



# Specialty Chemicals for Water and Fuel Management





Thermax's specialty chemicals enable customers across a spectrum of industries to improve efficiency and performance, conserve energy and preserve the environment.

As one of Asia's leading manufacturers and exporter of Ion exchange resins and a pioneer in chemicals for fuel and water treatment, Thermax also supplies pulp and paper chemicals, oil field chemicals and construction chemicals. Backed by technological expertise and capabilities honed over more than four decades, the chemical business supports the spectrum of Thermax's energy and environment businesses.

Thermax Chemicals manufactures its world class products in facilities equipped with automated process and instrumentation controls and with ISO 9001:2008 and ISO 14001:2004 accreditation.

Backed by a strong distribution network, Thermax Chemical Division serves its customers in US, Europe, South East Asia and SAARC, the Middle East and the Far East.

# Sustainable Integrated Water and Fuel Management Solutions

Thermax chemicals, a flagship division of Thermax Limited, with proven expertise of over four decades, offers gamut of "Specialty Water and Fuel Management Solutions" encompassing

- Polyelectrolytes
- RO Membrane Treatment Chemicals
- Boiler Water Treatment Chemicals
- Cooling Water Treatment Chemicals
- Fuel and Fire Side Additives
- Sugar Process Chemicals

With ever increasing concern on availability of water, fossil fuels and environment regulations, our products and monitoring techniques provide eco-friendly solutions to **improve efficiency and performance, conserve energy and preserve the environment.**



## Polyelectrolytes

### Clean Water, Safe Environment

Water, a valuable natural resource, plays vital role in day to day life and industrial water treatment operations. Our water and waste water chemical solutions are specifically aimed to meet the challenges of influent and effluent water in industrial, municipal and institutional segments.

Thermax manufactures an extensive range of polyelectrolytes (coagulants and flocculants) both liquid and dry powder. We offer low, medium and high molecular weight cationic, anionic and non-ionic polyelectrolytes.

### The Maxfloc series of Polyelectrolytes are applied for effective solid – liquid separation in

- Raw water clarification
- Colour removal
- Sludge dewatering
- De-oiling
- Paint detakification
- Industrial process applications





## Cooling Water Treatment

### Maximise Process Heat Extraction Through Efficient Cooling

Thermax's custom – made cooling water programs mitigate the impact of corrosion, scaling and fouling in Closed and Open loop systems. Our technical experts provide solutions, trouble shoot, evaluate chemical programs and align their goals to reduce water foot print, optimize heat transfer and achieve overall savings in operating costs.

### Maxtreat range of Cooling Water treatment products include

- Corrosion inhibitors for closed and open loop cooling water systems
- Inhibitors for controlling scaling and fouling
- Biodispersants to maintain clean heat transfer surface
- Broad Spectrum of oxidizing & non oxidizing biocides to minimize microbiological growth and negate microbiologically induced corrosion (MIC)

Thermax has recently introduced progressive on line monitoring instrument, Thermread. Thermread is programmed to control chemical delivery, water bleed off and equipped to detect water parameters including product residuals. Thermread helps customers initiatives to minimize both water usage and cost reduction.

## Boiler Water Treatment

### Steam Reliability At Condensed Costs

The boiler, steam generating unit, is the core of an industrial process or power industry. Necessity for maximum operating efficacy, optimal fuel and water consumption have added new dimensions to modern boiler water treatment solutions. Managing the feed, boiler and condensate water with the right water treatment chemicals is essential in extending life of both boiler and associated equipment and effectively control Corrosion, Scaling and Fouling.

### Thermax's Maxtreat range of Boiler Water Chemicals include

- Volatile and Non Volatile Oxygen Scavengers including Non Carcinogenic Oxygen Scavengers
- Condensate Protection Programs
- All Volatile Treatment Programs
- Phosphate Programs
- Sludge Conditioners
- Antifoam
- pH boosters
- On line descalants
- Off line cleaning chemicals
- NSF certified products for process industries





## Fireside Additives

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### Efficient Heat Gain

Sooting (Fouling), clinkering and other combustion deposits are common fireside occurrences in boilers and thermic fluid heaters. The adhesive properties of un-burnt carbon results in the formation of incombustible solids on the heat transfer surfaces, resulting in poor heat transfer, reduced overall boiler efficiency, and increase in fuel consumption.

Thermax provides series of fuel and fireside additives for liquid and solid fuel fired boilers where the impact of clinker formation can result in frequent cleaning, increased down time and increase in specific fuel consumption.

Thermosol range of liquid fuel additives are designed to condition fuel for better performance and operation of the systems. Thermomix and Economix series of fireside additives are designed for solid fuel fired boilers and heaters including biomass.

Thermosol and Thermomix/Economix series of fuel and fireside additives are balanced formulation of combustion catalysts, dispersants, oxidising agents, propellants, oxidizers and special additives in balanced quantities that helps in ensuring proper combustion, reduction in clinker formation, increase in heat transfer and reduction in corrosion.

## Reverse Osmosis Membrane Treatment

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### Accelerated Reverse Osmosis

Untreated feed water to reverse osmosis systems can result in scaling and fouling on membrane surface. Consequently, this reduces through put, impacts membrane performance and calls for unwarranted down time and membrane cleaning.

### Thermax offers complete range of Maxtreat membrane treatment chemicals including

- Antiscalants that provide optimum control of feed water with concentrate LSI upto +3.0 for varying water characteristics
- Non Oxidizing biocides for controlling biological fouling
- Alkaline and Acidic cleaning formulations

Application of these products ensures reliable output, improved recovery, protects membrane from damages and accelerates reverse osmosis.

A specifically designed computational software assists both in product selection and arriving at optimum dosage of RO antiscalants. Our products are compatible with all type of membranes and certified under ANSI/ NSF standards.





## Sugar Process Chemicals

### Improve Milling and Sugar Coat Profit

Thermax manufactures start to end sugar manufacturing process chemicals that help customers to

- Arrest sugar inversion during milling process
- Sugar juice clarification
- Scale inhibition in cane juice evaporators and vacuum pans
- Improve colour
- Improve centrifugation efficiency.

### The Maxtreat range of sugar process chemicals includes:

- Mill sanitation biocides
- Flocculants
- Color Precipitant
- Evaporator Antiscant
- Viscosity Reducer

Our products are Halal/ Kosher certified and meet requisite food grade standards

## Green Chemicals

### Green Chemistry for Responsible Care

Thermax's continuous emphasis for environment safeguard has resulted in the development of eco friendly Green Chemicals for application in boiler water, cooling water and reverse osmosis membrane systems.

### Our Maxgreen Chemicals offer the following advantages

Free from heavy metals.

Inherently bio degradable.

Free from volatile organic compounds.

No bioaccumulation in the environment.

Do not pose problems to effluent water treatment plants or environment after discharge to waste water.

Thermax's green chemicals have helped a number of customers achieve their environmental goals.

# Quality Assured Manufacturing

Thermax is committed to develop, manufacture, deliver and apply quality Fuel and Water treatment chemicals to meet customer expectations.

Thermax Chemical Division complies with the requirements of ISO 9001 and continually improve the effectiveness of the quality management system by establishing and reviewing quality objectives.

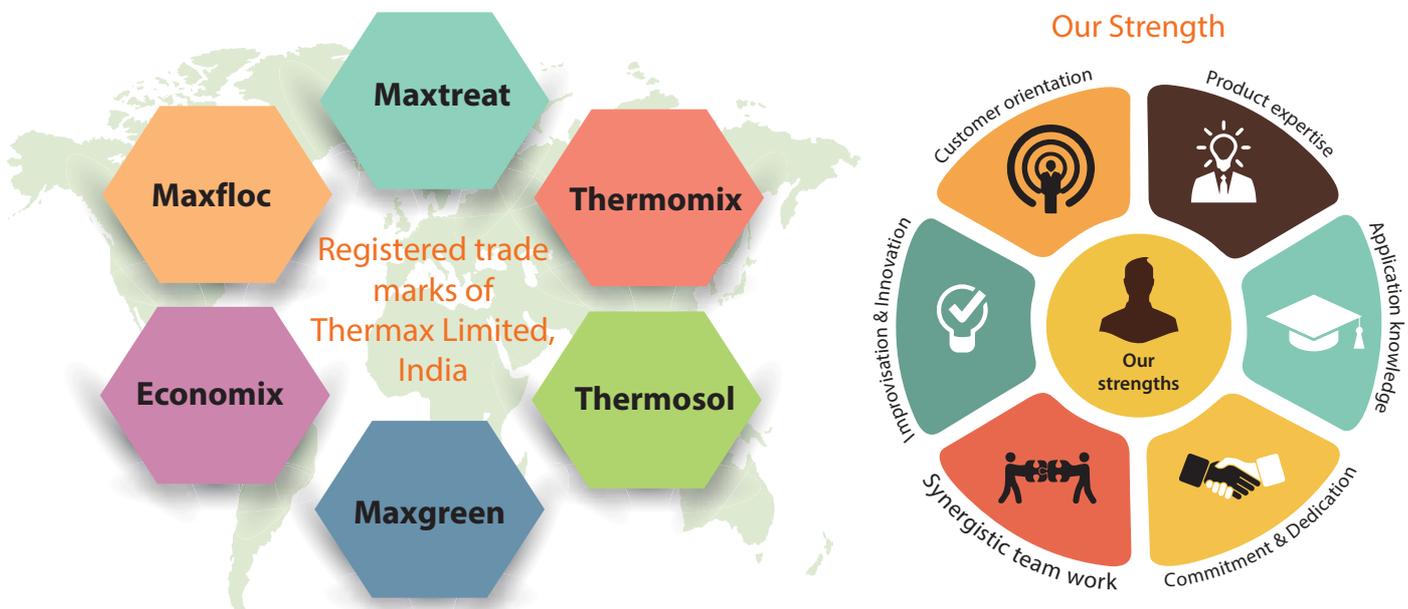


# Credentials

Thermax Chemical Division's manufacturing is accredited with ISO 9001:2008, ISO 14001:2004 and OHSAS 18001:2007 certifications.

# Research and Development

The Division's R&D, with its state-of-the-art laboratories is at the forefront of developing new products and technologies. Chemical R&D is approved by the Department of Science & Technology, Government of India and collaborates with many scientific and academic institutes. Thermax delivers the next generation of customer focused technologies within our core technologies using its unique, market - based management approach.





**THERMAX**

Sustainable Solutions in  
Energy & Environment

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This brochure presents only some of our products and we reserve the right to amend any product details without notice.

**Thermax Business Portfolio**

- Heating
- Cooling
- Power Generation
- Air Pollution Control
- Chemicals
- Water and Wastewater Solutions
- Solar
- Specialised Services