

INDUSTRIAL WATER TREATMENT

CATALOGUE





Water plays important role in every industry, for processing, washing, diluting, cooling, transporting and many others. Many purpose of water need special treatment in some certain condition. **ZEKINDO'S SERIES CHEMICALS** create specialty chemicals with long time journey of research and development to provide customer's needs.

TABLE OF CONTENTS.

Introduction	<u>3</u>
Product List	<u>4</u>
Zekindo Series	
Raw Water / Wastewater Treatment	<u>5</u>
Cooling Water Treatment	<u>7</u>
Boiler Water Treatment	<u>9</u>
RO Treatment Chemicals	<u>11</u>
RO Membrane Filter & Cartridge Filter	<u>13</u>
Paint Spray Booth	<u>17</u>
Our Factories	<u>18</u>



INTRODUCTION.

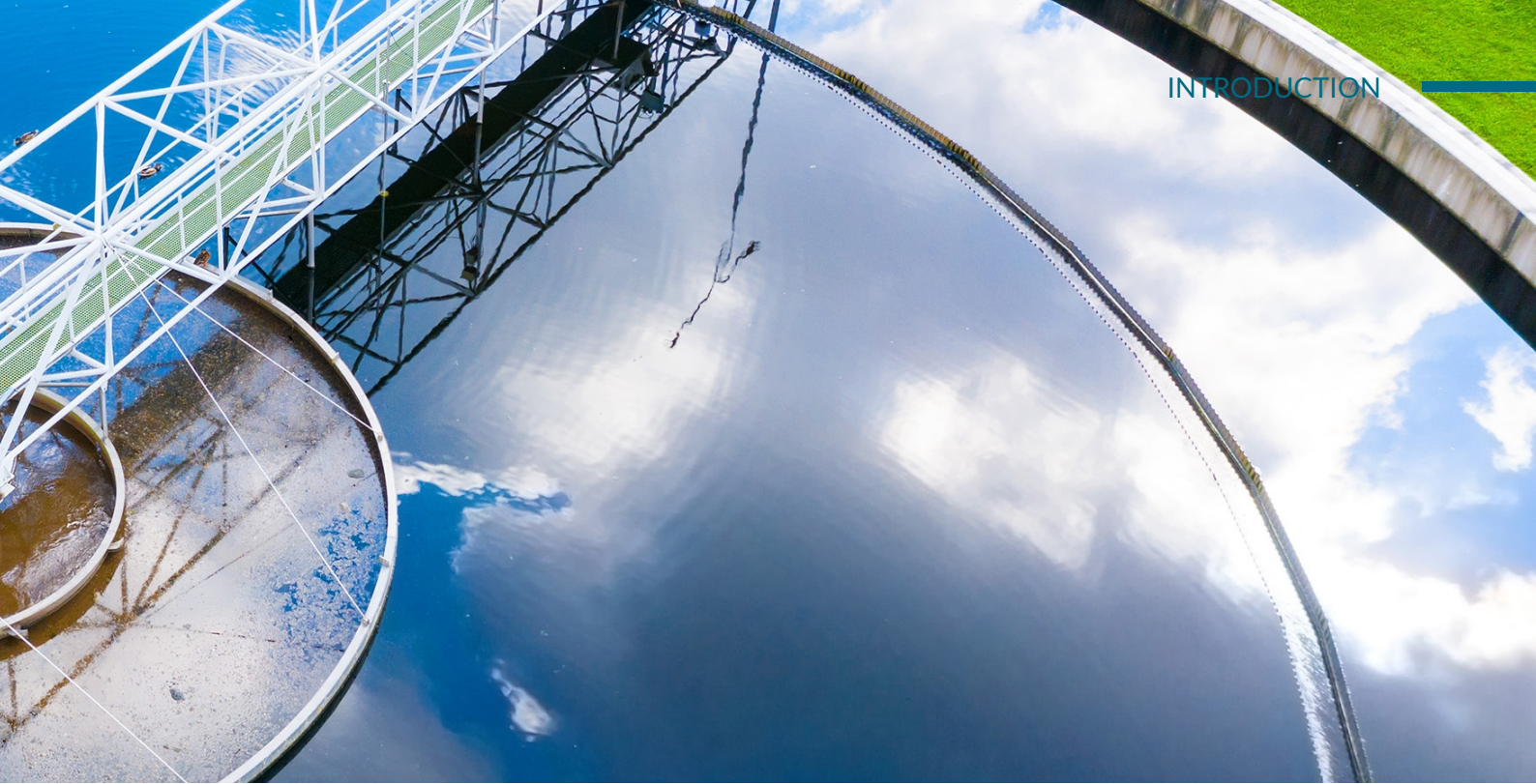
Industrial Water Treatment Chemicals

ZEKINDO is leading sustainable specialty chemicals and manufacturing in Indonesia that offer full range product of industrial water treatment application.

ZEKINDO Industrial Water Treatment (IWT) products are customized to provide customer needs for all related application, ranging from wastewater treatment, RO membrane treatment, cooling water treatment, boiler water treatment and many others.

Zekindo's Series Chemicals are developed by our Research & Development Department following water's characterization in each different kind of customer. Zekindo committed to offer you good performance and high quality products, in line with ISO System 9001, 14001 & 45001.

We has successfully manage wastewater treatment plant with high value added products, **Zekindo's Series**. We committed offer you good performance and high quality product for improving our client's plant and provide total cost reduction.



Product List

Water & Wastewater Treatment

- Coagulant
- Flocculant
- Decoloring Agent
- Heavy Metal Removal
- Bacteria
- Nutrient

Cooling Water Treatment

- Biocide
 - Oxidizing Biocide
 - Non-oxidizing Biocide
- Bio-dispersant
- Scale Inhibitor
- Corrosion Inhibitor

Paint Spray Booth Chemicals

- Paint Killer
- Paint Flocculant
- Alkalinity Booster

Reverse Osmosis Treatment

- Biocide
 - Oxidizing Biocide
 - Non-oxidizing Biocide
- RO Anti-scale
- RO Cleaner
 - Acid Cleaner
 - Alkaline Cleaner
- Zekindo BW400 Series
- Zekindo Cartridge Filter Series

Boiler Water Treatment

- Alkalinity Control Agent
- Oxygen Scavenger
- Scale Inhibitor
- Sludge Dispersant
- Neutralizing/Filming Amine
- Chemicals Cleaning & Boil Out

RAW WATER / WASTEWATER TREATMENT CHEMICALS



Coagulant

In wastewater system, water quality is a major concern where processing waste water is utilized back as a washwater or discharged to the environment. These concerns are both economic and environment, ZEKINDO has a wide range of coagulant products under

ZEKINDO'S SERIES COAGULANT is product line to treat industrial wastewater to meet water quality specification. It consists of organic, inorganic, and mixed organic-inorganic products.

Application: Raw Water/
Wastewater Treatment

Flocculant

ZEKINDO' S SERIES FLOCCULANT is used after coagulation processing, resulting in clearer effluent. Besides, another charge flocculant is used in dewatering processing. Good flocculated sludge produced will be discharged to third parties.

ZEKINDO'S SERIES FLOCCULANT consist of anionic, non-ionic, and cationic charge with various molecular weight.

Application: Raw Water/
Wastewater Treatment, Sludge
Dewatering

Decoloring Agent

In some industry, high color wastewater become serious problem should be solved quickly. **ZEKINDO'S SERIES DECOLORING AGENT** provides excellent way to reduce the high color waste water.

Application: Raw Water/
Wastewater Treatment



Antifoam

ZEKINDO'S SERIES ANTIFOAM is highly effective and durable antifoam emulsion specially developed to offer excellent foam control in a variety of surfactant concentrate and foaming process. It displays superior dispersibility in both non-ionic and anionic aqueous foaming media.

Application: Wastewater Treatment

Heavy Metal Removal

One of water pollution in wastewater system is heavy metal. **ZEKINDO'S SERIES HEAVY METAL REMOVAL** help to reduce heavy metal content in wastewater system before discharged the environment.

Application: Wastewater Treatment

Bacteria & Nutrient

Bacteria help to remove organic matter inside of wastewater system. In their cycle life, they need nutrient as extra boost to provide better performance in oxidizing the organic matter.

Application: Aerobic/ Anaerobic
Wastewater Treatment

COOLING WATER TREATMENT



Cooling tower is one of essential equipment in industry. It helps to remove excess heat from engine, maintain engine operating temperature, and bring up the right engine temperature as quick as possible.

ZEKINDO'S SERIES COOLING WATER TREATMENT CHEMICALS provide high quality product to reduce scale, corrosion, and biofouling potential in your system. It perfect choices to your once through, open loop and closed loop cooling system

Biocide Oxidizing & Non-oxidizing

ZEKINDO'S SERIES BIOCIDES is line oxidizing and non-oxidizing microbiocide for the control of bacteria found in and around cooling water system. ZEKINDO's biocides control aerobic, anaerobic, acid producing and sulfate reducing bacteria.

Application: Once through/open/close loop cooling system

Scale Inhibitor

Scale cause lower heat transfer efficiency. **ZEKINDO'S SERIES SCALE INHIBITOR**

helps you prevent and maintain the cooling water system from scale potential.

Application: Open/Close loop cooling system

Biodispersant

ZEKINDO'S SERIES BIODISPERSANT help to minimize complex matrix of microorganism biofilm in cooling water system.

Application: Open loop cooling system

Corrosion Inhibitor

Corrosion can cause leakage in cooling water system. **ZEKINDO'S SERIES CORROSION INHIBITOR** helps you maintain cooling system from corrosion problem.

Application: Open/close loop cooling system



BOILER WATER TREATMENT CHEMICALS



ZEKINDO'S SERIES BOILER WATER CHEMICALS provides you with various chemicals for optimizing boiler water treatment. Many industrial processes require steam for many purposes, heating, electricity generation, and others. Steam that is generated from boiler will produce various operational problem in a boiler system if left untreated. Zekindo's boiler feedwater treatment solutions will increase your boiler efficiency without sacrificing your boiler integrity.

Zekindo's Boiler Water Treatment Solution are perfect fit for:

- Low Pressure Boiler
- Medium/Hot Pressure Boiler
- Hot Water System

Alkalinity Control Agent

pH of boiler system should be controlled in the right condition, too high pH induce scale, and too low pH induce corrosion. **ZEKINDO'S SERIES ALKALINITY CONTROL AGENT** help you control the pH of boiler system.

Application: Pre-Boiler System

Sludge Dispersants

ZEKINDO'S SERIES SLUDGE DISPERSANT can disperse the suspended solid in boiler water, become easily discharged by blowdown. It helps to prevent fouling and suspended solids deposition which occurs in the boiler water system.

Application: Internal Boiler System

Neutralizing / Filming Amine

Pure condensate water from steam boilers are sensitive to traces of carbonic acids and sulfate residues which lower the pH of pure condensate water and increase corrosion tendencies. **ZEKINDO'S SERIES NEUTRALIZING/FILMING AMINE** is specially designed to keep your condensate pH levels, protecting your boiler from unwanted corrosion by forming protective layer.

Application: Condensate System

Oxygen Scavenger

Oxygen in water increase corrosion potential in boiler feedwater system. **ZEKINDO'S SERIES OXYGEN SCAVENGER** will remove any trace of oxygen on your deaerator unit.

Application: Pre-Boiler System

Scale Inhibitor

ZEKINDO'S SERIES SCALE INHIBITOR is designed with antifoam formulation to precipitate calcium or magnesium into soft deposits. Besides, it helps to promote the protective layer on boiler metal surface. By phosphate programs, it will form sludge as it reacts with hardness; blowdown or other procedures should be conducted to remove sludge during boiler shutdown. The formulated antifoam inside will protect your boiler system from foaming.

Application: Internal Boiler System

Chemicals Cleaning & Boil Out

ZEKINDO'S SERIES CHEMICALS CLEANING & BOIL OUT provides you various chemicals for cleaning and boil out process in boiler water system.

REVERSE OSMOSIS TREATMENT CHEMICALS



ZEKINDO'S SERIES REVERSE OSMOSIS TREATMENT products are customized to catered to the customer needs for all related industrial. All our products are manufactured by high standard quality and go through rigorous quality process control.

Prolong the lifetime of RO Membrane with good pre-treatment control and appropriate RO Membrane chemicals. Commonly, biological fouling can happen in RO System and early membrane replacement is required, at huge cost. In helping you keep your RO plant operating effective and efficiently and produce good quality of permeate, **ZEKINDO'S SERIES CHEMICALS** have various range of RO's chemicals to provide you achieving total cost reduction.

Oxidizing Biocide

RO Membrane are fit place for microbial growth. **ZEKINDO'S SERIES BIOCID (OXIDIZING BIOCID)** is needed to prevent moss and bacterial build up in Reverse Osmosis System. **ZEKINDO'S SERIES BIOCID** is excellent product for removing microbial growth.

Application: RO Membrane System

RO Antiscalant

ZEKINDO'S SERIES RO ANTISCALANT is designed to prevent scaling and fouling potential in Reverse Osmosis System. Before feed water enter to Reverse Osmosis, an anti scale injected into the water and sent through the system. The chemicals will create time delay between bicarbonate and calcium magnesium. The delay allows the water to pass through membrane before any chemicals reaction occurs, such as scale.

Application: RO Membrane System

RO Membrane Cleaner

In certain time, there will be debris deposit and bacterial growth (fouling) that may stick to membrane surface. Thus, acid cleaning based (**ZEKINDO'S SERIES ACID CLEANER**) is needed to remove solid deposit, and alkaline cleaning based (**ZEKINDO'S SERIES ALKALINE CLEANER**) is also needed to remove organic fouling.

Non-Oxidizing Biocide

ZEKINDO'S SERIES BIOCID (NON-OXIDIZING BIOCID) is anti-bacterial chemicals, used for killing bacteria besides oxidizing the electro chemicals reaction of bacteria. It is designed to remove specific bacteria or biofilm.

Application: RO Membrane System

Chlorine Scavenger

Chlorine which enters the RO Membrane can cause severe damage to membrane system, **ZEKINDO'S SERIES CHLORINE SCAVENGER** prevent any chlorine residual before entering your RO Membrane.

Application: RO Membrane System

RO MEMBRANE FILTER & CARTRIDGE FILTER



RO Membrane Filter

RO Membrane Filter can separate salts from water and are produced with an advanced technology that ensures precision, consistency, and reliability. It is mainly used for industrial water such as pure water manufacture of various scales, boiler supply water, etc. It is also used for the treatment of high concentration saline wastewater and the reuse of brackish water.

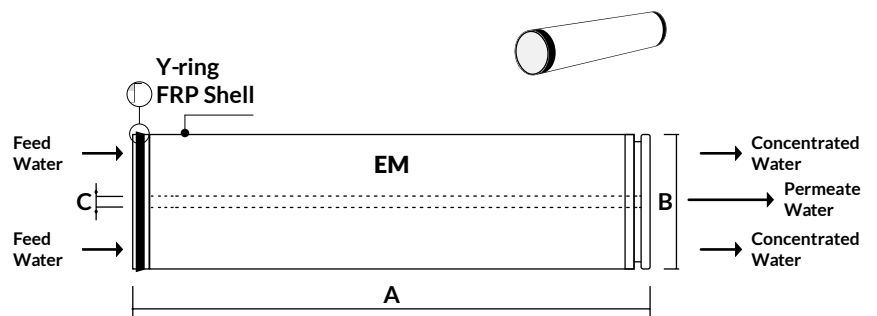
RO Membrane Filter offers years of proven performance, high performance yet long element life, offer the most effective cleaning performance durability, and delivers high quality permeate water while minimizing unit cost.

Product Specification

Product	Active Area (ft ² ; m ²)	Feed Spacer Thickness (mil)	Permeate Flow (GDP ; m ³ /d)	Salt Rejection (%)
BW-400	400 ; 37	28	10500 ; 39,7	99,5
BW-400 FR	400 ; 37	34	10500 ; 39,7	99,3

Element Dimension

A (inch ; mm)	40.0 ; 1016
B (inch ; mm)	7.9 ; 200
C (inch ; mm)	1.126 ; 28.6



Operating Limit

Membrane Type	Spiral-wound element with polyamide thin-film composite membrane
Maximum Operating Temperature	113°F (45°C)
Maximum Operating Pressure	600 psi (41 bar)
Maximum Pressure Drop	15 psi (1.0 bar)
pH Range ; Continuous Operation	3 – 10 ^a
pH Range ; Short-Term Cleaning (30 minutes)	2 – 12 ^b
Maximum Influent SDI	5
Free Chlorine Tolerance	< 0.1 ppm ^c

- When pH > 10, maximum allowable temperature for continuous operation is 95°F (35°C).
- Contact our technical sales engineer for further references.
- Under certain conditions, the presence of free chlorine and other oxidants will lead to premature failure of membranes.

Therefore, it is recommended that the inlet water be pretreated to remove residual free chlorine before water meets membranes.

Cartridge Filter

Z-FILTER-SERIES is one kind of sediment filtration media, made by food grade Polypropylene material. It is produced by advanced gradient melt blown technology. The material is melting in high temperature and blew out by high pressure air from nozzle, become to micro fibers, then collected and shaped by special receiving device.

Z-FILTER-SERIES proven to remove 99.98% of the contaminants at their micron rating. They are ideally suited for pre-RO, resin trap and cooling water applications. They are fusing and intertwined of polypropylene resin without any chemical glues. Z-FILTER-SERIES is one of the best qualified filtration media, widely used in petrification, chemical, auto, electronic, food & beverage, pharmacy, medical industries. Economical price and stable filtration capacity are also advantaging of PP filter.

Product Series

ZFS	Type	Length	Micron	Dimensions	
	SR	10"	0.5	Outside Diameter	2.5"
	SO	20"	1	Inside Diameter	1.0"
	SD	30"	3	Available Lengths	10", 20", 30", 40"
	DR	40"	5	Media	Polypropylene (FDA Grade)
	DO		10	Material	Melt Blown Bond Fibres
	DD		20	Micron	0.5, 1, 3, 5, 10, 20

Operating Limit

Maximum Operating Temperature	60°C
Maximum Differential Pressure	1 bar @ 60 C

Application

Z-FILTER-SERIES can be used for reverse osmosis pre-filtration, food and beverages, acid and alkaline, machine oil and cutting oil, electronics, industrial water treatment, DI water and ultra-pure water prefiltration, plating and coating, chemical solvents.



PAINT SPRAY BOOTH CHEMICALS



Paint Spray Booth is an enclosed area where car body painting is processed. In this unit, there is a water circulation on the wall catching up the over spray paint. The mixture of over spray paint and water should be treated if do not want to have any problem such as formed clumps of sticky paint, blockage of mist eliminator, shower head and circulation pump.

ZEKINDO'S SERIES CHEMICALS provides you integrated paint spray booth treatment with high value added products to reduce your total cost treatment.

Paint Killer

ZEKINDO'S SERIES PAINT KILLER provides you excellent de-tackifier processing into non-sticky paint result. Our **PAINT KILLER** are perfect fit for your painting process with water and solvent based.

Application: Sludge pool Paint Booth System

Alkalinity Booster

ZEKINDO'S SERIES ALKALINITY BOOSTER maintain alkalinity balancing in water system of your paint spray booth.

Application: Sludge pool Paint Booth System

Paint Flocculant

In de-tackifier processing, the micro-floc sludge should be flocculated by **ZEKINDO'S SERIES PAINT FLOCCULANT** into macro-floc sludge to produce clearer water effluent.

Application: Sludge pool Paint Booth System

OUR FACTORIES



Water Based Factory

Plant 1, Cikarang

Jl. Sungkai Blok F25 No.09 IA,
Delta Silicon V Lippo Cikarang,
Kabupaten Bekasi, Jawa Barat
Indonesia, 17550



Solvent Based Factory

Plant 2, Purwakarta

Jl. Bukit Akasia V Kavling A II No. 19,
Kawasan Bukit Indah, Dawuan,
Kabupaten Purwakarta, Jawa Barat
Indonesia, 41181

PT Zeus Kimiatama Indonesia

Phone : +6221 2977 9313

Email : customer.service@zekindo.co.id

Marketing Office:

The Prominence Office Tower, 12th Floor,
Jl. Jalur Sutera Barat No. 15, Alam Sutera, Tangerang
Indonesia, 15143