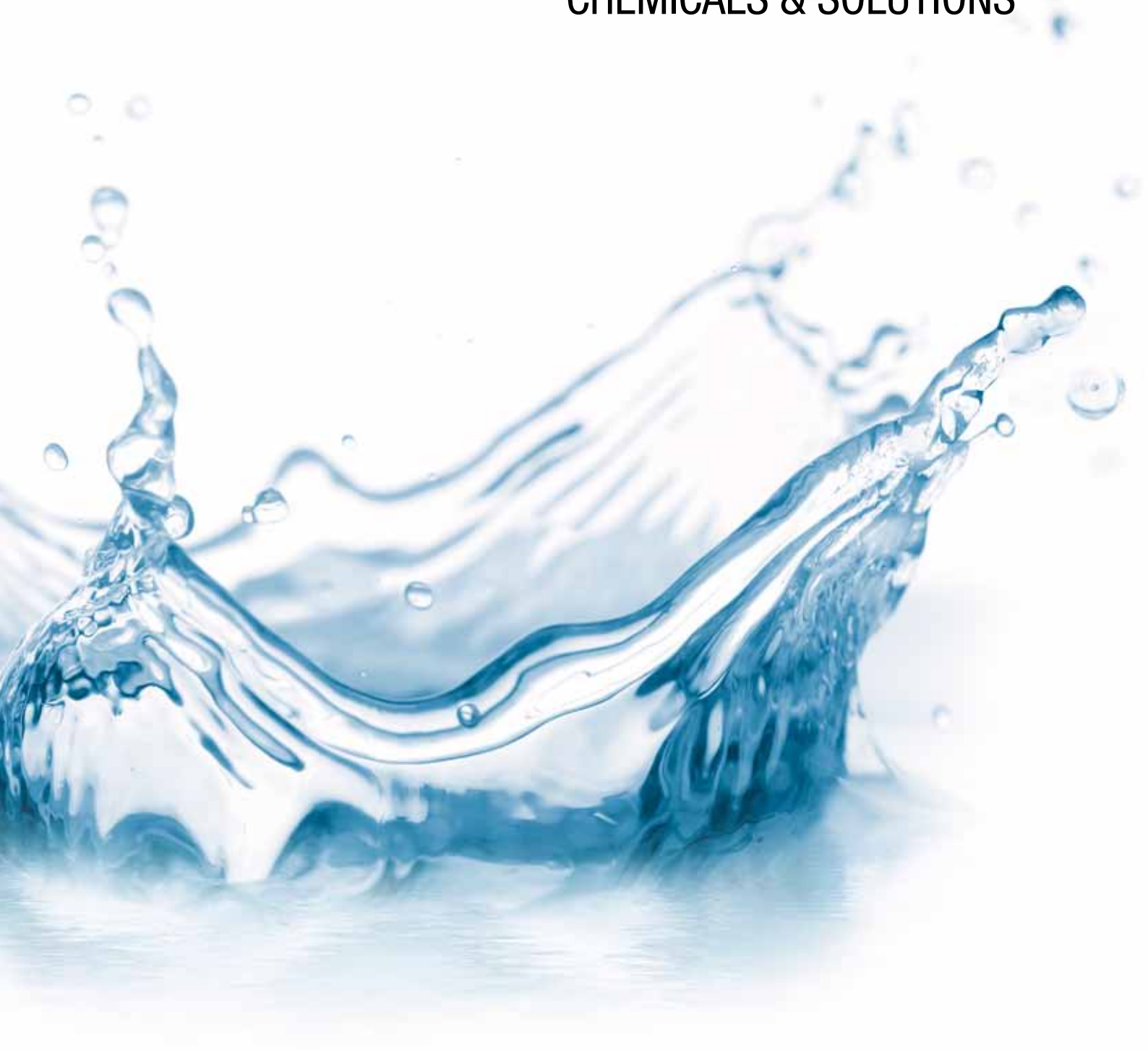




# **WATER & WASTEWATER TREATMENT**

**CHEMICALS & SOLUTIONS**



**“Science is and will be the  
medium by which people  
and nations progress”**

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## WHO WE ARE

ITS Water & Environmental Management Group is a business division under ITS GROUP which provides supply of water treatment chemicals and engineering solutions for seamless applications in water management, water & wastewater treatment and industrial waste pollution control. ITS strength lies in the unique ability to synergize the diverse range of products and services with our vast base of technical and application know-how. We also create integrated solutions which will enhance entire process performance and boost total efficiencies.

ITS Water & Environmental Management Group represents established brands from US, European and Asian manufacturers offering customers environmental-friendly solution to a wider range of applications in water treatment, pollution control and industrial manufacturing processes.

**“Regional presence,  
local service approach.”**





## CORPORATE COMPETENCY FRAMEWORK

### Total Solutions

ITS Water & Environmental Management Group provides total solution from water treatment chemicals and engineering solutions for all-in-one applications in water management, wastewater management and industrial waste pollution control with the objective of enhancing overall performance and efficiencies.

### Professional Services

ITS has a dedicated team of sales and service engineers fully capable of providing a comprehensive range of solutions from design, build, commissioning to continuous maintenance.

### Resources Integration

ITS GROUP integrates its resources in multiple countries to give a single point of contact facilitating turnkey project management, marketing management, business coordination management, as well as logistics & service engineering management for the entire region.

### Accreditation:



# BOILER WATER TREATMENT

With rapid increasing demands of energy, steam grows in importance as a primary energy-transfer medium for power generation, industrial processing and space heating. Even though steam is one of the older methods of energy transfer, it has proven to be one of the most practical and economical methods.

Typical boiler system problem involve corrosion of feedwater system; scale, deposition and corrosion in boiler; corrosion of condensate system and problem due to impurities in produced steam (carryover). Solving boiler, process steam and condensate system problems requires a total systems approach to water treatment. **ScaleGard®** has the knowledge and the expertise to understand the most complex systems and to apply the appropriate treatment program.

**SCALRID range of products** – range from conventional inorganic scale inhibitors to polymeric scale inhibitors; powder catalysed sulphite oxygen scavenger to liquid catalysed DEHA; alkalinity builders, corrosion inhibitors, condensate line conditioner to the multi-functional all in one product.

Providing quality feedwater treatment programs for low to high-pressure water tube boilers, fire tube boilers and steam generators. Our treatment programs are designed to maintain the waterside integrity of boilers and related heat exchange equipment including economizers, air preheaters, as well as steam while extending the useful life of boiler tubes.

**NSF Registered Products under category code G6 (where steam produced may contact edible products)**



# BOILER WATER TREATMENT



Application	Product	Product Description
Boiler Water Alkalinity Booster / Corrosion Inhibitor	Scalrid 33A	Concentrated alkalinity builder formulated primarily for use in all types of medium to high pressure boiler.
	Scalrid 3310A	Special blend of alkalinity builders designed primarily for use in steam boiler.
	Scalrid 3320A	Liquid blend of pure alkali and stabilizer designed for use in steam boiler.
Boiler Water Scale Control	Scalrid 44A	Special blend of sequestrant, chelant and inorganic phosphate.
Boiler Water Sludge Control & On-Line Descaling	Scalrid 5315A	Liquid blend of polymer and phosphonate developed as sludge conditioner for use in steam boiler system.
	Scalrid 5325A	Special blend of dispersant.
Boiler Water Oxygen Scavenger	Scalrid 66A	Catalyst sodium sulphite.
	Scalrid 6625A	Liquid oxygen scavenger
Boiler Water Steam & Condensate Line Corrosion Control	Scalrid 88A	Special blend of amines.



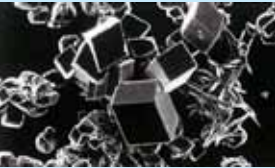

The NSF Nonfood Compounds Registration Program is a continuation of the USDA product approval and listing program, which is based on meeting regulatory requirements including the FDA 21 CFR for appropriate use, ingredients review and labeling review.

Registration letters for the above NSF Registered products can be downloaded from the following link under the G6 Food Category - <http://info.nsf.org/USDA/psnclistings.asp>



Nonfood Compounds  
Program Listed



# BOILER WATER TREATMENT

Application	Product	Product Description
<b>Boiler Water Scale Control</b> <ul style="list-style-type: none"> <li>Improved heat transfer</li> </ul>  	<b>FDA / USDA conforming product</b>	
	Scalrid 121K	Multi-functional product which is very cost effective to control corrosion, scale and disperse iron & other foulants.
	Scalrid 44	“Phosphate Cycle” treatment program. Special blend of powder complex phosphates and polymeric scale dispersants for feed water hardness below 10 ppm.
	Scalrid 44L	“Phosphate Cycle” treatment program. Special blend of liquid complex phosphates and polymeric scale dispersants for feed water hardness below 10 ppm.
	Scalrid 34HP	Sequestrant inorganic phosphate program to soften water within a boiler to prevent scale formation by precipitating calcium hardness as desired sludge for boiler operating pressure more than 900 psig.
	Scalrid 48	“Polymer Cycle” treatment for scale control in critical boiler application.
<b>Boiler Water Alkalinity Booster / Corrosion Inhibitor</b> <ul style="list-style-type: none"> <li>Improve steam quality and steam performance</li> </ul> <b>Boiler Water Sludge Control &amp; On-Line Descaling</b> <ul style="list-style-type: none"> <li>Permit maximum boiler operation cycle</li> </ul>  	<b>FDA conforming product</b>	
	Scalrid 33	Increase boiler water pH & alkalinity level.
	<b>FDA conforming product</b>	
	Scalrid 45A	Special formulated polymeric dispersant for sludge conditioning.
	Scalrid 5315	Special formulated polymeric dispersant for high hardness & suspended solids feed water.
	<b>Non-Food Grade</b>	
	Scalrid 45	Special developed for descaling of steam boiler without having to shut down the boiler.
	Scalrid 49	Powerful liquid formulation of polymeric sludge conditioner.
	Scalrid 4303	Special developed for silica & magnesium silicate dispersing.
	Scalrid 4303HP	Special developed for silica & magnesium silicate dispersing for boiler operation pressure more than 90 psig.



# BOILER WATER TREATMENT

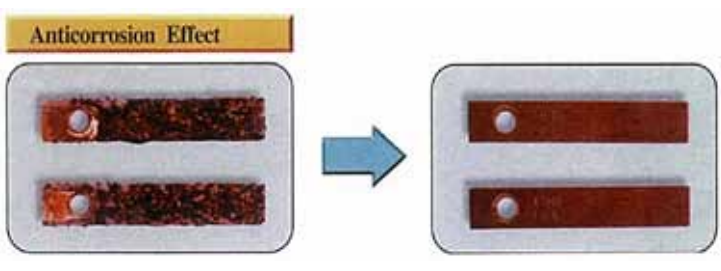
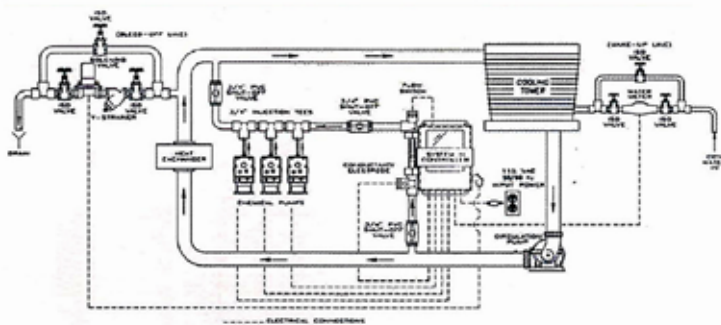


Application	Product	Product Description
<b>Boiler Water Oxygen Scavenger</b> <ul style="list-style-type: none"> <li>Prevent pitting corrosion and excellent metal passivation properties</li> </ul>  	<b>FDA conforming product</b>	
	Scalrid 66	Dry powder oxygen scavenger for boiler pitting corrosion control.
	Scalrid 6615	Liquid oxygen scavenger for boiler pitting corrosion control.
	Scalrid 66HP	Catalysed and chemically blend of erythorbate and sulphite for boiler pressure up to 600 psig.
	Scalrid 7725HP	Catalysed solution of diethylhydroxylamine (DEHA). It is used to remove dissolved oxygen from boiler water which add no solids or any toxic/corrosive by products to the system for boiler operating pressure more than 900 psig.
	Non-Food Grade	
	Scalrid 77	Liquid catalysed oxygen scavenger which does not contribute to boiler TDS.
<b>Boiler Water Steam &amp; Condensate Line Corrosion Control</b>	Non-Food Grade	
	Scalrid 88	Dual neutralizing and filming amide steam condensate line corrosion inhibitor.
	Scalrid 88HP	Special blend of dual neutralizing amine condensate line corrosion inhibitors for boiler operating pressure more than 900 psig.
<b>Boiler Water System Cleaning &amp; Descaling Chemicals</b> <ul style="list-style-type: none"> <li>To help increase efficiency and extend boiler life, reducing your operation costs and saving your equipment</li> </ul>	Boil-Out	Powerful product to clean new boiler and old boiler after long layoff.

# COOLING WATER TREATMENT



Impurities in industrial cooling water due to lack of treatment, governmental regulation of wastewater discharge and escalating emphasis on conservation of both water and energy causes a lot of problems. Many plants now carry higher cycles of concentration in their cooling tower systems, in turn, will lead to a variety of costly unscheduled shutdowns, excessive downtime and maintenance, energy waste because of lower heat transfer efficiency, lower equipment life and lower efficiency.

**KOOLGARD & BIOGARD range of products** – recognised as a leader in developing environmentally friendly, cost-effective water treatment programs for industrial and commercial evaporative cooling systems. Our cooling water treatment programs maximize heat exchange while extending the useful life of condensers, plate and frame heat exchangers, cooling towers, supply and return piping, and process equipment. Cost effective control is available through the application of second generation, organic and phosphate based formulations or the highest technology all-organic inhibitors. We offer a wide range of effective EPA registered biocides for safe and reliable microbiological control.




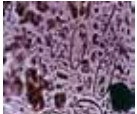


# COOLING WATER TREATMENT



Application	Product	Product Description
<b>Cooling Water Scale / Corrosion Control</b> <ul style="list-style-type: none"> <li>Superior corrosion control without use of environmentally 'bad' chemistries upon chromate and zinc</li> </ul> 	Koolgard 11	RSI index < 6.0. Effective Scale Inhibitor. For very high level of cooling water alkalinity & hardness without use of pH control by acidic addition.
	Koolgard 17	RSI index > 8.0. Effective Corrosion Inhibitor.
<b>Cooling Water Dispersant / Fouling Control</b> 	Koolgard 15	Dispersant to prevent the deposition of silt & other suspended materials.
	Koolgard 18	Formulation designed to emulsify & disperse biomasses, oil & grease and mud/silt to enhance the performance of biocide program and maintain system cleanliness.





# COOLING WATER TREATMENT

Application	Product	Product Description
<p><b>Cooling Tower Microbiological Control</b></p>   <p>Algae</p>  <p>Bacteria</p>  <p>Fungi</p>	<b>Oxidizing Biocide</b>	
	Biogard 21	Liquid oxidizing hypochlorite to control the algae, fungi & bacteria growth.
	Biogard 28	Powerful granular oxidizing biocide to control the algae, fungi & bacteria growth.
	Biogard 32	Powerful blend tablet oxidizing biocide to control the algae, fungi & bacteria growth.
	<b>Non-Oxidizing Biocide</b>	
	Biogard 22	Aqueous microbiocide effective in controlling the growth of slime forming bacteria & sulphate reducing bacteria with EPA registered.
	Biogard 25	Broad spectrum microbiocide with EPA registered.
	Biogard 30	Blend of nitrogenous compound & organic dispersing polymer with broad spectrum microbiocide.
<p><b>System Cleaning</b></p> <ul style="list-style-type: none"> <li>• To help increase system efficiency and reduce corrosion rates</li> <li>• Foam control</li> </ul>	Detartrant	High performance alkaline detergent for heavy duty degreasing & cleaning.
	Koolgard 9350	The choice of on-line & new installation clean up jobs.



## Chiller Conditioning Treatment

Chiller conditioning treatment equipment and treatment chemicals are used to maintain clean chiller system piping components and to optimize refrigeration. A selection of effective microbiocides are used to eliminate bacteria which are responsible for microbiologically induced corrosion (MIC) of the metal surfaces exposed to the water. Several conditioning treatment products are used to disperse the scale forming minerals as well as to inhibit corrosion in metal components.

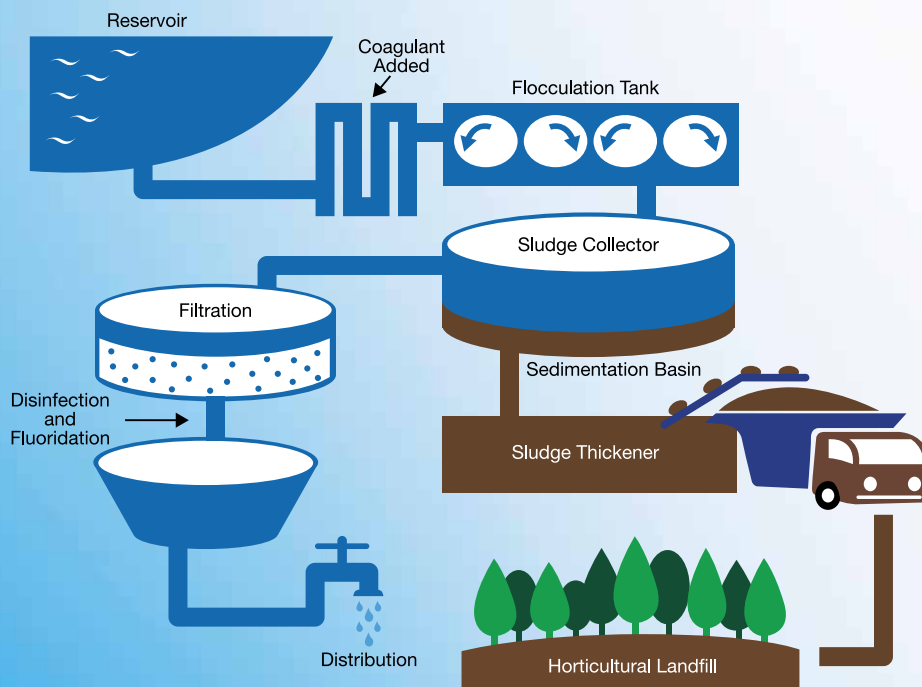
Application	Product	Product Description
<b>Chill Water Corrosion Control</b>  <i>Heavy corrosion on heat exchanger</i> <b>Deposit tube</b>	Koolgard 16	Closed loop corrosion inhibitor & antifoulant.
	Koolgard 1613	Replacement for nitrate based formulation for close loop treatment.
	Koolgard 1650	Copper metal corrosion inhibitor.
<b>Chill Water Biofouling Control</b>  <i>Choked heat exchanger</i>	Koolgard 18	Formulation designed to emulsify & disperse biomasses, oil & grease and mud/silt to enhance the performance of biocide program and maintain system cleanliness.
<b>Chill Water Microbiological Control</b>   <i>Bacteria Dip Test</i>	Biogard 22	Aqueous microbiocide effective in controlling the growth of slime forming bacteria & sulphate reducing bacteria with EPA registered.
	Biogard 30	Blend of nitrogenous compound & organic dispersing polymer with broad spectrum microbiocide.

# WATER & WASTEWATER TREATMENT

Regardless of the municipality or type of industry, incoming water must be monitored and treated to meet certain requirements. Chemical treatment, in conjunction with clarifiers, hot or cold process softeners, filters, ion-exchange or reverse osmosis processes, is often necessary for the trouble-free operation of a system or plant.

Our utility and process water treatment programs are designed to conserve water while meeting plant effluent requirements or providing recycle opportunities. We offer a wide range of coagulants, polymers and flocculants, reverse osmosis chemicals and other waste treatment specialties to meet the growing needs of industrial water users.

To provide a complete range of services to our customers, our R&D Division has formulated a full range of specialty chemicals. These chemicals are specifically formulated and manufactured in-house for various type of water and wastewater treatment application.



## WATER & WASTEWATER TREATMENT






Product	Product Description
Polimero-61S	An inorganic coagulant suitable for treatment of water and wastewater.
Polimero-10L, 18L	An effective liquid mixture of inorganic coagulants suitable for treatment of water and wastewater.
Envifloc-40L, 45L	An Aluminium based liquid coagulant suitable for treatment of water and industrial wastewater.
Polimero-20S	A high molecular weight, high anionic charge polyacrylamide in which works effectively as flocculation aid in numerous solid-liquid clarification processes.
Envifloc-70KS Envifloc-70GS	A high molecular weight cationic polyacrylamide supplied in granular form. The product is used as flocculants or dewatering aids in wastewater treatment and disposal.
Envifloc-28L	A high molecular weight cationic polyacrylamide supplied in emulsion form. The product is used as dewatering aids in wastewater treatment and disposal.
Envibug	A blend of selected microorganisms with a specification of $5.2 \times 10^9$ (billion) microorganism per gm. Because of the diversity of the microorganism systems incorporated into this product it is excellent for food processing uses for which requires a particular high impact on fats, oils and grease. The safe, naturally occurring bacteria are present in high numbers to handle difficult organic problems and are very economical to use.
Himoloc	<ul style="list-style-type: none"> <li>Himoloc technology is the Easy &amp; Green technology, in fact the easiest and greenest existing technology, to manufacture and use flocculants for many applications.</li> <li>These products are solvent and surfactants free. They have a very low environmental impact.</li> <li>Another major characteristics of the Himoloc products is their easiness to handle, feed and apply. Easier than emulsion and powder products.</li> <li>Cationic, anionic and amphoteric polyacrylamides. Soluble polymer in an aqueous matrix.</li> </ul>
Decolouring Agent	A liquid polymer of low molecular weight, which works effectively as primary coagulant and colour remover in the classification of effluent.
Acids / Alkaline	<ul style="list-style-type: none"> <li>Caustic Soda</li> <li>Sulphuric Acid</li> <li>Hydrochloric Acid</li> <li>Nitric Acid</li> </ul>
Biovite	Balanced blend of nutrients for biological treatment
Trading Items	<ul style="list-style-type: none"> <li>Ferric Chloride, Solution</li> <li>Calcium Chloride, Powder</li> <li>Calcium Chloride, Solution</li> <li>Hydrated Lime</li> <li>TSP, Trisodium Phosphate</li> <li>Urea</li> </ul>
Osmogard 1350	Highly effective scale inhibitor developed for reverse osmosis (RO) systems

## Activated Carbon

Our activated carbons are produced from carefully selected raw materials (coal, coconut shell, wood, peat and lignite), processed at low temperature to remove natural volatiles and activated by passing through high temperatures. The resulting carbon is a powerful absorbent with phenomenal internal surface area.

We have a wide range of carbon, specially processed to meet your everyday need and solving your industry problems!

Application		Product Description
<b>Water &amp; Wastewater Treatment</b>		<p>This range of activated carbons are specially developed to remove dissolves organic contaminants from water and to revitalise its natural purity.</p> <p>Applications include municipal water treatment in beverage production, brewing semiconductor manufacture, effluent water treatment in the remediation of contaminated ground water and landfill leachate treatment.</p>
<b>Environmental Treatment</b>		<p>Environment treatment activated carbons are developed to remove volatile organic compounds from air and gas.</p> <p>The activated carbons are typically used for recovery solvent, air treatment in airports, cigarette filter tips, range hoods, gas purification in petrochemical industry and natural gas production.</p>
<b>Colour Treatment</b>		<p>Activated carbons are commonly used to decolourize food products, chemicals and pharmaceutical.</p> <p>Applications in the decolourization of food products include edible oil processing, processing of glucose and dextrose syrups and sugar refining. Organic and inorganic acids are often decolourized.</p> <p>In pharmaceutical industry, high purity carbons are required for decolourization.</p>







## Resin

An ion-exchange resin is a resin or polymer that acts as a medium for ion exchange. It is an insoluble matrix normally in the form of small microbeads, usually white or yellowish, fabricated from an organic polymer substrate.

The beads are typically porous, providing a large surface area on and inside them. The trapping of ions occurs along with the accompanying release of other ions, and thus the process is called ion exchange.

There are multiple types of ion-exchange resin. Ion-exchange resins are widely used in different separation, purification, and decontamination processes. The most common examples are water softening, water purification and wastewater polishing.



## Water Softening Salt

Water softening salt helps to remove minerals from hard water, including iron, calcium, magnesium, and even barium.

- High Purity Salt (99%)
- Quality of Choice
- Easily Dissolved
- Zero Hardness





# AFM<sup>®</sup>

## Activated filter media made from green glass

### What is AFM<sup>®</sup>?

AFM<sup>®</sup> stands for Activated Filter Material, a revolutionary filter media made from green glass developed and manufactured by Dryden Aqua.

AFM<sup>®</sup> exceeds the performance of quartz and glass sand by filtering about 30% more organics.

AFM<sup>®</sup> is bio-resistant and self-sterilising which means no biofilm is formed in the filter bed. This important feature makes the pool system healthier, ecological and more economical.

AFM<sup>®</sup> has successfully been used in over 100'000 public and private swimming pools worldwide.

AFM<sup>®</sup> is manufactured under ISO 9001-2008 standards and is a filter material certified under European standards for swimming pools and drinking water, NSF50 and NSF61.

AFM<sup>®</sup> is a registered trademark and is exclusively made by Dryden Aqua.





## Your advantages at a glance

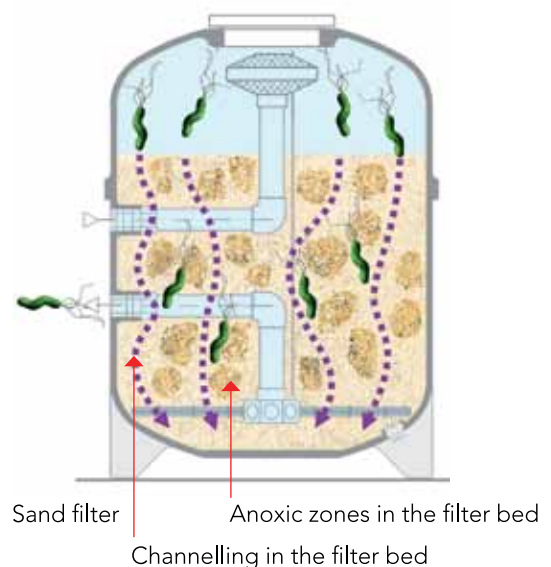
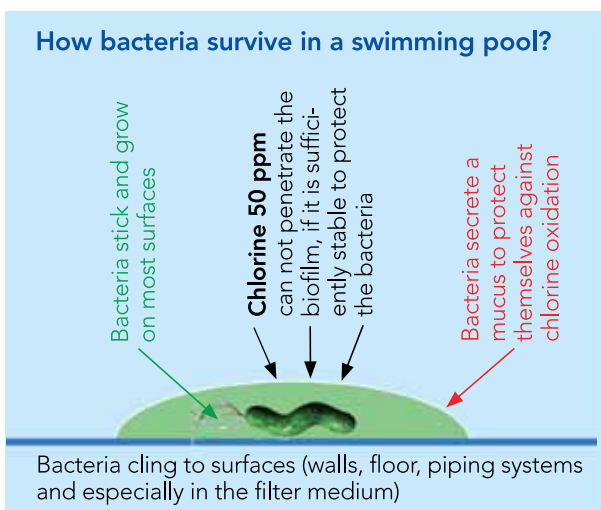
**Crystal clear water** – AFM® filters much finer than quartz or glass sand.

**Lower chlorine consumption** – Everything that is filtered out doesn't have to be oxidised.

**No smell of chlorine** – No heterotrophic bacteria means no trichloramine and thus no disturbing and harmful chlorine smell.

**No Legionella** – Legionella and many other pathogens grow in the protection of the biofilm. No biofilm means no Legionella.

**Ecological and economical** – AFM® and the integrated Dryden Aqua system save resources such as water, chlorine and energy.





## Technical data of AFM®

### What is the recommended layering of AFM®?

If you are currently using sand or glass sand simply replace this in your filter with AFM®. While sand has a specific weight of 1'450kg/m<sup>3</sup>, the specific weight of AFM® is 1'250kg/m<sup>3</sup>, and therefore it needs about 20% less AFM® according to weight.

For example: your filter has 150kg of sand, only 125kg of AFM® are needed.

AFM® is supplied in four different grain sizes and should be used as follows:

**AFM® grain 0** = 0.25 to 0.5 mm grain size

**AFM® grain 1** = 0.4 to 1.0 mm grain size

**AFM® grain 2** = 1.0 to 2.0 mm grain size

**AFM® grain 3** = 2.0 to 4.0 mm grain size



Grain 2 can be used for filters less than 1000 mm in diameter instead of grain 3. Also for all DIN filters with nozzle plate, grain 3 can be substituted with grain 2.

### Operating criteria:

Recommended filtration speed	: 15 – 30 m/h
Air purge	: 60 – 100 m/h
Flush	: 40 – 50 m/h
Desired filter bed expansion	: at least 15%

# SWIMMING POOL WATER TREATMENT

## APF - ALL POLY FLOC

### Highly efficient coagulant and flocculant

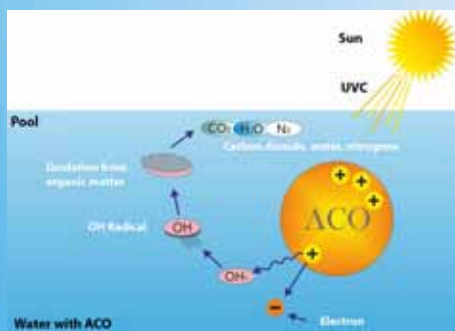
APF is a unique multi-spectrum coagulant and flocculant. Coagulation is the process of dragging dissolved chemicals out of solution. These are responsible for about 80% of the chlorine demand. APF is composed of 0,5 l NoPhos which prevents effectively algae and bacteria growth. APF combined with AFM and a ZPM will achieve the best possible filtration performance.

- **Crystal clear water: Nominal filtration to 0.1 microns**
- **Up to 80% less consumption of disinfection agent**
- **Basis for chlorine free system**

## ACO - ACTIVE CATALYTIC OXIDATION

ACO is a highly innovative, ecofriendly product that disinfects water by amplifying the natural disinfection power of the sun. ACO also protects chlorine from sunlight and UV. ACO is especially effective in outdoor pools.

- **Oxidation catalyst:** ACO is a catalyst that amplifies the natural disinfection power of the sun. ACO can be combined with any conventional oxidizing agent (chlorine, bromine, peroxide). Sun in combination with ACO will make your water sparkling clear.
- **Chlorine stabilizer:** ACO protects chlorine and bromine from photo oxidation. The half-time of chlorine increases by a factor of 4 - 5 and the chlorine demand will be reduced by about 30%. By using ACO as a stabilizer the effectiveness of chlorine will not be decreased like with cyanuric acid. With ACO the opposite happens: oxidation improves because free radicals are formed in this process.
- **Peroxide booster:** ACO supports the disinfection power of hydrogen peroxide and thereby ensures crystal clear water.



# PRODUCTION & QUALITY ASSURANCE

- Envilab Sdn Bhd has been certified with ISO 9001 Quality Management System.
- Production focus on manufacturing to meet customer's requirements and specific needs.
- Our laboratory is well equipped with analysis equipment and capable to provide accurate results.
- This implies all activities and condition are well controlled, reported and filed for easy retrieval and traceability.



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