ETİMADEN İŞLETMELERİ GENEL MÜDÜRLÜĞÜ

KIRKA BORON PLANT MANAGEMENT

TECHNICAL SPECIFICATIONS FOR THE PURCHASE OF 100 MTON POLYETHYENE OXIDE

February / 2025

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TECHNICAL SPECIFICATIONS

ARTICLE 1. SUBJECT OF THE WORK

1.1. 100 (One Hundred) mton Polyethylene Oxide will be purchased for the needs of Etimaden İşletmeleri Genel Müdürlüğü Kırka Boron Plant Management.

1.2. Etimaden İşletmeleri Genel Müdürlüğü will be referred as the "**ENTITY**", Kırka Boron Plant Management will be referred as the "**PLANT MANAGEMENT**", the bidding firms will be referred as the "**BIDDER**" and the successful bidder of the tender who is awarded the contract will be referred as the "**CONTRACTOR**" hereinunder.

1.3. Definitions and Abbreviations: This article is left blank.

ARTICLE 2. QUANTITY AND SPECIFICATIONS

2.1. Quantity: 100 mton Polyethylene oxide will be purchased.

2.2. Specifications:

Physical Appearance	: White granular powder
Particle Size	: - 0.75 mm (0.75 mm under the sieve): minimum 99,5%
Bulk Density	: 0.25 – 0.50 gr / cm^3
Molecular Weight	: 5000000 – 8000000
Dissolution Time	: max. 2 hours (for 4 g/l solution in pure water at 25 ^oC)
Viscosity	: 7-25 cp (25 ^oC- 0.1% concentrated solution)

Required technical specifications will be under the guarantee of the CONTRACTOR company. The shelf life of the material will be at least 16 months.

ARTICLE 3. SCOPE OF OFFER

3.1. Scope of Offer : This article is left blank.
3.1.1. Training : This article is left blank.
3.1.2. Surveillance : This article is left blank.

ARTICLE 4. WORKING ENVIRONMENT AND CONDITIONS

The raw tincal ore fed to the production plants in our Plant is dissolved in borax main solution at 96 ± 2^oC and anionic flocculant is added to precipitate the clay particles suspended in the resulting solution and then the main solution is fed to the decanter centrifuges. In order to easily discharge the clay from the decanter centrifuges and to make the solid waste portable by belt conveyor, a certain amount of polyethylene oxide solution is added to the decanter centrifuges. Thus, continuous operation of the decanter centrifuges at the desired operating parameters such as torque and vibration is ensured and the saturated borax solution required for production is prepared.

ARTICLE 5. RESPONSIBILITIES OF ENTITY AND OF CONTRACTOR

5.1. Responsibility of Entity: This article is left blank.

5.2. Responsibility of Contractor: This article is left blank.

5.2.1. Occupational Health and Safety: Occupational health and safety of the staff of the CONTRACTOR is under the reponsibility of the CONTRACTOR and all the liabilities under the legal framework belong to the CONTRACTOR.

5.2.2.Confidentiality: The CONTRACTOR shall comply with the principle of Confidentiality regarding information and documents related to the Plant.

5.3. Battery Limit: This article is left blank.

ARTICLE 6. REQUIRED DOCUMENT, INFORMATION AND SAMPLE

6.1. The bidding companies will provide a minimum of 50 kg of sample to be tested at our Plant free of charge along with their bids. The samples will be delivered to our Plant Management by the bidding companies, with their technical specifications specified, the day before the tender date. The samples submitted, with their technical specifications specified, will be analyzed in our Plant's laboratory and will be subjected to testing under process conditions in our Plant's factories. The bids of companies that do not submit samples will not be evaluated.

6.2. Companies will make chemical analysis of the product they recommend and present the analysis certificates during delivery. Products without an analysis certificate will not be accepted.

6.3. Companies should submit the Material Safety Data Sheet (MSDS) for the chemicals they offer, prepared by persons certified by an accredited organization in English and Turkish languages.

6.5. A brochure or text showing the technical properties and application of polyethylene oxide will be provided with the offer.

ARTICLE 7. MANUFACTURING, ASSEMBLY, DISASSEMBLY, TESTING, COMMISSIONING AND PERFORMANCE TESTS

7.1. This article is left blank.

7.2. Disassembly and Assembly: This article is left blank.

7.3. Testing and Commissioning: This article is left blank.

7.4. Performance Tests: This article is left blank.

7.5. Performance Bond: This article is left blank.

7.6. Damage Costs : This article is left blank.

7.7. Employee Qualifications: This article is left blank.

7.8. Manufacturing Control: This article is left blank.

ARTICLE 8. PACKAGING

8.1. Packaging: Polyethylene oxide will be packaged in 5-25 kg bags on pallets of minimum 300 kg and maximum 1,000 kg, shrink wrapped and strapped with strong strips to hold the bags together. Bags and shrink wrapped and strapped pallets will be packaged in the form that will be suitable for land and sea transportation and not be damaged by moisture, dust, etc., and will preserve the integrity of the packaging together with the pallet for at least 16-months warranty period. The packages will be not be affected by any external factors, be in shrink wrapped and strapped waterproof packages and be suitable for forklif transportation. The pallets used in the packages will be of a solid structure that will not break during transportation. The packages that are damaged within the minimum 16-month warranty period and the pallets that are broken or deformed by losing their carrying capacity will be repackaged by the CONTRACTOR company free of charge in accordance with the specifications.

ARTICLE 9. ACCEPTANCE PROTOCOL

9.1. The Polyethylene oxide delivered by the CONTRACTOR will be accepted after being controlled and inspected under the conditions written below**.**

9.2. Following delivery to the Kırka Boron Plant Management's Warehouse, the polyethylene oxide will be tested by the Inspection and Acceptance Committee under process conditions in the Plant's Laboratory and Borax Pentahydrate Factories. The necessary controls and measurements will be made and if deemed appropriate, the delivery process will be carried out.

9.3. In order to determine whether the delivered Polyethylene Oxide complies with the physical and chemical properties specified in Article 2.2 of this technical specification, Samples will be taken from the packages by drilling method.

9.4. These samples will be analyzed in the Plant's Laboratory and as a result of the analysis, the polyethylene oxide that meets the properties specified in Article 2.2 of this technical specification will be tested under plant (process) conditions.

9.5. This article is left blank..
9.6 The polyethylene oxide samples taken will be analyzed in the Plant's Laboratory.
9.6.1. Samples provided by the companies will be prepared as 0.1% concentration Polyethylene Oxide solution in the Plant's Laboratory and will be tested under process conditions in Borax Pentahydrate Factories. As a result of the process tests, polyethyleneoxide samples that provide solid waste output with portable features via the conveyor belt with the working parameters and order of the decanter centrifuge will be considered successful.

9.6.2. After the purchased Polyethylene oxide is shipped to our Plant, samples will be taken from the packages by drilling method and whether the incoming product complies with the technical specifications and with the previously received sample will be determined according to the tests to be conducted in the laboratory and under the Plant conditions.

According to the analysis results, materials found to be non-compliant with the technical specifications shall be replaced with new materials by the CONTRACTOR free of charge. The said replacement process, if requested by the CONTRACTOR, shall be in the form of either sending the non-compliant material to the CONTRACTOR and delivering the new material to the ENTITY or keeping the non-compliant material at the ENTITY and sending the new material to the ENTITY by the CONTRACTOR. This situation shall be notified to the CONTRACTOR by fax/e-mail. A penalty period of 50 (fifty) calendar days, starting with the notification, shall be given to the CONTRACTOR for the replacement of non-compliant materials with compliant new mateails.

9.6.3. All materials damaged during delivery will be replaced with new materials by the CONTRACTOR free of charge and with a penalty on the damaged part within 50 (fifty) calendar days.

9.6.4. The costs incurred during the return and/or resubmission of the material are specified below and belong to the CONTRACTOR.

All costs including taxes and duties related to the export operations at the customs of the ENTITY, all costs including taxes and duties related to the import operations of the CONTRACTOR, all transport costs from the ENTITY’s PLANT MANAGEMENT (Kırka Boron Plants management) to the CONTRACTOR's delivery point, all operations and costs incurred with the packaging, control, marking of the product during the shipment of new product by the CONTRACTOR, all costs including taxes and duties incurred at the export customs of the CONTRACTOR and all costs including taxes and duties incurred at the import customs of the ENTITY shall belong to the CONTRACTOR. If the CONTRACTOR does not take back the materials in question, the VAT amount paid for the second time at customs for the newly sent material will also be included in the specified costs.

9.6.5. If the CONTRACTOR fails to deliver the product with the specifications specified in the technical specifications at the end of the penalty periods mentioned in articles 9.6.2 and 9.6.3, another appropriate penalty period agreed upon with the CONTRACTOR shall be granted. During this second penalty period, the operational losses incurred by the ENTITY due to the supply of materials not conforming to the technical specifications (production loss due to material shortage, failure to meet production orders, etc.) shall be covered by the CONTRACTOR. If an agreement cannot be reached with the CONTRACTOR or if the CONTRACTOR fails to deliver the product with the specifications within the second penalty period, the termination clause of the contract shall be applied.

ARTICLE 10. WARRANTY

10.1. Material/Machine-Equipment Warranty: The delivered materials will be guaranteed for at least 16 months from the date of inspection and acceptance.

10.1.1. This article is left blank.

ARTICLE 11. OTHER TERMS

11.1. It will be stated on the packaging of the Polyethyleneoxide to be supplied by the CONTRACTOR company that it was manufactured in 2025. There will be no foreign substances other than Polyethylene Oxide in the Polyethylene Oxide bags.

ARTICLE 12. ARTICLES OF THE TECHNICAL SPECIFICATIONS

This technical specification consists of 12 (twelve) articles, including this article.

<u>This Technical Specifications is prepared by</u>

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