

*Enhancing process efficiency and  
profitability across applications*





## Vision

To be a globally respected high performance organization offering sustainable solutions in energy and environment

## Energy & Environment Offerings



## Integrated Energy-Environment solutions for industry

Thermax Limited, a billion dollar engineering major provides solutions in the areas of energy and environment. In over 75 countries around the world clients make use of Thermax's business - to - business solutions for energy efficient and eco-friendly operations: heating and cooling equipment, solar energy, turnkey power plants, systems for water & waste water management, air pollution control and performance improving chemicals.

**In the energy space,** Thermax offers a range of boilers and thermal oil heaters, energy efficient chillers and customized products such as waste heat and exhaust gas boilers. It builds utility and captive power plants.

**In the environment area,** Thermax offers waste management expertise for solid, liquid and air pollution. Water and wastewater treatment help reduce the hazardous impact on environment and by recovering resources improve revenues. Hi-grade Ion Exchange

Resins along with fuel and water treatment chemicals from Thermax are used for specialized applications across the globe.

The company has a robust and innovative R&D setup, involved in technology development and adaptation for various industrial applications. Over the years, the company has formed technology partnerships with global majors including Babcock & Wilcox, SPX technologies, Balcke Durr, Georgia Pacific, Kawasaki Thermal Engineering, GE, Eco-Tech, Wehrle, Lambion & Tecnochem.

Thermax manufactures to international standards at its facilities in India, China, Denmark and Germany. The company has an extensive sales & service network. With headquarters in Pune (Western India), Its international offices are located in South East Asia, Middle East, Africa, Russia, UK, Denmark, Germany, USA and South America.



# Thermax Chemical Division

## 35 Years Of Enriched Experience

A global entity engaged in manufacture and application of specialty chemicals which improve customer's processes and product performance



Thermax Chemical division manufactures and markets a wide range of specialty chemicals that help to improve processes and product performance across a spectrum of industries.

"Asia's leading manufacturer & exporter of **TULSION®** brand **Ion Exchange Resins** and a pioneer in the field of **Fuel & Water treatment chemicals**, Thermax also supplies **Paper Chemicals**, **Oilfield Chemicals** and **Construction Chemicals**.

Powered by technological expertise and capabilities honed over 4 decades and backed by a strong dealer network, the Chemical division serves customers across the globe and supports the entire range of Thermax's energy and environment businesses.

Backed by extensive R & D experience and equipped with modern research and state-of-the-art manufacturing facilities the business has built a client base in USA, Japan, South East Asia, India & Middle East.

Our business is about 'effective customer solutions' through innovations and development, service and co-operation. Our dynamic teams focus their energy and resources to offer the very best solutions to customers needs.

## Key Strengths

- Expertise in industrial applications and technical services.
- Specialized facility for product development.
- State of the art well equipped quality control laboratory
- Well equipped & automated manufacturing plant
- Quality assured manufacturing processes.

## High Quality Manufacturing

Thermax Chemicals manufactures its world class products in state-of-the-art manufacturing plants at Paudh (Maharashtra) & Jhagadia (Gujarat). Total quality management is a way of life at Thermax Chemicals and we take special care to ensure consistency in quality.

# Ion Exchange Resins

Thermax Chemicals is one of the world's major leading manufacturer of a gamut of TULSION® brand Ion Exchange Resins for over 35 years. TULSION® is a premium brand and enjoys a global reputation in the field of water treatment and process application technologies, based on Ion Exchange Resins.

Our business is about 'effective customer solutions' through innovations and development, service and co-operation. Our dynamic teams focus their energy and resources to offer the very best solutions to customers needs.



## Industrial Water Treatment Resins

Water treatment is traditional and one of the largest application fields of Ion Exchange Resins. Constantly growing demands on water quality require increasing sophistication of both the Ion Exchange Resins and the related application technologies. Tulsion® Ion Exchange Resins are particularly designed

to meet these demands and offer numerous advantages to our customers.

We have specialized in tailor made solutions for DM system upgradation / capacity enhancement through our value added products.

PRODUCT	APPLICATION
Tulsion® T-40 / T-42 Na / T-52 Na	Tulsion Resins for water softening
Tulsion® T-42H / T-52 H / T-5202	Tulsion Resins for demineralisation
Tulsion® A-23 / A-32 / A-36 / A-2332 / A-27 MP	Tulsion Resins for demineralisation
Tulsion® CXO-9 / CXO-12 / CXO-12 MP	Tulsion Resins for dealkalisation
Tulsion® MB-106 / MB-110 / MB-115 / T-46 H	Tulsion Resins for mixed bed polishing
Tulsion® T-48 / T-50 / T-52 / A-21 / A-29	Tulsion Resins for condensate polishing

# Specialty Ion Exchange Resins

Our aim is to provide our customers with innovative, high quality products and the support of the full scope of our expertise in all application

areas. Today our expertise has reached to the tune of supplying resin for every known application

## Thermax offers an entire range of Specialty Resins including:

- Resins for Purification-Separation-Recovery-Removal
- Polymeric Adsorbent Resins
- Polymeric Catalyst Resins
- Chelating Resins
- Nuclear grade Resins
- Resins in pharmaceutical formulations
- Food grade Resins
- Amphoteric Resins
- Oilcoalescent Resins
- Fine mesh Resins
- Chromatographic Resins
- Effluent treatment Resins



**Tulsion®** Resins find number of applications as special media in Chemical Process, Hydrometallurgy, Pharmaceutical Formulations, Chemical Synthesis, Waste Water Treatment, Natural products Extracts, Chromatographic Separations, Biotechnology and other applications\* classified as below:

- MEG cycle water purification
- Ground water remediation & purification
- Brine decalcification / brine purification
- Glyoxal deacidification/purification
- Caprolactum purification
- Flouride removal from smelter wash water
- Removal / recovery of metals
- Applications in biodiesel
- Sorbitol purification
- Resins for biotechnology
- Waste water treatment
- Uranium recovery
- Acid catalyzed reactions
- Solvent dehydration
- Oil removal
- Separation of amino acids
- Camphor applications
- Sugar decolourisation
- Deashing of liquid glucose
- Pharmaceutical applications
- Decolourisation of fermentation products
- Eomycin & Gentamycin recovery
- Alkaloids recovery from natural plant extracts
- Deacidification of process streams
- Deashing of gelatin
- Ultrapure water for electronics & pharma industry
- Juice debittering
- Isotopes separation
- Investment casting
- Perchlorate removal
- Separation of enzymes, polypeptide & proteins
- Lysine purification
- Corn syrup applications
- PTA applications
- Glass interleaving products
- Purification of organic acids

\*Refer "Summarized Data Sheet" for complete range of Resin applications.

Customized solutions available.



# Cooling Water Treatment Chemicals

Cooling water for industries, if untreated, can cause severe problems of corrosion and scaling in coolers, condensers and other equipment on the cooling water side. This often results in equipment failure, unscheduled shut downs and production losses.

You can control corrosion and scaling and thereby achieve maximum cooling system efficiency and reduce unnecessary shutdowns by treating cooling water with the right chemicals.

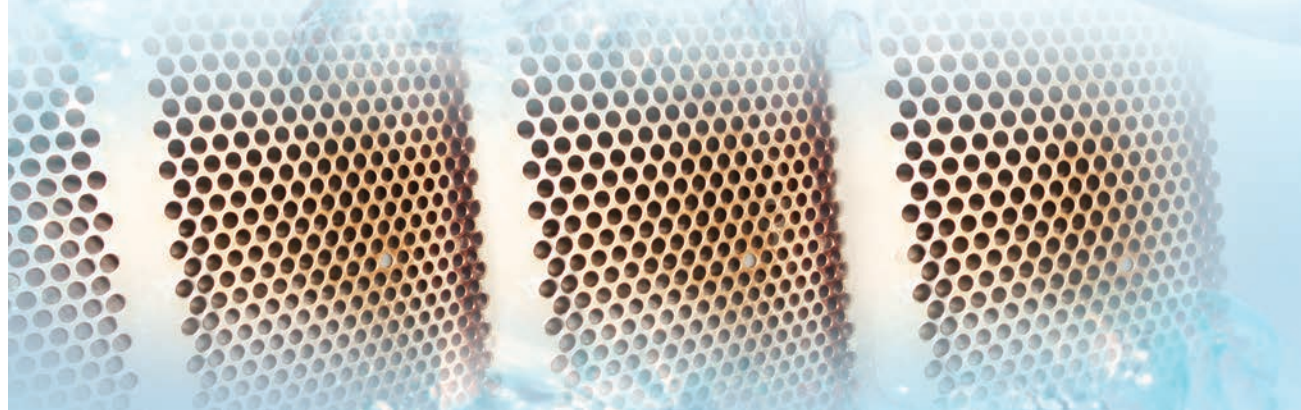
Thermax Chemicals offers you a comprehensive range of MAXTREAT® cooling water treatment chemicals that treat cooling water effectively.



## MAXTREAT® Microbiocides

Product	Application
Maxtreat® 606	Powerful microbiocide in liquid form
Maxtreat® 608	Broad spectrum microbiocide in liquid form
Maxtreat® 635	Effective microbiocide
Maxtreat® 652	Bromine- Isothiazolin based biocide
Maxtreat® 7961	Oxidising biocides
Maxtreat® 651	Effective microbiocide

## Post Treatment Condenser Tubes



## Action & Benefits

- Protects Against Corrosion**  
 MAXTREAT® range of cooling water chemicals contains a synergistic blend of corrosion inhibitors. Regular and correct use of MAXTREAT® keeps the corrosion rate under control to eliminate corrosion related failure and unscheduled shutdowns.
- Flexible Dosage Control**  
 MAXTREAT® cooling water chemicals are formulated to suit the requirement of makeup water quality. This formulation provides wide flexibility in dosage levels giving you sufficient room for operational fluctuations.
- Cleans Existing Deposits**  
 MAXTREAT® range of cooling water chemicals contains powerful dispersants and penetrants that loosen and remove existing deposits from the system keeping the cooling water circuit clean.
- Easy to Use Liquid**  
 All MAXTREAT® cooling water chemical formulations are available as easy to use liquids which enable easy dosing.
- Non-Polluting**  
 MAXTREAT® chemicals are bio-degradable and acceptable for discharge in streams after dilution. MAXTREAT® does not pose any serious problems of pollution.
- Easy to Monitor**  
 Since MAXTREAT® cooling water chemicals offer flexibility of dosage, it is easy to monitor. All the required active ingredients are available in one form, enabling ease of monitoring.
- Technical Service**  
 MAXTREAT® range of cooling water chemicals is backed by Thermax Chemicals' technical service to ensure optimum performance.

## MAXTREAT® Cooling Water Treatment Chemicals

Product	Application
Maxtreat® 801	Corrosion inhibitor for acid descaling
Maxtreat® 204/7500	Organic corrosion inhibitor
Maxtreat® 2901 / 2925	Corrosion inhibitor
Maxtreat® 2902	Corrosion inhibitor
Maxtreat® 7770	Scale inhibitor
Maxtreat® 7700	Scale & corrosion inhibitor
Maxtreat® 1000N / 1000M	Dispersant
Maxtreat® 2515	Dispersant, organic corrosion inhibitor and bio-dispersant
Maxtreat® 2002	Bio-dispersant
Maxtreat® 7200 D	Dispersant
Maxtreat® 2730	All in one scale & corrosion inhibitor and antifoulant
Maxgreen® 1202	Scale & corrosion inhibitor
Maxgreen® 7003	Effective bio & organic dispersant
Maxgreen® 6500	Microbiocide

\*Customised formulations as per requirement are also available



# Reverse Osmosis Chemicals

Thermax offers a complete range of Reverse Osmosis Chemicals, which includes antiscalants, inorganic & organic cleaning chemicals in powder and liquid form, biodispersants and biocides.

Even with the best pretreatment based on feed water characteristics, reverse osmosis membrane continues to face several problems associated with scaling, fouling, biological growth along with operational problems.

As Thermax is water treatment equipment supplier, we have in-house chemical manufacturing facilities and thus we have strong competence on equipment and chemical performance. We also carry out in-house membrane autopsy studies.

## Antiscalants

Our MAXTREAT® range of antiscalants reduces membrane scaling, fouling. It also disperses silt, colloidal particles and fouling tendencies thereby giving sustained performance for a longer time and reduces unscheduled shutdown and cleaning costs.

## Facilitates Maximum Recovery

Provide optimum control of feed water with concentrate LSI up to + 3.0

## Safe For Use In Potable Water

Certified under  ANSI/NSF standards





## Membrane Cleaning Chemicals

Our MAXTREAT® range of liquid and powder cleaning chemicals (Inorganic & Organic ) are specially formulated blend of cleaner for the inorganic scale & organic compounds and also biological slime.

### Benefits

- Liquid / powder cleaner which allows shorter mixing time.
- Low foaming formulation.
- Cost effective program for carbonate or sulfate scale and also for organic compound & slime.

## Biocides

MAXTREAT® range of non- oxidizing biocide works speedily and provide effective response even in heavily contaminated waters.

### Benefits

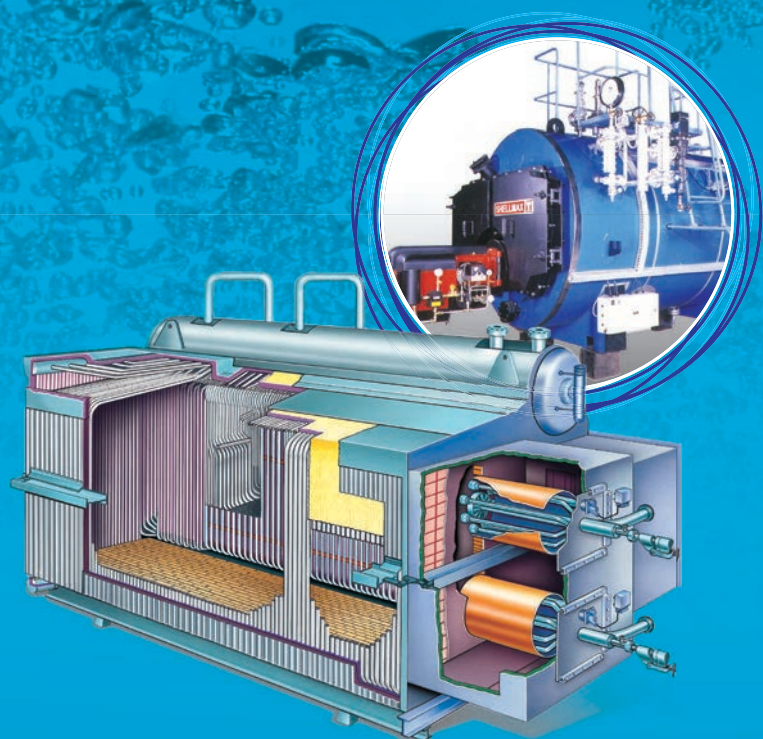
- Biocide activity spans over a spectrum of microorganisms.
- Liquid formulation.
- Heavy slime deposit can be eliminated or controlled by regular use of biocide in heavily infected reverse osmosis system

## MAXTREAT® Reverse Osmosis Treatment Chemicals

Product	Application
( Antiscalants )	
Maxtreat® 9001	Antiscalant
Maxtreat® 9002	Silica antiscalant
Maxtreat® 9007	Antiscalant
Maxtreat® 9005	Antiscalant for hardness & biofouling
Maxtreat® 9115	Antiscalant
Maxtreat® 9118	High silica antiscalant
Maxtreat® 9900RC	Antiscalant / Antifoulant for disc type membranes
( Powder Cleaning Chemicals )	
Maxtreat® 9822	For hardness and Iron
Maxtreat® 9311	For general purpose, organics
(Cleaning chemicals)	
Maxtreat® 9201	Inorganic cleaner
Maxtreat® 9202	Inorganic cleaner
Maxtreat® 9203	Inorganic cleaner for SO <sub>4</sub>
Maxtreat® 9204	Inorganic cleaner for Ca, Mg
Maxtreat® 9206	Organic cleaner
Maxtreat® 9771 UF	Ultrafiltration cleaner
Maxtreat® 9772 UF	Ultrafiltration cleaner
Maxtreat® 9773 UF	Ultrafiltration cleaner

# Boiler Water Chemicals

MAXTREAT® range of boiler water treatment chemicals is a combination of polymers and organo-inorganic chemical treatment programmes. The range of MAXTREAT® Boiler Water Chemicals includes oxygen scavengers, scale, deposit and corrosion inhibitors, sludge conditioner, anti-foaming agents, alkalinity controllers and also an all organic single product boiler water treatment chemical & condensate corrosion control treatment.



## MAXCLEAN® Descaling Compounds

Product	Application
Maxclean® - 05	Descaling compound
Maxclean® - 06	Descaling compound
Maxclean® - 07	Boil out chemical





## Action & Benefits

- **Protects Oxygen Pitting**  
Catalysed oxygen scavengers remove oxygen instantly thereby controlling oxygen related corrosion.
- **Corrosion Inhibition**  
Powerful corrosion inhibitors help protect against acidic corrosion to reduce coil tube failures and unscheduled shutdowns.
- **Scale Prevention**  
Highly effective anti-scalants prevent scale formation improving heat transfer, reducing failures and unscheduled shutdowns.
- **Energy Saving**  
The anti-scalant and dispersant action of MAXTREAT® keeps your boiler clean and at the peak of heat transfer efficiency thereby reducing energy losses.
- **Easy to Use**  
MAXTREAT® range of Boiler Water Chemicals is easy to dose liquids which provide wide flexibility with regards to dosage levels and sufficient room for operational errors.
- **De-Scaling**  
MAXTREAT® de-scaling compounds are useful in removal of hardness and corrosion products from boilers, heat exchangers and cooling systems, etc

## MAXTREAT® Boiler Water Treatment Chemicals

Product	Application
Maxgreen™ 3001	Online sludge conditioner
Maxgreen™ 3002	Online descalant for hardness & Iron scale
Maxtreat® 3003	Defoamer
Maxtreat® 3004	Alkalinity builder
Maxtreat® 3005	Alkalinity controller / reducer
Maxgreen™ 3006	Alkalinity builder
Maxgreen™ 3100	Catalysed oxygen scavenger in powder form for low and medium pressure boiler
Maxtreat® 3200	Catalysed oxygen scavenger in liquid for high pressure boiler
Maxtreat® 3220	Scale & corrosion inhibitor for oil type boiler
Maxgreen™ 3221	Corrosion and scale inhibitor in liquid form for low and medium pressure boiler
Maxgreen™ 3222	Corrosion and scale inhibitor
Maxtreat® 3330	All organic complete
Maxtreat® 3311	Condensate line corrosion inhibitor
Maxtreat® 3334	Condensate corrosion inhibitor
Maxtreat® 3223 SR	Corrosion and scale inhibitor in powder form
Maxgreen™ 3226	Single product treatment for low pressure boiler

# Fuel Additives

Thermax Chemical offers a range of fuel treatment chemicals. The THERMOSOL® range of products are designed to condition fuel for better performance and operation of the system.

## Action & Benefits

- **Improves Combustion**

THERMOSOL® speeds up combustion reaction reducing formation of soot, tar and clinker ensuring complete combustion at lower excess air. This improves fuel utilisation and reduces stack losses increasing overall combustion efficiency.

- **Improves Atomisation**

Surface active agents included in THERMOSOL® reduce surface tension of oil and improve fuel oil atomisation by forming uniform, smaller droplets.

The ashless dispersants in THERMOSOL® inhibit formation of resin or coke at burner nozzle keeping it clean for fuel oil passage.



### Other Benefits

- Reduces high temp corrosion
- Prevents sludge formation
- Reduces acid smut emission
- Reduces low temp corrosion
- Prevents filter clogging
- Inhibits wax deposition
- Improves oil flow

## THERMOSOL® : Fuel Oil Treatment Chemicals

Product	Application
Thermosol® - I	Organo - metallic compound with detergent, surfactant and combustion catalyst
Thermosol® - S	Corrosion inhibitor, sludge dispersant for heavy fuel fired system
Thermosol® - L	Corrosion inhibitor, sludge dispersant and combustion catalyst for LSHS fired systems
Thermosol® - F	Multi-component, multi-purpose
Thermosol® - D	Diesel additive for internal combustion engines
Thermosol® - DG	For heavy fuel fired internal combustion engine
Thermosol® Optiva	Fuel conditioner for heavy fuel fired boiler / heater
Thermosol® SPM	For particulate matter reduction
Thermosol® - MG	Multi-function fuel additive for heavy fuel oil

\*Customised solutions are available





# Fireside Cleaning Compounds

Even under the best operating conditions, users can face several problems with fuels right from storage to post combustion such as dust nuisance, carbon rejection in ash, fouling and slagging of furnace, formation of clinker.

THERMOMIX®/ ECONOMIX® range of fireside treatment products from Thermax Chemicals

contain dust suppressants, combustion catalysts, slag modifiers and corrosion inhibitors that help improve overall combustion and system performance. This range of chemicals helps to increase the ash fusion temperature of deposits & improves heat transfer.

## Action & Benefits

- **Ease of operation**

Improves combustion by reducing carbon rejection in ash, reduces fouling and slagging, increases ash fusion temperature and reduced clinker formation.

- **Reduces corrosion and cleaning period**

Reduces corrosion of boiler metallurgy caused by sodium and sulphur compounds, reduces

refractory and tube failure problems as deposits can be easily removed during soot blowing and shutdowns .

- **Efficient steam generation**

Heating surfaces are kept clean to facilitate better heat transfer leading to efficient steam generation and complete boiler utilisation.

## THERMOMIX® / ECONOMIX® : Fire Side Cleaning Compounds

Product	Application
Thermomix® - BG	Slag modifier, corrosion inhibitor for bagasse and heavy oil applications.
Thermomix® - C	Slag conditioner, combustion improver for coal fired equipment.
Thermomix® - E	Low temperature deposit modification improves heat transfer
Thermomix® - BGL	Combustion improver, corrosion inhibitor, slag modifiers for heavy oil fired units
Economix® - HD / Thermomix® - HD	Complete removal of fireside deposits & corrosion inhibitors for heavy fuel oil fired units
Economix® - S	For removal of glass clinker for solid fuel fired units
Coalmix™	Additive for coal
Biomix™	Additive for biomass



# Polyelectrolytes

Thermax has a wide range of Polyelectrolytes for raw water clarification, effluent treatment, colour removal, paint detackification & a range of process applications.

## Action & Benefits

- **Coagulation & flocculation**  
Solid liquid separations with faster sedimentation.
- **Dewatering**  
Reduces moisture from centrifuge, RVDF & Belt press.
- **Faster separation**  
Use of Polyelectrolytes results in faster separation of a solid from liquid & oil from liquid as a result of denser floc formation.
- **Cost effective**  
Polyelectrolytes requirement is lower as compared to conventional coagulants like Alum, PAC etc and hence work out to be economical alternatives to conventional treatment.
- **Easy to use**  
Polyelectrolytes are easier to dose. Custom made dosing equipments are available from Thermax. Solid, liquid varieties are available to suit your needs.
- Low to ultra high molecular weight solid, liquid & emulsion polyelectrolytes are available to suit your needs.



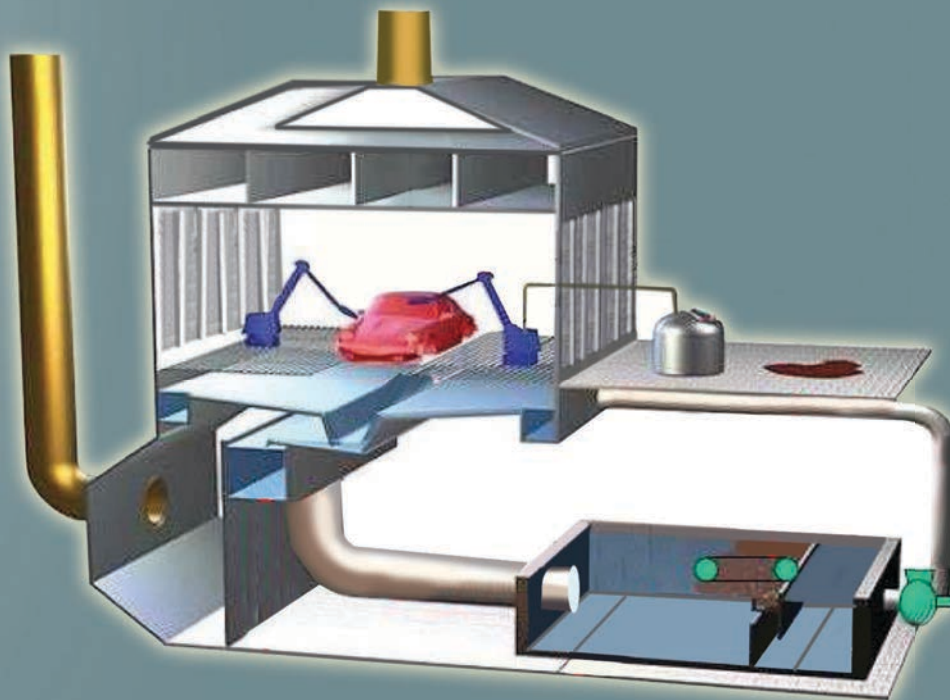
## Maxfloc® : Polyelectrolytes for Raw water / ETP & Special Applications

Product	Application
Maxfloc® T	Removal of turbidity in raw water clarification
Maxfloc® 20	O/W separation, sludge dewatering, SS removal in primary and secondary treatment
Maxfloc® TG	Turbidity removal as filteraid, coal washery for colloidal SS removal, sedimentation of particulate matter in scrubbed water from blast furnace & basic oxygen furnace, ETP O/W separation
Maxfloc® 507	Colour removal & precipitation for textile mills
Maxfloc® C-11	Centrifuge, sedimentation of biological sludge, sludge dewatering and paper krofta
Maxfloc® C-22	Bio sludge sedimentation, dewatering, setting in primary & secondary ETP
Maxfloc® C -33	Bio sludge sedimentation and dewatering
Maxfloc® A-115	Sedimentation of SS in primary & secondary clarifier in ETP, thickening & centrifuge in coal washery
Maxfloc® A-107	Flocculation of sludge in primary, secondary industrial ETP furnace scrubbed suspended solids sedimentation
Maxfloc® 6110	Detackification of overspray paint in paint booths of automobile industry & ancillary units
Maxtreat® 6440	Detackification of HR grade paint overspray in paint booths

Customised solutions are available



# Paint Detackification Treatment Program for Automobile and Ancillary Industry

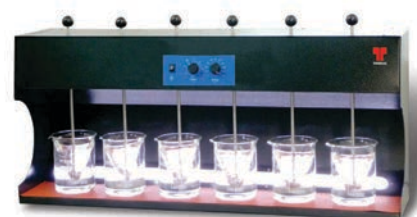


## Advantages of Organic Detackifiers:

- Effective over wide range of paints (paint is basically complex formulation of pigments, binder, surfactant, vehicle, solvent, alkyd amide, ester, polyurethanes, vinyl etc)
- Maximizes detackification (eliminates tackiness i.e. stickiness)
- Maximizes solids capture (sludge is compact & dewatered)
- Minimizes foaming problems
- Minimizes biological problems (no paint accumulation, no biogrowth)
- Optimizes sludge characteristics (sludge formed is only to the extent of paint over spray, organic detackifier do not react with water like metallic salt)

## Benefits with Thermax package:

- Consistently superior results with all types of paints
- Simple to use and control treatment
- Cleaner spray booths and sludge systems
- Easier, less frequent clean-ups
- Improved booth water clarity
- No foaming and odour problems, enhanced sludge system operations
- Reduced treatment chemicals, maintenance and sludge disposal costs



# Specialty Sugar Chemicals

Thermax offers a range of specialty sugar chemicals. Our range includes start to end solutions for sugar manufacturing process.



## Mill Sanitation Biocides

Maxtreat® SH-401 is a carbamate based microbiocide & Maxquat® 50 is quaternary ammonium based microbiocide specially formulated to inhibit growth of bacteria during milling of sugarcane.

### Action & Benefits

- **Prevents bacterial growth**  
Highly effective against acid producing bacteria and fungi found in sugar mills.
- **Arrests sugar inversion**  
Arrests Sugar Inversion during milling process
- **Inhibits enzyme action**  
Bacterial and enzyme action on sucrose reduces sugar recovery. Maxtreat SH-401 / Maxquat 50 inhibits enzyme action for the time between crushing of cane and lime neutralization.

## Evaporator Anti-Scalant

Maxtreat® -4000 is a multi-component liquid chemical specially formulated to inhibit scale formation in sugar cane juice evaporators and vacuum pans.

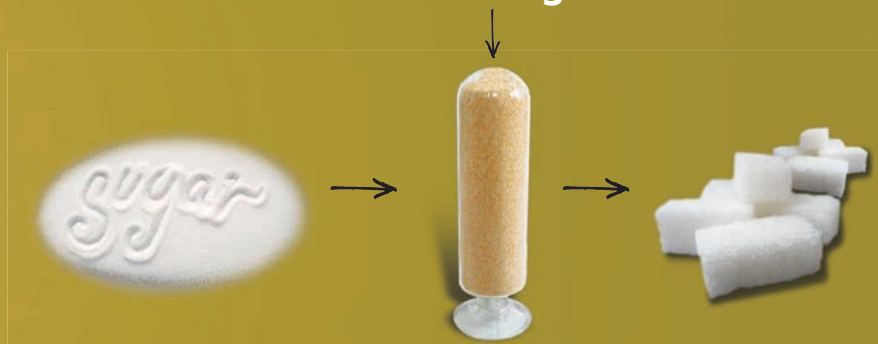
### Action & Benefits

- **Improves heat transfer**  
Powerful active agent in Maxtreat® -4000 keeps heat transfer surfaces clean and free from excessive deposition. This improves heat transfer co-efficient reducing steam requirement while improving evaporator capacity.
- **Reduced scale formation**  
Maxtreat® -4000 contains a sequestering agent which keeps calcium and magnesium salts as water soluble complexes. These water soluble complexes do not precipitate forming scales on heat exchange surfaces.





## Tulsion® Resins for Sugar Decolorisation



### Action & Benefits

- High quality refined sugar.
- Resins have high regeneration efficiency reducing operating cost.
- Effluent problem can be eliminated by recycling the brine after treatment
- The costs of IER operation is considered to be about half those of traditional granular carbon or bone char methods.
- As brine is cheap so regeneration cost is low.
- Equipment cost is less for IER process

Product	Application
Tulsion® A - 72 MP/ A - 722 MP	Sugar decolourisation, Organic removal
Tulsion® A 30 MP	Sugar remelt decolourisation

### Flocculant

Canefloc S is a highly effective coagulant for separation of suspended solid in sugar juice. This product is used in the sugar juice clarifier .

### Action & Benefits

- **Efficient clarification**  
Canefloc S is a high charge density anionic polymer that helps in flocculation of suspended matter forming dense, easy setting flocs. The higher molecular weight of polymer ensures complete and quick coagulation and flocculation of suspended matter resulting in efficient clarification of sugar juice.
- **Improves mud filtration**  
Higher molecular weight of Canefloc® helps in formation of tough flocs which improves filterability of mud. The quality of filtrate is better and loss of juice in mud is reduced. Use of Canefloc® increases the efficiency of filtration reducing cost of operation.

### Viscosity Reducer

Maxtreat® 4025 improves centrifugation efficiency, improves sugar colour, better exhaustion of molasses & reduces sugar losses.

### Maxtreat® - Range of Sugar Chemicals

Product	Application
Maxtreat® 4000	Evaporator antiscalant
Maxtreat® SH-401	Mill sanitation chemical
Maxquat® 50	Mill sanitation chemical
Canefloc® S	Flocculant
Maxtreat® 4025	Viscosity reducer
Maxtreat® 4004	Colour Improver

# Oilfield Chemicals

With a wide product portfolio and an experience of over 20 years in oil field chemicals & management in India and abroad, Thermax is capable of offering customized chemicals & solutions for the specific needs & application of customers.

The oilfield specialty chemicals from Thermax focus on treating crude oil and water, efficiently and cost-effectively.

We offer a wide range of Pour Point Depressants for smooth and problem-free transportation of crude oil from production site to refinery. Thermax Pour Point Depressants have proven their versatility in handling crude oil of various characteristics.

Thermax can offer a package of chemicals which are required by the oil exploration services companies apart from demulsifiers, deoilers, polyelectrolytes, antifoams & oxygen scavengers.

Our portfolio also includes chemicals for controlling bacterial growth, scaling and corrosion in oil and gas pipelines while not impeding the flow of oil or gas. This avoids operational problems and ensures smooth transportation of the crude.





## Quality Assured Manufacturing



## Oilfield Product Profile

Product	Application
<b>PRIMARY RECOVERY OIL FIELD CHEMICALS</b>	
Maxdip <sup>®</sup>	Pour point depressant
Deemax <sup>™</sup>	Demulsifier
Oilmin <sup>®</sup>	Deoiler
Scalemin <sup>®</sup>	Scale inhibitor
Corromin <sup>®</sup>	Corrosion inhibitor ( produced water & gas )
Biomin <sup>®</sup>	Biocide
<b>SECONDARY RECOVERY OIL FIELD CHEMICALS (WATER INJECTION)</b>	
Maxolyte <sup>™</sup>	Coagulants & flocculants
Scalemin <sup>®</sup>	Scale inhibitor
Biomin <sup>®</sup>	Biocide
Corromin <sup>®</sup>	Corrosion inhibitor
<b>OTHER OIL FIELD CHEMICALS</b>	
Swellmin	Clay stabilizer
Acimin	Acid corrosion inhibitor
Deemax <sup>™</sup>	Non emulsifying agent
Maxdip <sup>®</sup>	Pour point depressants for diesel & lubricating oil

# Paper Chemicals

Thermax-Georgia Pacific combine offers the entire spectrum of performance paper chemicals formulated to enhance the physical attributes of the paper products from wet and dry strength resins, internal alkaline sizes, surface sizes and box board coatings to specialty products such as charge modifiers and anionic trash collectors.

Georgia Pacific products lines are ably supported by MAXFLOC® range of polyelectrolytes-cationic coagulants, cationic/anionic flocculants (in powder, liquid & emulsion form) and MAXTREAT® range of micro-biocides & deposit control formulations, antifoam and de-inking additives etc. coupled with diagnostic and value added services.

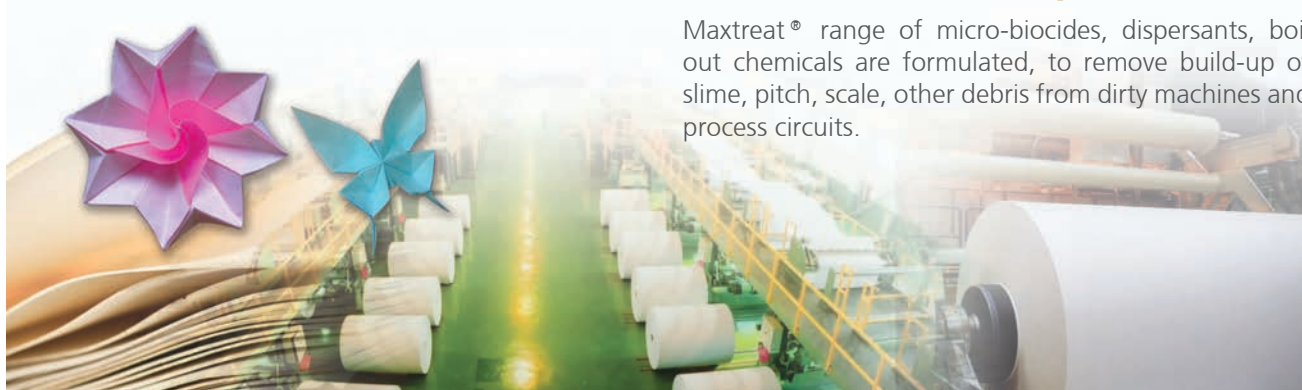


## Coagulants & Flocculants

Thermax manufactures a range of coagulants and flocculants for use in the paper machine systems and their wastewater treatment plants. The Maxfloc® range of coagulants find use as charge neutralizers of anionic trash, fixing agents, controlling the 'stickies' in the coated broke system and in combination with AKD and ASA sizes to improve fixing and cure rate.

## Wet & Dry Strength Resins

Amres® wet strength and Ambond® dry strength resins, manufactured in technical collaboration with Georgia Pacific Corporation USA are engineered for paper tissue and towelling, linerboard, liquid packaging, and carrier board.



## Sizing Chemicals

### Internal Sizing

Thermax internal alkaline sizes include AKD, ASA and ASA emulsifying agents. NovaSize® AKD size is offered on acceptable solids basis and extraordinary performance efficiency. Similarly NovaSize® ASA sizing system provides distinctive cost effectiveness.

### Surface Sizing

Surface sizes (SMA, SAE chemistries) like NovaCote® products meet the unique needs in newsprint, linerboard, carrier board and gypsum applications.

## Microbiocides & Deposit Control

Maxtreat® range of micro-biocides, dispersants, boil out chemicals are formulated, to remove build-up of slime, pitch, scale, other debris from dirty machines and process circuits.





## Defoamer & Antifoamers

Thermax defoamers act as a dual effective agent for efficient foam control in paper manufacturing systems. Certain grades of defoamers are also used in the coating colour kitchen.

## De-inking, Refining & Bleaching Additives

Maxtreat® surfactant based de-inking chemical as well as enzyme based de-inking chemicals are designed to remove and disperse ink from recycled furnish used in de-inking plants.

## Paper Dyes

Thermax Maxtreat® brand products exhibit a wide range of paper dyes offered by Thermax in blue, violet, red, orange and green colours.

## Coating

NovaCote® a ready-mix coating formulation manufactured under licensing agreement with Georgia Pacific Corporation USA, can be used without any other coating chemical use. Thermax also offers acrylic binders, rheology modifiers, coating hardeners and dispersing agents.

## Paper Chemicals Product Profile

Product	Applications
Maxfloc® 5020	Charge neutralizer, broke treatment, drainage aid, anionic trash controller, fixative
NovaSize® AKD 3016	Sizing for writing & printing paper and also for board, alkaline internal sizing agent
Amres® 8855	High performance wet strength resin
Maxtreat® 5304	Paper machine slimicide / fungi control
Maxtreat® MDF 5010	Paper machine defoamer
Maxtreat® DI 16	De-inking chemical
NovaCote® PC 3050	High bright applications for paper / board

# Construction Chemicals

Thermax Chemical division leveraging its rich experience in specialty chemicals has entered in technical collaboration with Tecnochem Italiana S.p.A, a leading European construction chemical company with 37 years of experience and export profile in more than 50 countries.

**Thermax-Tecnochem** combine offerings would include the entire spectrum of construction chemicals from Admixtures to Cement grinding aids offering total solutions and unmatched services to construction and cement industry.

## Thermax Key Features

- MuCis (Multiple Corrosion Inhibiting synergies) range of synergetic corrosion inhibitors which strongly reduce the corrosion reactions on the steel reinforcement are few of the innovative products from Thermax
- Backward integration for manufacturing PC, PMS & PNS molecules
- Complete product range : Concrete Admixtures to Cement Grinding aids
- Unique products in range : Bentonite waterproofing, Asphalt grout, Mucis system, Admixture for CLC & Microsilica



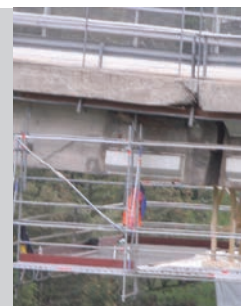
### Concrete Admixtures

Thermax offers a complete range of Admixtures including Plasticizers, Superplasticizers, Air entrainers, Accelerators, Retarders and other specialty admixtures. **Tecnos™** range of Admixtures from Thermax help produce high strength, high grade & high workability concrete.

### Repair & Rehabilitation

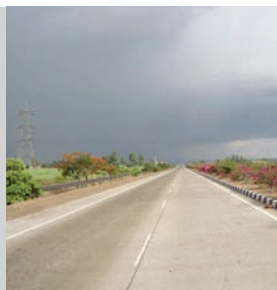
Even under the best construction practices concrete structures faces several problems & require structural strengthening.

**Maxtreat®** range of Cement & Resin based materials reinstate defective & distressed concrete including underwater repairs.



### Surface Treatment

**Maxcure™** range of products includes demoulding agents, curing compounds, surface retarders, rust removers & concrete cleaners for better concrete surfaces.



### Protective Coatings

**T-guard™** range of Protective coatings for vital protection of external and internal surfaces against weather and environmental pollutants.



### Grouts & Anchors

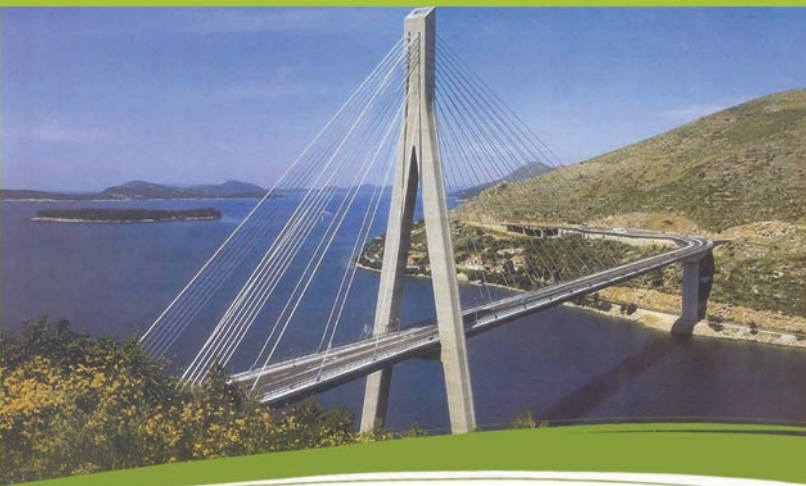
**Maxgrout™** range of Cement & Resin based high efficiency products for heavy load bearing units together with anchoring systems to install permanent anchors & fixings.

### Waterproofing

**Maxshield™** range from Thermax includes entire range of different bases of coatings & membranes for waterproofing of below ground & above ground structures.







### Industrial Flooring

**Tecfloor™** range of floorings products are specially designed to enhance the performance characteristics of both new & old concrete floors with added advantages including abrasion & chemical resistance, load impact & zero moisture penetration.



### Sealants

**Maxflex™** range of flexible jointing materials for filling expansion, contraction, construction & isolation joints in civil structures.

### Adhesives

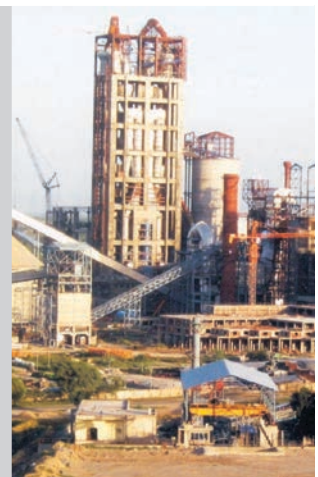
**TM-Bond™** range of jointing materials for providing structural integrity & bonding of two concrete elements in segmental construction.

**Maxtite™** range of joint fillers & Tile adhesives for fixing tiles on the floors, walls & swimming pools.



### Cement Grinding Aids

**Deemax™** range of high performance products for delivering high quality cements, reduced energy consumption, enhanced throughput of mill & better flow characteristics of cement.



Please refer "**Product Summary Guide**" for complete product details.



# A Tradition Of Customer Focused R & D

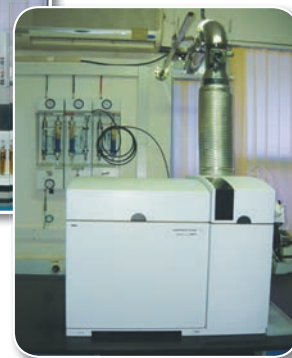


## Research and Development

The division's R&D, with its state-of-the-art laboratories is at the forefront of developing new products and technologies. Our 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.

## Credentials

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



## Quality Assured Manufacturing

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

Thermax chemical division complies with the requirements of ISO 9001 and continually improves the effectiveness of the quality management system by establishing and reviewing quality objectives.



# Thermax Channel Associate – Closer To You Than You Thought

## Reliable business support

Introducing Thermax channel associate (TCA), your single point source for solutions in utilities & services. from Thermax portfolio including: heating, cooling, water treatment, wastewater management, air pollution control systems & performance improving chemicals.

TCA helps you manage your business better by extending sustained support from a location nearer to your plant.

## Improving your business is our business

TCA offers your business an edge over competition by providing customized solutions.

TCA helps you configure the right mix of products and services for growth.

## Your knowledge partner

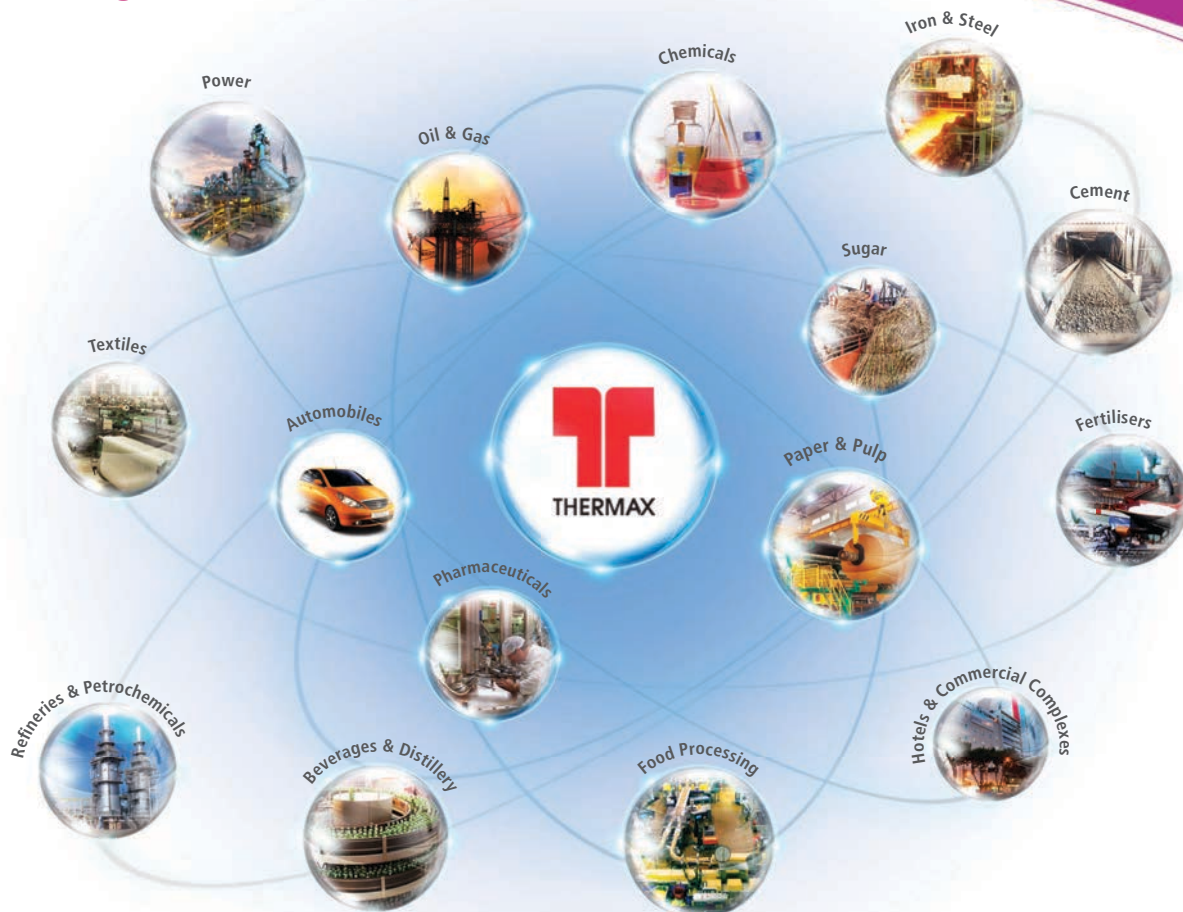
TCA's are able to troubleshoot and offer solutions specific to your needs since they are equipped with Thermax's extensive knowledge of applications gained from working with various industries worldwide.

TCA's shall also involve in systematic knowledge transfer through training sessions for customer personnel.

## Recognitions for Thermax

- Featured four times in the Forbes' list of Asia's 'best under a billion companies' (2005-'08)
- Listed among the top 100 of India's most valuable 500 companies (Business Today '07)
- Business standard 'CEO of the year' (2007-08) award for chairperson
- CNBC TV-18 India award for the "most promising entrant to the big league (2011-12)

## Serving more than 44 sectors World-wide



\*Please visit our website [www.thermaxindia.com](http://www.thermaxindia.com) in "Industries" section and click on your industry to get the complete details of offerings by Thermax for your business enabling us to serve you better.

## Our Global Network



### THERMAX

Sustainable Solutions in  
Energy & Environment

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Sri Lanka, China, Philippines, Peru, Chile, Kenya,  
Nigeria, Brazil, Indonesia

**Website :** [www.thermaxindia.com](http://www.thermaxindia.com)

### Thermax Business Portfolio

#### Chemicals

#### Absorption Cooling

#### Air Pollution Control

#### Boilers & Heaters

#### Power

#### Water & Waste Solutions

#### Solar

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