanliness and wear)
 - iv. Date of off-loading pipe pressure test
 - v. Tanker content cleanliness

- 11. The following documentation shall be submitted to the Eskom personnel in the Water Treatment Plant Control Room upon arrival at the power station:
 - a. Weigh bridge certificate.
 - b. Certificate of Analysis showing that that the chemical in the tanker meets the specification.
 - c. Delivery note, which must include the Eskom order number, the name of the power station and the power station address.
- 12. The Supplier shall be accompanied to the off-loading facility by the Eskom personnel.
- 13. The Supplier shall take a sample from the tanker for analysis by the Eskom personnel.
- 14. Connection to the off-loading facility shall only commence after the Eskom personnel has confirmed the quality of the chemical and has given permission for off-loading to proceed.
- 15. A tanker shall be rejected in the event of product quality non-conformance or safety non-conformance. The Contract Manager shall be informed immediately and no payment shall be made.
- 16. The Supplier shall be responsible for connecting the tanker to the off-loading facility.
- 17. Where an intermediate transfer pump is required, the tanker shall be fitted with stainless steel pump.
- 18. Standing time shall only be claimed if the delay is caused by Eskom. Standing time shall not be claimed where external conditions affect off-loading, such as rain, hail, lightning, etc.

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19. In the event that a tanker is not off-loaded due to an incorrect level indicator, a) the tanker shall be sent back and payment shall be made for transport and product, or b) the tanker shall be re-direct to another power station upon arrangement with the power station and upon correcting the delivery note, and Eskom shall pay the additional transport charge.
20. The Supplier shall immediately inform the Contract Manager of any transportation and off-loading incident. The Supplier shall issue an incident investigation report to the Contract Manager and to all power stations within seven days of the incident.
21. The following documentation shall be submitted to the power station after delivery:
 - a. Return weigh bridge certificate, within two working days, before payment is processed.
 - b. Original invoice within seven days of delivery.
22. The Supplier shall perform an inspection of an off-loading event in the presence of power station staff at each site at least once a year and shall issue a report to the Contract Manager.
23. The Supplier shall provide contingency plans providing assurance of continuity of supply of the product to the power stations in the situations where experience unplanned outages, interruptions in production and strikes.
24. The Supplier shall provide evidence of the Logistics Management / Quality Management System of the Transporter, providing assurance of on-time delivery of the product of the required quality.
25. The Supplier shall guarantee that the product will be delivered from the tendered Supplier/Manufacturer and via the tendered Transporter for the duration of the contract.
26. During the course of the contract, any concerns with the tendered Supplier/Manufacturer or the tendered Transporter shall be communicated in writing with the Contract Manager.
27. The product from the Supplier/Manufacturer shall be assessed by Eskom to be technically acceptable prior to first delivery of the product.
28. The Transporter of the product shall be assessed by Eskom to be technically acceptable prior to first delivery by the Transporter.

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