ADSD GROUP

Turnkey Urea Coating Plants from Concept to Commissioning



OUR COMPANY

ADSD CONSULTING PVT. LTD. is part of ADSD Group based in Noida/Delhi (NCR), India. ADSD Consulting Pvt. Ltd. is the flagship entity of ADSD Group with focus on Engineering & EPC Project Business & Consulting Service Business.

ADSD Group is a Reputed and Renowned Engineering and EPC Company with Expertise in Basic and Detailed Engineering, Project Execution, Project Management, Manufacturing & Fabrication, Site Construction, Erection, Commissioning & Startup for Chemical & Fertilizer Plants and Urea Coating Technologies. With a Commitment to Innovation and Precision, we deliver cutting-edge Urea Coating Turnkey Plants on Lumpsum Turnkey EPC Basis on Single Point Responsibility. Urea Coating is primarily the Coating of Sulphur or other Essential Nutrients such as Zinc/ Neem Coating to ensure the Slow Release of Urea into the Soil and also improve the Sulphur Deficiency in the Soil which helps in low Urea Consumption and adequete dose of Nitrogen in Plants.



OUR MANAGEMENT

ADSD Group is promoted by Mr. Satish Kumar, MD & CEO — a dynamic and hard-core Industry Professional with over 20 years of experience in International Sales & Marketing, Project Management and Execution of Large-Scale EPC Projects across Chlor Alkali, Sulphur Based Plants, Energy, Water and Oil & Gas Projects. Mr. Kumar brings remarkable expertise in Manufacturing of Activated Carbon & Executing Bulk Shipments of Chemicals, Fertilizers and Commodities — driving ADSD with a global vision to address the requirement of Global Clients.



MISSION

- We are committed to building strong, long-term partnerships with our customers and suppliers globally, ensuring exceptional service, ethical business practices and fostering sustainable growth for all stakeholders.
- To ensure a continuous and reliable availability of our complete product range & services in International & Domestic Market.
- To provide our clients with innovative and customized solutions that enhances their business performance and operational efficiency.



VISION

To become a Globally Recognized Business House by delivering innovative and sustainable solutions to Domestic and International Clients across Engineering & EPC Business, Activated Carbon Manufacturing Business and Chemicals & Supply Chain Business, creating long-term value through innovation and excellence.



CORE VALUES

- Collaboration and Partnership
- Excellence in Engineering & Project Execution
- Competencies in Manufacturing
- Reliability, Safety & Sustainability
- Excellence in Application Performance
- Quality & Delivery Commitment



OUR BUSINESSES

ENGINEERING & EPC BUSINESS

ADSD is renowned Engineering & EPC Company having core strength in managing and executing the Complex Industrial Projects right from Concept to Commissioning and Handing Over by covering all aspects of Project Execution. As an Integrated Engineering & EPC Contractor providing end-to-end Project Execution Solutions right from Technology Selection, Basic Design, Detailed Engineering, Project Management, Procurement, Fabrication, Logistics, Site Erection and Construction, Pre-Commissioning, Commissioning, Start-up, Performance Guarantee Test Runs and Handing Over for Commercial Operation.



CHEMICALS & SUPPLY CHAIN BUSINESS

ADSD is a renowned Manufacturer, Supplier, Exporter & Distributor of Basic & Speciality Chemicals and also undertakes the Supply and Distribution of Basic Chemicals, Fertilizers & Agrochemicals, Speciality Chemicals, Mining Chemicals, Polymers & Petrochemicals, Paints and Solvents. The Chemicals & Supply Chain Division has been serving its Global Clients from last 9 years with regular shipment of quality products as per the Process Requirements of Clients.



ACTIVATED CARBON BUSINESS

ADSD is a pioneer Manufacturer, Supplier and Exporter of High-Performance Activated Carbon and Adsorbent Products, delivering world-class Purification and Filtration solutions globally. With a rich legacy in Activated Carbon Manufacturing, ADSD Offers a comprehensive range of Granular, Powdered and Pelletized Activated Carbon serving Industries including Water Treatment, Air Purification, Pharmaceuticals, Food & Beverage, Gold Recovery and Oil & Gas. Backed by stringent quality standards and deep global market expertise, ADSD delivers reliable, premium quality Activated Carbon products to its esteemed clientele — from India to the World.



ENGINEERING & EPC SERVICES

A. Process Design & Technology Selection:

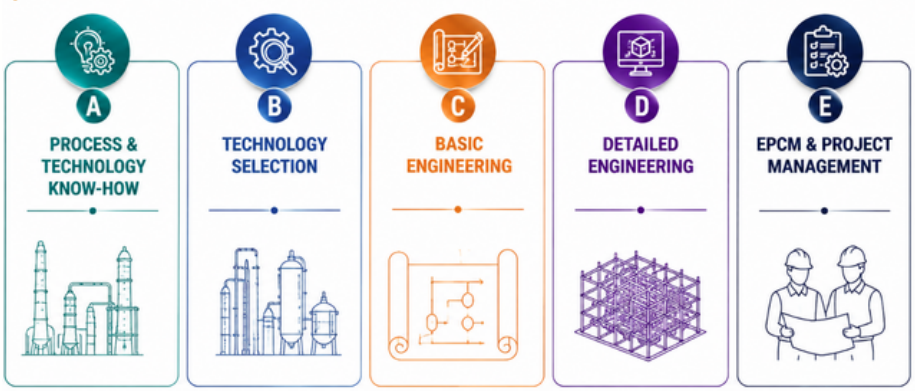
A. Process & Technology Know-how

B. Technology Evaluation & Selection

C. Basic Engineering

D. Detailed Engineering

E. EPCM & PMC Services



B. Basic Engineering Services:

The Basic Engineering phase establishes the technical foundation for project execution by defining the design basis, process philosophy, equipment specifications, and engineering layouts for detailed design and implementation.



C. Detail Engineering Services:

Our in-House Detailed Engineering services convert approved basic engineering into construction-ready drawings, calculations, specifications, and multidisciplinary design documents, covering process, mechanical, piping, structural, electrical, instrumentation, and control engineering. We use advanced tools including AutoCAD, Navisworks, STAAD.Pro, ETAP, HTRI, and PV Elite.



List of Detailed Engineering Disciplines In-House

A. Process Engineering

B. Mechanical Engineering

C. Piping & Layout Engineering

D. Electrical Engineering

E. Instrumentation Engineering

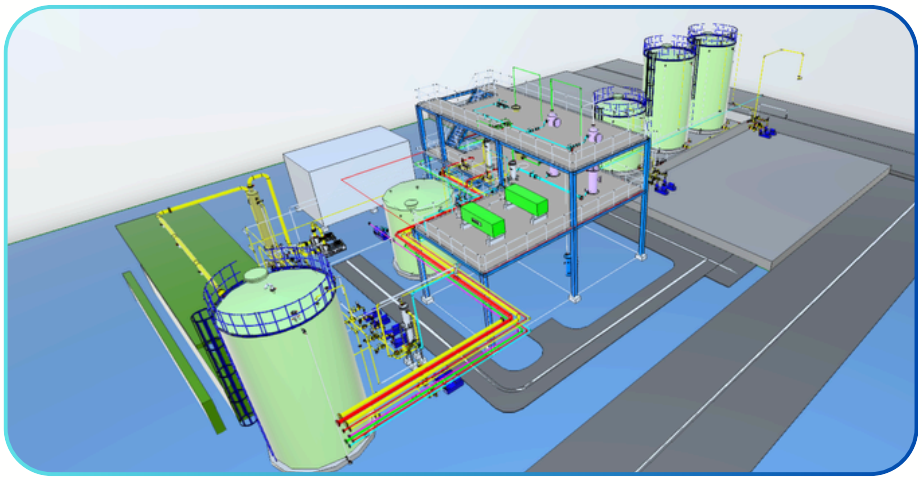
F. Civil & Structural Engineering

G. Insulation & Painting

H. Fire Fighting System

I. HVAC System and

K. Hazop & SIL Study



ENGINEERING & EPC SERVICES

D. Project Management & Execution:

Our in-house Project Management & Execution Team ensures seamless project delivery through effective planning, coordination and execution, with a strong focus on safety, quality, cost and timely completion.



E. Manufacturing & Fabrication Capabilities:

Static Equipment's & Pressure Vessels used in our Projects are Manufactured through ASME 'U' & 'U2' certified workshops, ensuring compliance with international standards, stringent quality controls, material traceability, inspection, testing and reliable performance.



F. Quality Assurance & Compliance:

Dedicated in-house and third-party QA/QC teams ensure quality through systematic inspections, testing & compliance with project requirements.



G. Logistics and Transport:

Our integrated Logistics & Transport team ensures safe and timely movement of equipment worldwide, managing Domestic and International logistics, export packaging, customs documentation, multimodal transportation, freight coordination and site delivery.



H. Site Management:

A dedicated Resident Construction Manager (RCM) supported by Site planning, HSE and Discipline wise Erection teams, oversees site execution through commissioning to ensure safe and timely project completion.



I. Operation and Maintenance Services:

ADSD Group provides comprehensive O&M services for chemical process plants, water & wastewater facilities & utility systems to ensure safe, reliable, and efficient plant operations.

Industries We Serve

A. CHEMICAL PROCESS PLANTS

We provide Integrated Engineering and EPC Execution solutions for Chemical Process Plants, Ensuring Safe, Efficient, Sustainable, and Compliant Plant Performance.

- Chlor-Alkali & Chlorine Derivatives
- Methanol & Formaldehyde Derivatives



B. FERTILIZER PROCESS PLANTS

We provide Integrated Engineering and EPC Execution solutions for Fertilizer and Urea Coating Plants, Focused on Safe, Efficient, Sustainable, and Optimized Plant Performance.

- Urea Coating Plants
- Sulphuric Acid & Sulphur Derivatives
- Phosphoric Acid & Phosphate Derivatives



C. WATER & WASTEWATER PLANTS

We deliver Integrated Solutions for Water and Wastewater Treatment Plants, Ensuring Sustainable, Compliant and Reliable Performance.

- Effluent Treatment Plants (ETP)
- Water Treatment Plants (WTP)
- Seawage Treatment Plants (STP)
- Seawater Desalination Plants (DESAL)



D. PLANT OFF-SITES & UTILITIES

We provide Integrated Off-Sites and Utility Solutions for Efficient, Reliable and Uninterrupted Plant Operations.

- Off-Sites & Utility Solutions
- Steam & Cooling Water Systems
- Compressed Air & Fuel Handling
- Storage & Utility Distribution
- Reliable & Energy-Efficient Operations



CHEMICAL PROCESS PLANT

1. Chlor Alkali & Chlorine Derivatives

- Chlor Alkali Plant
- HydroChloric Acid Plant
- Sodium Hypochlorite Plant
- Calcium Chloride Plant
- Ferric Chloride Plant
- Poly Aluminium Chloride Plant
- Aluminium Chloride Plant
- Stable Bleaching Powder Plant
- TCCA Plant
- Mono Chloro Acetic Acid Plant
- Chlorinated Paraffin Wax Plant
- Sodium Silicate Plant
- Calcium Hypo-chlorite
- Sodium Sulphate Plant





2. Methanol & Formaldehyde Derivatives

- Methanol Plant
- Formaldehyde Plant
- Urea Formaldehyde Plant
- Formaldehyde Resin Plant
- Hexamin Plant
- Para Formaldehyde Plant
- Phenol Formaldehyde Plant



FERTILIZER PROCESS PLANT

1. Sulphuric Acid & Sulphur Derivatives

- Sulphur Coated Urea
- Sulphate of Potash
- Sulphuric Acid Plant
- Sulphur Bentonite
- Oleum Plant
- Liquid Sulphur Dioxide Plant
- Liquid Sulphur Tri Oxide Plant
- Sulphur Handling & Pelletisation Plant
- Wet Sulphuric Acid Plant
- Ammonium Sulphate Plant
- Chloro Sulfonic Acid Plant
- LABSA 90/96 Plant
- SLES, LAS Plant





2. Phosphoric Acid & Phosphate Derivatives

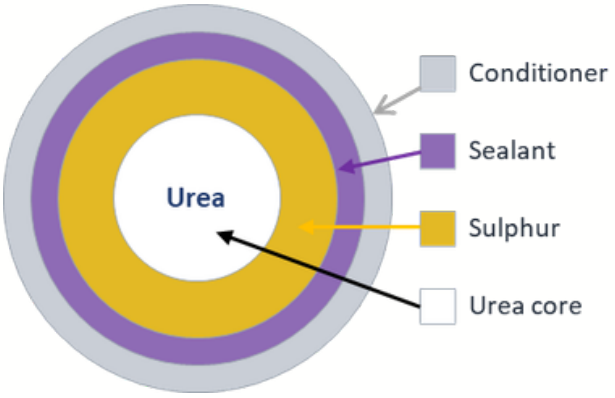
- Di-Calcium Phosphate Plant
- Di-Ammonium Phosphate Plant
- Mono-Ammonium Phosphate Plant
- Triple Superphosphate Plant
- Single Superphosphate Plant
- NPK / NP Fertilizer Plant
- Mono Potassium Phosphate Plant
- Di-Potassium Phosphate Plant
- Tri-Potassium Phosphate Plant
- Zinc Phosphate Plant
- Iron Phosphate Plant



Sulphur Coated Urea

WHAT IS SCU?

Urea Granules/Prills Coated with a Shell of Molten Elemental Sulphur, Sealed with a Wax/Polymer Sealant and Dusted with a Conditioner, the Sulphur Coating Releases Nitrogen Slowly; the Sulphur itself is a Plant Nutrient, Produced in a Continuous SCU Plant.



Why is it required?

Slow Release of Nitrogen
N_2 released gradually, matched to crop uptake — no sudden N_2 surge.

Sulphur Nutrition
Corrects sulphur deficiency in Indian soils — oilseeds & pulses benefit.

Fewer Applications
Often one dose instead of split doses — saves labour & cost, Reduced Consumption of Urea.

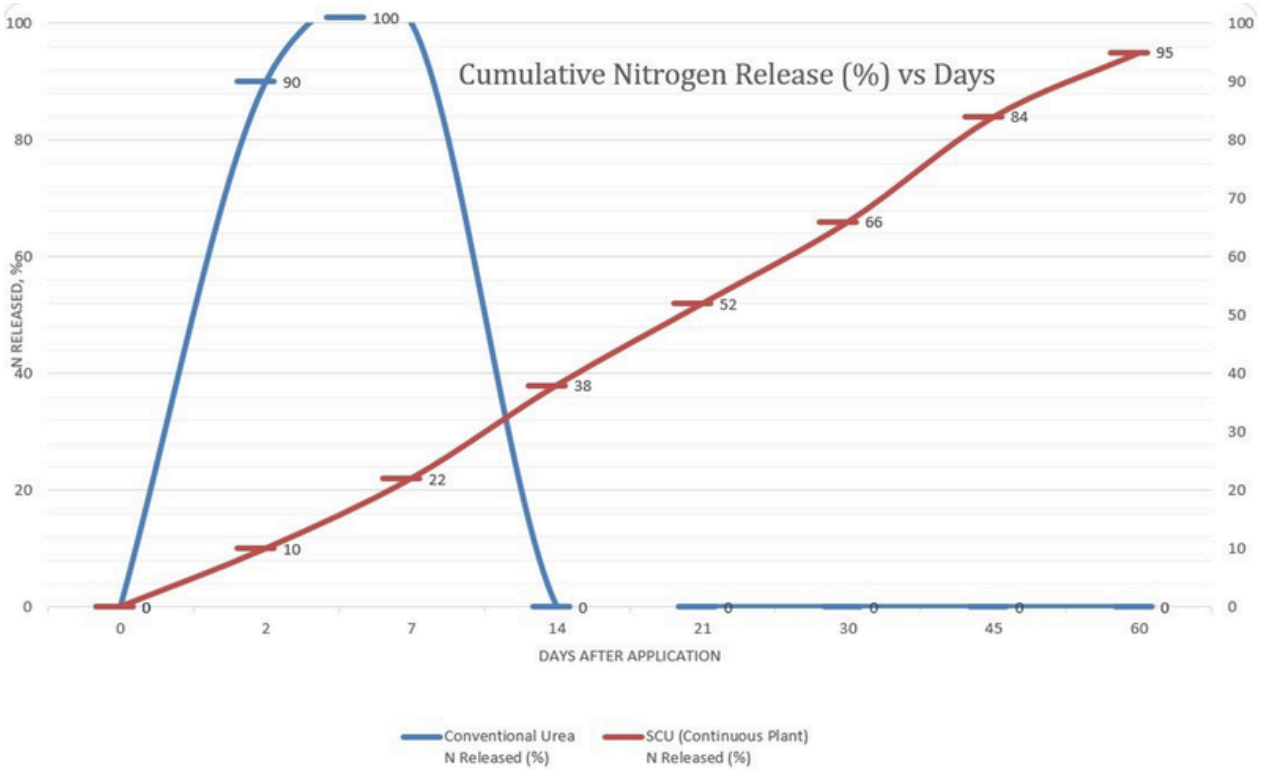
Gentle on Soil & Crop
Reduces toxicity / burn to plants and avoids excess N_2 loading of soil.

Higher N_2 use Efficiency
Lower losses by leaching, volatilisation and denitrification.

Product & Performance

37% **Nitrogen (min., dry)**	**17%** **Sulphur coating**
< 1% **Process wastage**	**17.5–35%** **7-day dissolution**

Cleaner Environment
Less nitrate run-off to water and lower N_2O Emissions.



Block Diagram of a Coating Urea Plant

Urea Granulation/Prill's Handling System
Urea Feed handling, weigh feeder, elevator

→

Pre Heating Process
Fluid bed Heating of Urea

→

Sulphur Coating Process
Falling curtain type, Specially Designed Proprietary Spray nozzles

→



Dust Collection
Cyclone on coating-drum exhaust

Sulphur Handling System
Steam-heated; molten S 140–155 °C

Sealant Application Process
Coating of Sealant to hold Sulphur layer & Avoid Cracks in SCU

→

Cooling Process
Cooling of SCU after Sealant Application for Surface Hardening.

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Conditioning Process
To fill Micropores which is developed during the Sealing Process which will avoid the intake of Moisture.

←

Screening of SCU Product
Oversize sent for Packing, Undersize Recycled to Coating Drum.

←

Packing System
Bagging & Dispatch.

←



ADSD Expertise in Offering Coating Urea Plants on Turnkey Basis

- In-House Basic & Detailed Engineering Capabilities.
- Collaboration with a Proven Process Licensor for Coating Technologies.
- Adaptation of Licensor Basic Engineering to Indian Conditions.
- Pilot Testing of Raw Materials in Licensors Facility.
- Discipline wise Detailed Engineering covering Process, Mechanical, Piping, Electrical & Instrumentation, Civil, Structure, HVAC & Fire Fighting.
- Procurement, Manufacturing, Fabrication & Supply of Equipments to Site.
- Civil Design and Site Construction.
- Erection within Host Urea Complex & Tapping of Urea Feed lines and Utilities to B/L.
- Commissioning, PGTR & Handover.
- Operators Training, O&M Support Services and Long Term Spares Support.

Offer & Contract Signature with Client → **Basic Engineering & Pilot Testing** → **Detail Engineering & Equipment Fabrication** → **Site Works & Mechanical Completion** → **Start-up & PGTR**

Sulphur Coating Drum



Sulphur Coated Urea



Polymer Coated Urea



ADSD
GLOBAL PRESENCE

A Strong Network. Global Reach. Trusted Worldwide.



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