

Marine chemical products

Chemicals and test kits designed specifically for use in marine environments.



Marine chemical products and test kits

Star International supplies a comprehensive selection of marine chemicals, test kits and product accessories that have been designed specifically to meet the stringent requirements of marine operators.

With over 200 chemical products on offer, we can supply any chemical that is typically found on-board ship, with categories including:

- Biological products
- Cleaning and maintenance
- Potable water treatment
- Engine and boiler water treatment
- Fuel treatment
- Special products

As a specialist supplier to the marine and offshore sector, Star International's operational capabilities are designed to complement the needs of shipping and maritime operators. The business operates from three main depots, strategically located in Birkenhead, Southampton, and Truro, with additional distribution centres located in London and Aberdeen, providing a network of coverage that facilitates fast turnaround capability on orders to all commercial UK ports.

Operating to the highest industry standards

Star International operates to the highest of industry standards and holds both ISO 9001 Quality Management and ISO 45001 Occupational Health and Safety.



Minimising environmental impacts through sustainable manufacturing

All chemical products in the Star range are manufactured specifically for use within the maritime and offshore sectors, at a purpose-built facility in the UK. Each chemical product is formulated to minimise impacts on the marine environment, and where possible is Offshore Chemical Notification Scheme (OCNS) certified.

The manufacturing facility is verified through independent audit. Specific accreditations include: BS EN ISO 9001:2015, BS EN ISO/IEC 27001:2013 and BS EN ISO 45001:2018.

In addition, the manufacturing site has been awarded the Carbon Trust Standard and ISO 50001:2011 Energy Management Standard in recognition of a continued commitment to reduce the carbon footprint resulting from manufacturing operations.

Star International's manufacturing site is Achilles FPAL registered for quality, successful contract delivery and optimised business performance, as an established member of the supply chain for the offshore oil and gas industries.

Star International – Marine and offshore services worldwide

Star International is an established supplier to the maritime sectors, servicing a diverse client base that includes leading cruise and ferry operators, shipping companies, shipyards, commercial ports and military organisations.

Key areas of provision include liferaft service and repair, marine chemicals, fuel treatment, refrigeration, welding, marine safety, firefighting, Rigid Inflatable Boats (RIBs) and ship-wide disinfection solutions.

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Product Descriptions

CLEANING AND MAINTENANCE	
00910009 Available in 25 Ltr., 205 Ltr. and 1,000 Ltr. IBC	STAR COLDWASH CONCENTRATED EMULSIFIABLE SOLVENT DEGREASER Wide application range for cleaning oil and grease from machinery, decks, engines and tanks. Suitable for use on all metals, painted surfaces, vehicles and tanks, glass and enamel. Use as supplied or dilute with 6-8 parts of commercial paraffin. Apply by brush, mop, spray or in an unheated soak tank. Allow 20 minutes penetration time. Agitate stubborn soils and rinse off with water.
00910036 Available in 25 Ltr., 205 Ltr. and 1,000 Ltr. IBC	STAR SEACLEAN Multi Purpose Tank Cleaner for removing deposits after carrying mineral oil based cargoes. It is also suitable for deep tank and double bottom cleaning and general degreasing in engine rooms etc. Dosage: Direct Injection Method - 1-2 ltr per tonne of wash water. Hand Spray Cleaning - Use undiluted to spray on bulkheads, frames and stringers. Leave for sufficient dwell time dependent on degree of contamination and wash off with water. For more detailed information please refer to Technical Data Sheet (TDS).
00910010 Available in 25 Ltr., 205 Ltr. and 1,000 Ltr. IBC	STAR QUICKBREAK For tank and general engine room cleaning. Allows slop water to break into separate oil and water phases. May be applied by brush, spray, immersion or soaking. Depending on degree of soiling use neat or diluted up to 30% with fresh water. Allow at least 30 to 60 mins contact time. If possible rinse off with hot water at high pressure. Emulsion residue must be allowed to separate in a holding tank for at least 3 hours before passing through an oily water separator.
00910029 Available in 25 Ltr., 205 Ltr. and 1,000 Ltr. IBC	STAR GALLEY CLEAN HEAVY DUTY ODOURLESS BACTERIOCIDAL CLEANER/DEGREASER Ideal for use in catering areas but strong enough for heavy soiled areas and can be used for removing oil & grease and carbon deposits from hard surfaces. For food processing applications it is good practice and advised in food processing law to rinse surfaces with clean water after a 10 minute contact time. Use @ 1-3%. Apply by spray, mop or diluted in detergent tanks. BIOCIDAL AGENT PASSES TEST EN1040 @ 1:100 dilution (Light). PASSES TEST EN1276 @1:20 dilution (Heavy).

CLEANING AND MAINTENANCE

00910037

Available in
25 Ltr., 205 Ltr.
and 1,000 Ltr.
IBC

STAR ALKACLEAN

CONC. ALKALINE CLEANER/DEGREASER/DECARBONIZER

Rapidly penetrates & emulsifies hardened, oxidised animal & vegetable fats. Low foaming - suitable for immersion paint removal from ferrous metals & machinery, degreasing, heavy duty oven cleaning and boiler fire side cleaning.

Usage: 10% solution in water.

Apply by spray, brush or immersion tank. Allow 10-20 minutes contact time & for heavy deposits, repeat if necessary. Rinse after use with clean water. Avoid contact with aluminium, magnesium, & zinc silicate coatings.

00910057

Available in
25 Ltr., 205 Ltr.
and 1,000 Ltr.
IBC

STAR ALKACLEAN SAFETY LIQUID

Non caustic water based alkaline cleaner.

Tank cleaner for removal of natural oils and fats.

Method of use largely depends on nature of natural oil.

As a general rule use at 5% in water and heat to 60-80°C.

Use via handspray, direct injection and/or recirculation method. For further details and dosing please see data sheet.

00910023

Available in
25 Ltr., 205 Ltr.
and 1,000 Ltr.
IBC

STAR MULTI PURPOSE DEGREASER

Concentrated grease, oil and carbon remover.

For walls, decks etc. use @ a dilution of up to 5%.

Apply by mop, spray, sponge or cloth. With steam cleaners, power washing machines & floor scrubbers, use @ 2%. For light duty applications use @ 1-2%. In all cases rinse off with clean water.

00910012

Available in
25 Ltr., 205 Ltr.
and 1,000 Ltr.
IBC

STAR BOW & STERN

GENERAL PURPOSE CLEANER/DEGREASER

Removes grease, grime, and traffic film from many hard surfaces, machinery, engine parts, vehicles and decks.

Generally use @ between 1-2% in water.

Apply by spray, brush or sponge.

00910045

Available in
25 Ltr., 205 Ltr.
and 1,000 Ltr.
IBC

STAR ENVIROPLUS

Emulsifiable and Biodegradeable. Removes greases, fats, oil & grime, inks and general dirt leaving a pleasant odour.

Safe on most surfaces including metal, ceramics, wood. Avoid prolonged contact with rubber and/or paint finishes.

Maximum dilution is 1 in 100. However for most applications dilute with 20 parts of water.

Apply by brush, cloth, spray or use in soak tanks. Agitate if necessary. Rinse with water.

00910039

Available in
25 Ltr., 205 Ltr.
and 1,000 Ltr.
IBC

STAR SEDIMENT REMOVER

Highly effective liquid compound for removal of sediments, silt and mud from ballast/bilge tanks, cooling water systems and pipelines.

Dosage: 1ltr per 10 tonnes ballast/cooling water. For removal of existing accumulations increase dosage by 2-3 times.

Inject into suction line of the ballast or cooling water pump to ensure thorough mixing.

If circulating the water through the tank, the suspended mud and silt will be pumped out when de-ballasting.

00910020

Available in
25 Ltr., 205 Ltr.
and 1,000 Ltr.
IBC

STAR HIGH PRESSURE WASH

Concentrated Grease, Oil and Carbon cleaner for Decks and walls etc.

Use @ a dilution of up to 5%. Apply by mop, spray, sponge or cloth. With steam cleaners, power washing machines & floor scrubbers, use @ 2%.

For light duty applications use @ 1-2%. In all cases rinse off with clean water.

CLEANING AND MAINTENANCE

00910026

Available in
25 Ltr., 205 Ltr.
and 1,000 Ltr.
IBC

STAR AQUASTRONG

Heavy duty water based alkaline cleaner/degreaser, suitable for vegetable/animal/fish oils, grease, wax, oil, sludge, soot and carbon deposits.

For tank cleaning - prewash with hot water at 50-60°C

For drying/semi-drying oils prewash with cold water.

For direct injection/recirculation methods use at approx. 2-5% depending on degree of soiling.

Avoid contact with aluminium, magnesium and zinc silicate coatings.

00910028

Available in
25 Ltr., 205 Ltr.
and 1,000 Ltr.
IBC

STAR FOAM AGENT

Foam additive for water based cleaning solutions.

Adds additional foam to increase product dwell time on vertical surfaces to increase cleaning efficiency.

Dose 50ml per 10 ltr washing solution. Mix and apply with foam equipment.

00910022

Available in
5 Ltr.

STAR HEAVY DUTY HAND CLEANER

A yellow semi-gel skin cleanser that rapidly and effectively removes oil, grease, household paints, general dirt and grime without exposing the user to harsh petroleum based products. Based on natural citrus extracts and organic soaps, which clean well and improve user acceptability.

Hand cleaning: Use a 5 gram application onto dry hands, work in well and then rinse with clean water and towel dry.

00910019

Available in
25 Ltr., 205 Ltr.
and 1,000 Ltr.
IBC

STAR SEPARATOR DISCLEAN

Designed to remove carbon and varnish deposits from lube and fuel oil separator discs.

Discs should be immersed in a diluted solution depending on the quantity of the deposits. 1 part to 4-8 parts water as a guide.

Use at ambient temperature or for faster cleaning, elevate temperatures to 50-70°C.

Remove stainless steel discs from the support column and only place these in the solution.

After cleaning rinse with water.

00910024

Available in
25 Ltr., 205 Ltr.
and 1,000 Ltr.
IBC

STAR ELECTRO SOLVE

General purpose cleaner and degreaser for all electrical parts.

To remove dirt and grease from equipment: Use undiluted and apply by brush, spray, swab or immersion. Allow to evaporate or use compressed air at low pressure and high volume.

00910038

Available in
25 Ltr., 205 Ltr.
and 1,000 Ltr.
IBC

STAR OSD

Oil Spill Dispersant.

Spray undiluted on oil slick or oil deposit to form stable emulsion which will dissipate naturally.

Spray at low pressure. Area being treated may require agitation to aid emulsification.

00910014

Available in
25 Ltr., 205 Ltr.
and 1,000 Ltr.
IBC

STAR CARBON REMOVER

Carbonised oil and paint remover suitable for use on all metals and contains corrosion inhibitors.

Used cold in soak tanks and is particularly suited to many reconditioning & maintenance cleaning operations, removing carbon, fuel residues, paint and resin from various engine, machine, compressor & burner components. May also be circulated in enclosed systems.

00910013

Available in
25 Ltr., 205 Ltr.
and 1,000 Ltr.
IBC

STAR AIR COOLER CLEANER

For cleaning of air coolers when in service or dismantled.

Approx 33% solution should be used. Dismantled air cooler, air side and exhaust side turbochargers, may be cleaned by soaking, brushing or hand spraying. Allow sufficient dwell time.

For detailed instructions on in-situ cleaning please refer to data sheet and equipment manufacturers instructions.

CLEANING AND MAINTENANCE

00910015

Available in
25 Ltr., 205 Ltr.
and 1,000 Ltr.
IBC

STAR POWDER ACID LIQUID

Inhibited Acid, Rust, Scale Remover.

Descaling boilers etc: Use at a 10% dilution in water for system.

Removable components can be soaked in solutions of 1 part POWER ACID LIQUID to 2 parts water.

Steam cleaner descaling: Use a 10% solution and circulate around the system according to

manufacturers instructions. May also be used neat. Rinse surfaces clean after use.

00910031

Available in
25 kg drums

STAR POWDER ACID

Powder descaler for ferrous and non ferrous metals.

Limit contact time and temperature for galvanized steel.

As a practical guide use 1kg powder to 9 ltr water (gives approximate solution of 10%) for heavy

applications and 1-5% for light applications. Preferably heat solution to approx 82°C for best results.

Freshly prepared solution will be red/violet in colour and change to yellow when its activity is depleted.

00910017

Available in
25 Ltr., 205 Ltr.
and 1,000 Ltr.
IBC

STAR RUSTOFF HD

Rust and scale remover for boilers, sanitary ware, aluminium & stainless steel and glass.

For rust & scale removal - use at 5-25% solution in water.

For cleaning, brightening & descaling - use at 10% solution in water.

Always rinse with a 2% solution in water if a passivation film is required against re-rusting/scale.

00910030

Available in
25 kg drums

STAR TEAK BRITE

Acid cleaner for removal of rust stains on paint, wood and fabrics.

For the removal of lacquers, varnishes, old paint or hardened oil on areas which have been scraped or brush cleaned to the bare surface.

Apply a 5% solution of Star Teakbrite to the area to be bleached. Allow to stand for 10-15 minutes.

Rinse with water and repeat application for further bleaching.

00910004

Available in
25 Ltr., 205 Ltr.
and 1,000 Ltr.
IBC

STAR RUST CONVERTER

STAR RUST CONVERTER is a complex mixture of a vinal acrylic copolymer and tannic

acid for the treatment of corroded steel and iron surfaces. Surfaces should be wire brushed to

remove loose rust and it is preferable to remove soluble salts by washing with water as they inhibit the conversion process. Surfaces should also be oil and grease free.

STAR RUST CONVERTER has been designed for application by spray and brush.

By airless spray a dry film thickness of up to 60 microns can be achieved without sagging.

The addition of further water may be necessary for air assisted spraying. By brush application, a dry film thickness of 40 microns per coat is considered optimum.

STAR MARINER FUEL TREATMENTS

Star International now stock a range of competitively priced fuel additives which are specially formulated for the application and treatment of both Marine Gas Oil (MGO's) and Heavy Fuel Oils (HFO's).

This can be backed up with a full range **STAR FUEL OIL TEST KITS**

The STAR MARINER range addresses a number of fuel related issues which can cause operators concern from time to time.

00920003

Available in
5 Ltr., 20 Ltr.
and 205 Ltr.

STAR MARINER NEPTUNE is a multi-functional Marine Gas Oil fuel treatment with excellent "lubricity" characteristics. It is designed to effectively reduce wear and damage to fuel pumps and injectors, which is caused by burning "dry", low sulphur content (0.1%) Diesel fuels. MARINER NEPTUNE also acts as a highly efficient, non-abrasive injector cleaner, assuring the operator of optimum fuel atomisation and burn efficiency.

Typical dosage treat rate: 1 litre of NEPTUNE to 4,000 litres (4 tonnes) of fuel.

STAR MARINER FUEL TREATMENTS

00920037 Available in 25 Ltr. and 205 Ltr.	<p>STAR MARINER OCEANIC is a fuel treatment formulated for application with residual fuels (HFO's). At a dose rate of 1 litre OCEANIC to 10,000 litres (10 tonnes) of HFO, this additive will break down sludge formation into a useable fuel, bringing a more efficient fuel "burn". The reduction of sludge (by up to 70%) creates cleaner tanks and separators, and, as a result of the fuel being used more efficiently, will reduce consumption by 1% - 3%.</p>
00920039 Available in 5 Ltr., 20 Ltr. and 205 Ltr.	<p>STAR MARINER ELIMINATOR formulated for application to Marine Gas Oils . On application, ELIMINATOR will eradicate/prevent the manifestation of microbial growth (Diesel bug) in fuel storage tanks. Typical dosage rates: Eradication or 'kill' Rate: 1 litre ELIMINATOR to 4,000 litres (4 tonnes) of fuel. Prevention: 1 litre ELIMINATOR to 10,000 litres (10 tonnes) of fuel. Depending on the severity of contamination, MARINER ELIMINATOR will eradicate microbial contamination within 24-48 hours. Attention should be paid to MSDS on the careful handling of this material. Please note that STAR fuel test kits are available to quickly identify microbial and water content present in the fuel.</p>
00920036 Available in 5 Ltr., 20 Ltr. and 205 Ltr.	<p>STAR MARINER MGO ANTIGEL is formulated to maintain Diesel fuel cold flow properties in sub-zero temperatures. MGO ANTIGEL provides the many benefits of lowering Winter grade Diesel fuel's CFPP (Cold Filter Plug Points) to temperatures of (down to) -24°C degrees centigrade, allowing vessels to operate in severe winter conditions. By applying a stronger dose, MGO ANTIGEL will protect fuel at temperatures down to -30° degrees centigrade by applying a stronger dosage, as below: Typical dosage rates: 1 litre ANTIGEL to treat 1,000 litres (1 tonne) of fuel Stronger dosage: 1 litre ANTIGEL to treat 500 litres (half tonne) of fuel.</p>
00920047 Available in 5 Ltr., 20 Ltr. and 205 Ltr.	<p>STAR MARINER WATER DISPERSANT in the event of a situation where an operator discovers light contamination of water in MGO whilst in storage, or bunkered on a vessel, application of MARINE WATER DISPERSANT is formulated to clear any slight haziness which effects the fuel's clarity and brightness. The recommended dose rate is subject to the level of contamination. However, this product will not have any effect on fuel that is cloudy, or where heavier water contamination may have occurred. If possible, please allow our team to view a sample of the contaminated fuel first, to enable us to give the correct advice.</p>
00920006 Available in 25 kg packs	<p>STAR SOOT POWDER Removes unburned carbon slag deposits from: boiler furnaces, superheaters etc. increasing their efficiency. No need to shutdown boiler or plant before use. Add to hottest part of boiler furnace, blow through furnace door if equipped with dosing injectors, pour powder into the injectors and direct nozzle towards hottest area of flame. DOSE: For coal fired boilers, dose at 3kg per 30 tonnes of coal consumed per boiler every 24 hours. For oil fired boilers see dosage sheet. Approx 3kg per 20 tonnes.</p>
00920021 25 sticks per box	<p>STAR SOOT STICKS If deposits are allowed to form on heat exchangers, the loss of efficiency can be directly related to extra fuel consumption. A 1mm deposit can reduce efficiency by up to 50%. The normal ignition temperature of soot is around 600°C. This means that it is burned only in the hottest parts of the boiler or diesel exhaust systems, Due to the catalytic action soot Remover, the ignition temperature of the soot/deposit is reduced to less than 280°C. The carbon deposits are thus ignited, leaving an easily removed ash. Directions for Use and Dose Rates Soot Sticks/ Remover should be introduced to the boiler through suitable port, preferably with a blower, ensuring that the powder is spread through the flame towards the back of the combustion chamber.</p>

STAR MARINER FUEL TREATMENTS

For a more detailed description and information on Star Fuel treatments, please see our website <http://www.star-international.co.uk/>

For all technical issues/problems/questions, please contact Alan Stewart, our Fuel Oil Manager on 07595 221498 or email: Alan.Stewart@star-international.co.uk

Please have a look at our **introduction video** below, explaining all about the (F.O.T.) Fuel Oil Treatment: <https://player.vimeo.com/video/217781885>

BIOLOGICAL PRODUCTS

00950011 Available 12 per pack	STAR ENZYME BIO TOILET CLEANER Biological active liquid, suitable for use in all marine sanitary and sewage treatment systems, plus toilets, sinks, showers.
00940002 Available in 5 kg packs	STAR ENZYME SEWAGE TREATMENT Biological treatment for sewage plants.
00950016 Available 12 per pack	STAR ENZYME SINK CLEANER Star Enzyme biological sink cleaner is a specialised biological preparation formulation for the treatment of clogged drain lines, grease traps and floor drains. Utilising specialised bacteria to digest organic waste matter, the product is ideal for restoring flow in drains where grease accumulation is a problem. Unpleasant odours are also significantly reduced.
00940018 Available 6 per pack	STAR ENZYME MULTI CLEANER Biological liquid cleaner for use on carpets, drapes, laundry, also effective in sinks, showers, decks, tiles, bathrooms.
00950015 Available in 100 x 50 gram packs	STAR ENZYME TOILET DESCALER For use in toilet bowls, toilet systems, drains and pipes to remove organic materials and acid scale.
00950013 Available 6 per pack	STAR ENZYME ODOUR CONTROL Water based that eliminates odours in garbage, waste collection, rest rooms and galleys.
00950009 Available 6 per pack	STAR ENZYME DRAIN PIPE CLEANER Powder form that removes oils, fat and grease from grease traps, pipe work.
00910041 Available in 25 Ltr., 205 Ltr. and 1,000 Ltr. IBC	STAR DEFOAMER Star Defoamer is for use with vacuum toilet systems where due to the nature of the system unwanted and excessive foam conditions are created. <ul style="list-style-type: none"> On most vacuum systems an antifoam injection-dosing unit is fitted. Where this is the case, then Star Defoamer should be dosed at 0.1% but may need increasing according to the severity of the problem in some cases. The product needs to be dosed directly into the flow of the waste water and not directly onto the foam. The product may also be used manually by dosing directly into the system via the nearest toilet to the main system. Aquamarine is able to offer dosing solutions if your system does not already have a provision for dosing in place. Star Defoamer is compatible with Bio-Vac, Star Enzyme Toilet Cleaner and Star Enzyme Toilet Powder.

What is Endosan?

EndoSan is a solution of Hydrogen Peroxide (H_2O_2) which is stabilised using a proprietary ionic silver based chemistry.

When correctly applied to water, air or any surface, EndoSan will disinfect through an oxidation process and continue to safely provide unrivalled residual performance.

EndoSan is chlorine and alcohol free, with no corrosive effects on usual materials of construction during application. After use it simply degrades into harmless water and oxygen as one of the safest forms of disinfection.



How Endosan works - a closer look



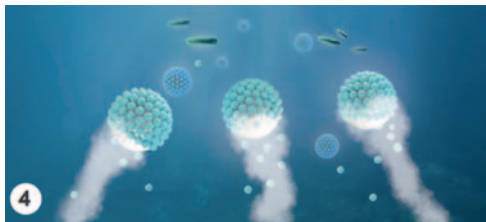
A typical bacterium naturally emits a negative charge. EndoSan is attracted by this charge to the site.



In catalase producing bacterium the presence of EndoSan inhibits the defence mechanism, allowing the powerful free hydroxyl radicals to attack the cell membrane.



These free hydroxyl radicals penetrate the membrane and destroy the bacterium. Once killed the bacterium no longer emits a negative charge.



EndoSan is now attracted to the next bacteria site emitting a negative charge. Silver ions re-stabilise with excess hydrogen peroxide molecules to repeat the process.

Representation for illustrative purposes only

- 00951020 - Star EndoSan3 1 ltr Spray
- 00951019 - Star EndoSan3 1 ltr
- 00951018 - Star EndoSan5 5 ltr
- 00951017 - Star EndoSan20 10 ltr
- 00951001 - Star EndoSan50 20 ltr



- 00951006 - Star EndoSan Peroxide Test Strips (0-100ppm) 50 pack

- 00951007 - Star EndoSan Peroxide Test Strips (0-1000ppm) 50 pack



Dosing Equipment

DOSING SYSTEMS

GUARDIAN PULSE PLUS DOSING SYSTEM (excludes water meter)

00951021

Pulse fed, proportional dosing system with additional inbuilt traffic light chemical indicator system, lance, cable, bund, pump and associated ancillary equipment.

This dosing system is a true 'plug and play' system which doses proportionally to the water used via direct injection. It has the added ability to monitor the EndoSan levels in the drum and to warn on low readings. This is achieved using a traffic light system, cable and lance which is placed inside the EndoSan drum. The beta 4 pump is manufactured to a very high standard and comes with de-gassing head at the rear. The system is all mounted on a bespoke designed bund, stress tested and palletised ready for delivery to site.



Guardian Pulse Plus

GUARDIAN SMART DOSER PLUS SYSTEM (excludes water meter)

00951022

Guardian pulse plus dosing system and Smart Dulcometer (DACA) monitoring and communication system.

The Smart doser plus is a fully automated 'smart monitoring' and dosing system which enables full control of your EndoSan dosing and automated adjustment via H₂O₂ probes. These probes take samples of the water and test for Hydrogen Peroxide strength. Dependant on the dose rate the system is programmed to, the smart doser will auto adjust the pump up or down to the required levels ensuring a level concentration throughout the system.

This system is perfectly suited to recycled water systems.

BMS/PID plug in available



Guardian Smart Plus



GUARDIAN DOSING SYSTEM INSTALLATION ONLY

00951023

Installation, calibration and commissioning by engineer on site

GUARDIAN DOSING SYSTEM INSTALLATION AND SERVICE PACK

00951024

Installation, calibration and commissioning by engineer on site, 1 extra visit to site within 12 months, 2 year extended warranty

WATER METERS

Guardian 1" - 00951025 Contacting head water meter k=10

Suitable for horizontal installation, Litres per pulse: 10, Suitable for flow rate between 208L/hr & 3500L/hr, Max working temp. 50°C

Guardian 1½" - 00951026 Contacting head water meter k=10

Suitable for horizontal installation, Litres per pulse: 10, Suitable for flow rate between 800L/hr & 10,000L/hr, Max working temp. 50°C

Guardian 2" - 00951027 Contacting head water meter k=10

Suitable for horizontal installation, Litres per pulse: 10, Suitable for flow rate between 1,050L/hr & 15,000L/hr, Max working temp. 50°C

Guardian 3" - 00951028 Flanged contacting head water meter k=100

Suitable for horizontal installation, Litres per pulse: 100, Suitable for flow rate between 8,000L/hr & 40,000L/hr, Max working temp. 50°C

DRUM PUMPS

00951029 5L drum pump

00951030 10L drum pump

00951032 20L drum pump

FOGGERS

00951035 IMP Fogger (Industrial Main Powered)

Starter Pack which includes;

IMP Fogger, PPE Starter kit (HypacLens Eyewash 100ml, Nitrile Gloves Box 100, Goggles. Face Mask (Sundstrom + Cartridge)

00951036 IMP Fogger with Hose

Starter Pack which includes;

IMP Fogger with 48" hose, PPE Starter kit (HypacLens Eyewash 100ml, Nitrile Gloves Box 100, Goggles. Face Mask (Sundstrom + Cartridge)



Guardian Water Meter



Drum Pumps



IPM Fogger



IPM Fogger with Hose



WATER TREATMENTS

00950001

Available in
25 Ltr., 205 Ltr.
and 1,000 Ltr.
IBC

STAR ORGANIC INHIBITOR

Liquid cooling water corrosion inhibitor, nitrite/borate based compound with organic corrosion control in recirculating water systems.
Initial dosage for untreated system is 10 ltr per 1000 ltr water to bring treatment up to a suitable min. level of 1000ppm nitrite. Maintain normal levels 1000-2400 ppm.
For detailed dosing refer to Technical Data Sheet.

00950031

Available in
25 kg packs

STAR POWDER INHIBITOR

Powder cooling water corrosion inhibitor, nitrite/borate based compound with organic corrosion control in recirculating water systems.
Initial dosage for untreated system is 1.77kg per 1000 ltr water to bring treatment up to a suitable min. level of 1000ppm nitrite.
Maintain normal levels 1000-2400 ppm. For detailed dosing refer to Technical Data Sheet.

00950003

Available in
25 Ltr., 205 Ltr.
and 1,000 Ltr.
IBC

STAR COOLTREAT

Biodegradable liquid corrosion inhibitor, acceptable for commonly used materials in engine cooling systems, including aluminium.

00950032

Available in
25 Ltr., 205 Ltr.

STAR POTABLE WATER TREATMENT

Phosphates mix with stabilizing properties. Prevents 'red water', provides scale and corrosion control. For use in condensers, heaters, coolers, tanks, flash evaporators and other marine equipment.
Dosage varies between 15-40 mg/ltr for ordinary water treatment (approx 0.3-0.8 ltr/25 tonnes of water). Dosage may be greater for other applications. Potable water stabiliser is non-corrosive to ordinary metals used in feeding equipment and may be fed with a simple by-pass feeder.
The treatment should be proportioned to maintain the desired dosage.

00950002

Available in
25 Ltr., 205 Ltr.
and 1,000 Ltr.
IBC

STAR ANTIFOULANT

Controls fouling by shellfish, micro organisms and fungal growth in marine seawater cooling systems. The film forming properties also discourage metal corrosion.
Preferably start use in clean system, feed directly via submerged chemical pump into system.
For a once-through condenser cooling system, continually dose 2 to 5 ml/cu. metre for one hour in every 24 hours is recommended when vessel is on estuarine or coastal waters. In port when conditions permit condenser should be filled with solution of 200ml/metre³ and allowed to stand for 24 hours. Do not exceed 200ml/metre³ in engine cooling systems.

00950005

Available in
25 Ltr. and
205 Ltr.

STAR ONE SHOT BWT

Complete 'One Shot' Liquid Conditioning Treatment.
Best dosed into boiler feed line by means of metering pump.
Gravity fed systems dose by means of a flowmeter and dosing drum.
Initial dose: Untreated system 5 ltr per 1000 ltr distilled feed water giving 100ppm p.alkalinity, maintain p.alkalinity levels at 100-300ppm. Increase or decrease doses accordingly.
For detailed information see Technical Data Sheet.

00950033

Available in
25 Ltr. and
205 Ltr.

STAR ALKA BOILER TREATMENT

Conc. liquid alkaline product for corrosion and scale control in boilers.
Provides alkaline conditions for hardness control to function correctly and neutralises acidic gases.
Dosage and Control: Maintain by testing p-alkalinity, maintain at approx 100-150ppm depending on boiler pressure. For detailed information see Technical Data Sheet

00950034

Available in
25 Ltr., 205 Ltr.
and 1,000 Ltr.
IBC

STAR EVAPORATOR TREATMENT

Polymer based additive to be used in evaporators to prevent scale formation.
Standard dosage is 30ml per tonne of distillate produced.
The treatment is added to the dosage tank & dosed at a rate satisfactory to the flowmeter.
Brine density should not exceed 1.038. As a general rule, the treatment should be dosed into the sea feed line before entering the heater. For more details instructions see Technical Data Sheet.

WATER TREATMENTS

00950035 **STAR BOILER WATER CONDITIONER**

Available in
25 Ltr. and
205 Ltr.

Dry powder compound containing alkaline mineral salts, sequestering agents, scale and corrosion inhibitors and scale conditioners.
Alkalinity Control: The correct level of alkalinity ensures that the optimum environment exists for: Correct precipitation of hardness salts in conjunction with phosphate, neutralisation of acid conditions, avoidance of caustic corrosion, control of magnesium and calcium salts.
Suitable for use with all auxiliary boilers; waste heat units; economisers; package boilers; smoke and water tube boilers; steam/steam generators, up to 20 bar pressure. Initial dose 400g/1000 ltr Opt. level 200ppm p.alkalinity.

00950044 **STAR HARDNESS PHOSPHATE BWT**

Available in
25 Ltr. and
205 Ltr.

Phosphate treatment for boiler water, will precipitate calcium ions. Dose direct to boiler via the bypass pot feeder. Dissolve in hot water 1 part powder to 20 parts condensate, ensure fully dissolved before dosing.
For dosage and control please see data sheet.

00950036 **STAR OXYGEN CONTROL**

Available in
20 Ltr. and
205 Ltr.

Removes oxygen to prevent oxygen corrosion in boilers.
Oxygen control must be dosed at the rate of 83mls/tonne to maintain the desired 20-30mg/ltr of sodium sulphite in the boiler.

00920026 **STAR OXYGEN (DEHA)**

Available in
25 Ltr. and
205 Ltr.

Catalysed (DEHA) solution for oxygen scavenging in boilers.

00910047 **STAR CONDENSATE CONTROL**

Available in
25 Ltr., 205 Ltr.
and 1,000 Ltr. IBC

Concentrated liquid neutralisation agent for corrosion control in condensate and feed water systems. Neutralises acid contaminants. The condensate is tested for pH to determine the dosage level. The minimum pH should be 8.3 the optimum would be between pH 8.5 and 9.0. A typical dosage for an average 10 metric tonne system would be 0.75ltr/day. Condensate control is best dosed using a metering pump or a flow meter arrangement.
The treatment can be dosed together with oxygen control.

00950037 **STAR BOILER LIQUID COAGULANT**

Available in
25 Ltr. and
205 Ltr.

Liquid sludge conditioner designed to prevent depositions in steam boilers. Prevents the formation of sludge deposits on boiler internal surfaces. The sludge is kept dispersed in small particles and conditioned to be removed by normal blowdown.
The normal dosage will be 20 ml of treatment daily for every tonne of boiler water capacity. For an average size system this will be 0.1 - 0.3 ltr per day. This level is the advised initial dosage, it can be reduced if liquid coagulant is being regularly used.

00920035 **STAR OXYGEN CONTROL SULPHITE**

Available in
25 Ltr. and
205 Ltr.

Catalysed for rapid oxygen removal. Prevent oxygen corrosion.
OXYGEN CONTROL is a catalysed sodium sulphite in liquid form. It is very soluble in water.

00920028 **STAR COLORCOOLING 2000**

Available in
25 Ltr. and
205 Ltr.

It is a specially formulated corrosion inhibitor with alkaline builders and sequestering agent. It provides excellent corrosion protection for fresh water diesel engine cooling system. It can be used in all cooling system as jackets, pistons, injectors, cooling towers, coolers and piping. It contains a colour indicating system which turns the solution clear when the pH falls below the safe level of 8,3.

00950047 **STAR BIOCONTROL WT**

Available in
25 Ltr. and
205 Ltr.

Broad activity: effective against bacteria, moulds, and yeasts in oil and contaminated water. Easy to use concentrated liquid. Prevents the corrosion caused by microorganisms.

00920025 **STAR OXYTREAT**

Available in
25 Ltr. and
205 Ltr.

Environmentally superior organic oxygen scavenger and corrosion inhibitor for feed, steam, and condensate systems.

SPECIAL PRODUCTS

00910039 Available in 25 Ltr. and 205 Ltr.	STAR SEDIMENT REMOVER Colourless to pale yellow liquid compound for the removal of sediment.
00920031 Available in 25 Ltr. and 205 Ltr.	STAR BILGE WATER FLOCCULANT Bilge Water Flocculant is a very effective liquid treatment based on Poly Aluminium Chloride (PAC) to separate oil residues from bilge water. It is iron-free, and is completely safe to the environment
00950052 Available in 25 Ltr. and 205 Ltr.	STAR HYDROXIDE 32% Sodium Hydroxide based alkalinity builder and is used for controlling or increasing the pH or alkalinity of water in boilers, cooling systems and effluent streams.
00920033 Available in 25 Ltr., 205 Ltr. and 1,000 Ltr. IBC	STAR HYPO 5% Sodium hypochlorite is a green/yellow liquid with a characteristic smell of chlorine. It is commonly known as bleach.
00930001 Available in 25 Ltr., 205 Ltr. and 1,000 Ltr. IBC	STAR HYPO 14/15% Sodium hypochlorite is used as a disinfectant and as a bleaching agent. It is also used in the disinfectant process of drinking-water and in swimming pools.
00930002 Available in 25 Ltr., 205 Ltr. and 1,000 Ltr. IBC	STAR ANTIFREEZE - Available in 25 Ltr., 205 Ltr. and 1,000 Ltr. IBC An antifreeze is a chemical additive which lowers the freezing point of a water-based liquid. An antifreeze mixture is used to achieve freezing-point depression for cold environments and also achieves boiling-point elevation
00910025 Available in 25 Ltr., 205 Ltr. and 1,000 Ltr. IBC	STAR ULTRASONIC MULTICLEANER - Available in 25 Ltr., 205 Ltr. and 1,000 Ltr. IBC Concentrated grease, oil and carbon remover suitable for cleaning engine components etc. In ultrasonic equipment, standard dose would be 3-4% in clean water. For stubborn deposits this can be doubled. Use at 60-80°C will also speed up the cleaning process. Cleaning time will depend on amount of soiling and nature of the soiling. For hardened, carbonised deposits cleaning time required may be as much as 3-4 hours.

ULTRASONIC CLEANING

Cleaning for maintenance purposes - Precision Ultrasonic Cleaning Equipment

Star Supplies Ultrasonic cleaning equipment for on-board use. Our range of ultrasonic baths and submersible ultrasonic transducers are all designed, manufactured and tested in Germany. We have the flexibility to meet individual customer requirements and provide cleaning solutions for the many ultrasonic applications that occurs every day on-board vessels.

Ultrasonic Baths and Cleaning Tanks and flexible Submersible Transducers for existing tanks Over the past, ultrasonic cleaning systems have been incorporated on many seagoing vessels all over the world. The ultrasonic cleaning tanks range in size from 20 litre baths to larger powerful ultrasonic cleaners tailored to individual customer requirements.

Features:

- material: stainless steel ASTM A240 / DIN 1.4571 • Power Supply: 230 or 440 (380) V 50/60 Hz
- 2 mm thickness completely welded • integrated or external generator
- working frequency: 30 kHz

ULTRASONIC CLEANING MODULES

ULTRASONIC CLEANING

Cleaning for maintenance purposes - Precision Ultrasonic Cleaning Equipment *continued*



Ordering Information and Specification

Part Number	Type	Volume	inner Dimensions (L x W x H) (mm)	Power Supply (V)	US power effective (W)	Heating Element (W)	Weight (kg)	External Generator	Level Sensor
00930013	USB 434	20	400 x 250 x 250	230	300	1200	25		
00930014	USB 535	38	500 x 300 x 300	230	400	1800	40		
00930015	USB 535-4	38	500 x 300 x 300	440	400	1800	40		
00930016	USB 536	60	500 x 300 x 400	230	400	1300	40		
00930017	USB 645	50	550 x 350 x 300	230	500	1800	45		
00930018	USB 645-4	50	550 x 350 x 300	440	500	1800	45		
00930019	USB 756-4	80	600 x 400 x 400	440	300	3000	60		
00930020	USB 867-4	170	750 x 500 x 500	440	1000	4500	80		X
00930021	USB 867 LT	170	750 x 500 x 500	440	1000	4500	80		X
00930022	USB 868 LT	200	750 x 500 x 600	440	1000	5400	90		X
00930023	USB 868 LTX	200	750 x 500 x 650	440	1000	5400	90	X	X
00930024	USB 1168 LT	250	1000 x 500 x 600	440	1200	5400	115		X
00930025	USB 1168 LTX	250	1000 x 500 x 650	440	1200	5400	115	X	X
00930026	USB 1480 LTX	350	1250 x 500 x 650	440	1800	6000	125	X	X
00930027	OCTAMAR	370	550 x 550 x 900	230/440	2400	5400	150	X	X
00930028	OCTAMAR690	370	550 x 550 x 900	690	2400	5400	170	X	X

Ordering Information Submersible Transducer

00930029	TD 10 SE	–	455 x 155 x 80	–	500	–	12	–	–
00930030	TD 12 SE	–	525 x 155 x 80	–	600	–	14	–	–
00930031	TD 14 SE	–	600 x 155 x 80	–	700	–	17	–	–
00930032	TD 15 SE	–	460 x 245 x 80	–	750	–	18	–	–



STAR offer range of on-board test kits which have been tailored around current and forthcoming legislation requirements

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Star Onboard Test Kits

STAR offer range of on-board test kits, which have been tailored around current and forthcoming legislation requirements.

TEST KITS

Test kits from STAR are your passport to peace of mind. We supply a range of testing kits to the maritime industry, giving you the chance to maintain safe and healthy water supplies for drinking, heating, cooling and ballast.

Accurate, reliable and exceptionally user-friendly, the selection includes kits for testing for a number of potential issues at sea.

CONSUMABLES

To back up our comprehensive range of testing kits for vessels and offshore installations, we also supply a wide selection of consumables. They include several types of test strips, reagents and test meters, as well as a versatile comparator system and a top quality digital incubator.

For all your testing needs, STAR are on hand to bring you the best.

SERVICES

As every vessel and offshore installation operator knows, there's more to regulation compliance than just testing. Here at STAR, we provide highly effective management services to back up your processes. They include legionella risk assessments, laboratory analysis and record-keeping and monitoring. Peace of mind is available at all times with STAR.

WATER TESTING IS A VITAL ISSUE IN THE MARITIME INDUSTRY

Water-borne infections can spread exceptionally quickly, and the implications can be serious. The safety of every crewmember, passenger, employee and visitor is at risk if accurate testing and monitoring isn't carried out. As well as the threat to people, the damage that can be done to ecosystems around the world should never be underestimated. STAR supply a range of testing kits, monitoring systems and management services, enabling operators to maintain safe, healthy water supplies for drinking, heating, cooling and ballast.

Our testing kits ensure operators of ocean-going vessels and offshore installations will be able to comply with the requirements of the ILO Maritime Labour Convention 2006. Whether you're running a single oil platform or a large fleet of cargo ships, you need the peace of mind that comes with the knowledge that you are compliant.

Regular, accurate testing of all water systems on board is a must, and with the range of kits from STAR you can rely on the results every time. We provide everything you need for this crucial aspect of your operations.



WATER TREATMENT TEST KITS

TEST STRIPS

Description

It goes without saying that there will be times when a quicker way of testing will be needed, and that's when our top quality test strips represent the ideal option. They provide you with accurate results in no time at all, and all without the need for reagents.

Thanks to Star International, you don't need to compromise on accuracy when you're in a hurry. We supply a wide range of test strips which can be used to check for the presence of a number of important issues. They include chlorine, water hardness, ammonia and peroxide. Testing the water quality on board a vessel or offshore installation is hugely important, of course, so make sure you have a good supply of all the relevant strips. Any problems with the water supply on ships and offshore installations can cause major issues in no time at all, so you need to be testing regularly with the most appropriate products. Thankfully, our range of test strips can make a genuine difference.



SPECIFICATION:

00960163	Ammonia Test Strips 0 – 6 mg/l (25 strips) (0, 0.5, 1, 3 & 6)
00960164	Chlorine LR Test Strips 0 – 5 mg/l (50 strips) Method A (0, 1.0, 2.0, 3.0, 4.0, 5.0, 6.0, & 7.0) Method B (0, 0.05, 0.10, 0.20, 0.40, 0.60, 0.80 & 1.20)
00960165	Chlorine LR Test Strips 0 – 10 mg/l (50 strips) (0, 0.5, 1, 3, 5 & 10)
00960166	Chlorine HR Test Papers 0 – 200 mg/l (100 papers) (10, 50, 100 & 200)
00960167	Chlorine HR Test Strips 0 – 300 mg/l (50 strips) (0, 25, 50, 100, 200 & 300)
00960168	Copper Test Strips 0 – 5 mg/l (25 strips) (0, 0.5, 1, 2 & 5)
00960169	Hardness (Total) Test Strips (50 strips) (0, 40, 80, 120, 180, 250, 425 & 1000)
00960170	Iron Test Strips 0 – 5 mg/l (25 strips) (0, 0.02, 0.05, 0.1, 0.2, 0.3, 0.5, 0.75, 1, 2 & 5)
00960171	Nitrate Test Strips 0 – 500 mg/l (50 strips) (0, 10, 25, 50, 100, 250 & 500)
00960172	Nitrate/Nitrite Test Strips 0 – 10 mg/l & 0 – 50 mg/l (50 strips) Nitrite (0, 0.15, 0.3, 1, 1.5, 3 & 10) Nitrate (0, 0.5, 2, 5, 10, 20 & 50)
00960173	Peroxide Test Strips 0 – 100 mg/l (50) (0, 1, 3, 10, 50 & 100)
00960174	Peroxide Test Strips 0 – 400 mg/l (50) (0, 100, 200 & 400)
00960175	pH Test Strips 4.5 – 10 (100 strips) (0.5 unit intervals)
00960176	pH Test Strips 7 – 14 (100 strips) (1 unit intervals)
00960177	pH Test Strips 0 – 14 (100 strips) (1 unit intervals)
00960178	pH Test Strips 5 – 9 (100 strips) (1 unit intervals)
00960179	pH Test Strips 7 – 10 (100 strips) (0.5 unit intervals)
00960180	Silver (ion) Test Strips 0 – 1000ppb (50 strips) (0, 50, 100, 250, 500 & 1000)
00960062	DPD Glycine Powder (Used with Silver (Ion) Strips (20g)

Other test strip parameters are available – please contact Star International for details.

STAR CHEMICAL TREATMENT & WATER TEST KIT SELECTOR

Application	Product	Test Kit (Order No.)	Test Application
Cooling water inhibitor	Star organic & powder	00960025	Nitrite, Chloride, pH
Boiler water inhibitor	Star one shot BWT	00960023	Alkalinity
Single boiler water Treatments inhibitors	Star Alka B.T	00960083	TDS
	Star Oxygen (Deha)	00960027	DEHA
	Star Oxygen control	00960029	Hydrazine
	Star Hardness Phosphate	00960030	Phosphate
Single cont' boiler	CAT Sulphite Liq	00960031	Sulphite
Boiler	Tannin (Oxygen Inhits)	00960032	Tannin
Engine	Star Glycol Ref	00960028	Glyco
Boiler	Star Alka B.T Star one shot BWT	00960033	Suspended Solids (2 part) Stability Tube
Potable water system	Star Potable Stabilizer	00960004	PWT
		Full Kit 00960011	Chlorine
Potable water system	Star Potable Stabilizer	00960002PWT Standard	
Potable water system	Star Potable Stabilizer	00960010 Bacteria	Bacteria
Boiler inhibitor	Anodes	00331051	Alkalinity
Ballast tanks	Star Ballast Water Kit	00960001	E-Coli -
	Star Glycol Ref	00960028	Glyco
Fuel tanks	Star heavy fuel	00960181	Bacteria
Sewage tanks	Star Sodium Hypo	00930001	Bacteria
Galley	Galley Hygiene Kit	00960037 Star Enzyme Multi Cleaner Bacteria	Bacteri

Replacement Consumables Spares Test Kits

Supporting test kits for Boiler/CWT/ Ballast/ Potable,water/ Fuel bacteria/ Sewage/Galley Hygene TESTING

WATER TREATMENT TEST KITS

BOILER & COOLING WATER SYSTEMS

Description

There are a number of problems which can occur if the marine water systems on a vessel are not working to their full potential. If the water that's used for heating, cooling and cleaning isn't of the highest standard there will inevitably be the likelihood of corrosion, not only becoming a huge inconvenience but, in today's modern commercial world, costing a small fortune to repair. Your company can safeguard against such problems with our accurate, efficient and easy to use testing kits. Thanks to STAR, you will be able to test for a number of potential issues, including alkalinity, hardness, chloride, nitrite, pH and total dissolved solids (TDS). Our kits are your first line of defence against disaster. We provide both boiler and cooling water test kits, to make sure your marine water systems are operating correctly at all times. Here at STAR, we know all there is to know about the processes you need to implement, so contact us today for more information.



SPECIFICATION

00960023 Star Marine Boiler Water Kit

1 x Marine Heavy Duty Plastic Case & Foam
1 x Alkalinity (P & M) Test (0 – 2400 mg/l) (100)
1 x Chloride Test (20 – 12000 mg/l) (100)

1 x pH Test Strips (7 – 14) (100)
1 x Instruction Manual & Log book

00960025 Star Marine Cooling Water Kit

1 x Marine Heavy Duty Plastic Case & Foam
1 x Chloride Test (20 – 12000 mg/l) (100)
1 x Nitrite Test (10 – 2000 mg/l) (100)

1 x pH Test Strips (4.5 – 10) (100)
1 x Instruction Manual & Log Book

00960026 Star Marine Boiler & Cooling Water Kit

1 x Marine Heavy Duty Plastic Case & Foam
1 x Alkalinity (P & M) Test (0 – 2400 mg/l) (100)
1 x Chloride Test (20 – 12000 mg/l) (100)
1 x Nitrite Test (10 – 2000 mg/l) (100)

1 x pH Test Strips (4.5 – 10) (100)
1 x pH Test Strips (7 – 14) (100)
1 x Instruction Manual & Log Book

Optional Extras

00960083	Star TDS/Conductivity Meter (TDS: 0 – 13000ppm & CON: 0 – 20000µS)
00960027	Star DEHA Comparator Test (0 – 0.5 mg/l)
00960028	Star Glycol Refractometer (0 – 70% Product/ 0 – 50°C Freeze Protection)
00960029	Star Hydrazine Comparator Test (0 – 5 mg/l)
00960030	Star Phosphate Comparator Test (0 – 100 mg/l)
00960031	Star Sulphate Tablet Count Test (0 – 200 mg/l)
00960188	Star Sulphate Tablet Count Test (0 – 500 mg/l)
00960032	Star Tannin Tablet Count Test (0 – 200 mg/l)
00960033	Star Suspended Solids Test (5 – 500 mg/l)

Replacement Consumables

Please see replacement STAR liquids, tablets & powder pillow and test strips sections.

WATER TREATMENT TEST KITS

REAGENTS

Description

In order to ensure your testing processes are as accurate and reliable as they can be, you need to be utilising the correct components. The integrity of your systems, whether they are on ocean-going vessels or on offshore installations, is only ever as viable as the reagents which are being used. We are the acknowledged industry leaders in marine testing, and we carry a comprehensive range of reagents and related products. Whatever your needs might be, you can find them all here on one convenient site. When you prepare for any voyage or any project, be sure to contact Star International first.



Our range of reagents are suitable for all methods of testing, and can be used to detect abnormalities in various vessel and offshore installation systems. As an operator, you have a responsibility to provide safe, healthy and hygienic working environments, so make sure Star International are with you from start to finish.

SPECIFICATION: Liquid Reagents Boiler & Cooling Water Kits

Alkalinity

00960133	PA1 Phenolphthalein Indicator (65ml)
00960134	PA2 Alkalinity HR Titant (65ml)

Chloride

00960135	BC1 Potassium Chromate Indicator (65ml)
00960136	BC2 Chloride HR Titrant (65ml)

Nitrite

00960137	N1 Ferroin Indicator (65ml)
00960138	N2 Nitrite Titrant (65ml)

Other Kits Replacement Reagents

Free Chlorine

00960139	FCL1 Free Chlorine Buffer (65ml)
00960140	FCL2 Free Chlorine LR Titrant (65ml)

Test Meter Calibration Solutions

Conductivity/TDS

00960143	1413 μ S Conductivity Solution (500ml)
00960144	12880 μ S Conductivity Solution (500ml)

pH

00960145	4.0 Buffer Solution (500ml)
00960146	7.0 Buffer Solution (500ml)
00960147	10.0 Buffer Solution (500ml)

Tablet Count Reagents Boiler & Cooling Water

Alkalinity

00960148	Alkalinity (M) Tablets (250)
00960149	Alkalinity (P) Tablets (250)

Chloride

00960150	Chloride Tablets (250)
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WATER TREATMENT TEST KITS

REAGENTS - Tablet Count Reagents Boiler & Cooling Water *continued*

Nitrite

00960151	Nitrite No 1 Tablets (100)
00960152	Nitrite No 2 Tablets (250)

Sulphite

00960153	Sulphite No 1 Tablets (100)
00960154	Sulphite No 2 (LR) Tablets (250)
00960155	Sulphite No 2 (HR) Tablets (250)

Other Kits Replacement Tablets

Sewage Effluent Kit (COD Testing)

00960156	Acidifying SE Tablets (100)
00960157	Permanganate Tablets (300)

Powder Pillow / Sachet Reagents

Chlorine

00960158	DPD Free Sachets (100)
00960159	DPD Total Sachets (100)

Silver (Ionisation Systems)

00960061	Silver Ion Sachets (100)
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WATER TREATMENT TEST KITS

POTABLE WATER TEST KITS

Description

Access to safe drinking water is vital on land, of course, but at sea it can be even more crucial. With our high quality drinking water test kits, you can be sure that crew members, employees, contractors and passengers are able to rely on adequate supplies of hygienic water at all times. As an operator, you have a responsibility to provide safe drinking water throughout every voyage. If you fail to do so, the effects of harmful chemicals and pathogenic organisms can be disastrous. That's why you need our help, and with our potable chlorine, bacteria and water kits you can monitor quality from day one.

Our water testing kits are easy to use and provide reliable, accurate information.

They can be used as stand-alone units or as part of a more far-reaching laboratory analysis. With our help, you can be sure that the drinking water you are providing is always fit for purpose.



SPECIFICATION

00960004 Star Full Potable Water Kit

- | | |
|--|--|
| 1 x Marine Heavy Duty Plastic Case & Foam | 1 x Digital Temperature Meter |
| 1 x Digital Incubator (110v/240v) | 1 x UV Lamp |
| 1 x Comparator | 1 x Aerobic Bacteria Pack (0 – 1400 CFU/ml) (40) |
| 2 x Comparator Cells | 1 x Coliforms/E Coli Pack (Detects 1 CFU/100ml) (25) |
| 1 x Chlorine LR (0 – 1ppm) Comparator Test (100) | 1 x Enterococci Pack (Detects 1 CFU/100ml) (20) |
| 1 x Chlorine LR (0 – 5ppm) Comparator Test (100) | 1 x Pseudomonas Pack (Detects 1 CFI/100ml) (20) |
| 1 x Chlorine HR (0 – 250ppm) Comparator Test (100) | 1 x Instruction Manual & Log Book |
| 1 x pH (4 – 11) Comparator Test (100) | |

00960002 Star Standard Potable Water Kit

- | | |
|---|--|
| 1 x Marine Heavy Duty Plastic Case & Foam | 1 x Chlorine HR (0 – 250ppm) Comparator Test (100) |
| 1 x Digital Incubator (110v/240v) | 1 x pH (4 – 11) Comparator Test (100) |
| 1 x Comparator | 1 x Digital Temperature Meter |
| 2 x Comparator Cells | 1 x UV Lamp |
| 1 x Chlorine LR (Free & Total) (0 – 1ppm) Comparator Test (100) | 1 x HPC (TVC) Aerobic Bacteria Pack (0 – 1400 CFU/ml) (40) |
| 1 x Chlorine LR (0 – 5ppm) Comparator Test (100) | 1 x Coliforms/E Coli Pack (Detects 1 CFU/100ml) (25) |
| | 1 x Instruction Manual & Log Book |

00960011 Star Marine Potable Chlorine Kit

- | | |
|--|---|
| 1 x Marine Heavy Duty Plastic Case & Foam | 1 x Chlorine (Free & Total) LR Comparator Test (0 – 5 mg/l) (100) |
| 1 x Comparator | 1 x Chlorine HR Comparator Test (0 – 250 mg/l) (100) |
| 2 x Comparator Cells | 1 x Instruction Manual & Log Book |
| 1 x Chlorine (Free & Total) VLR Comparator Test (0 – 1 mg/l) (100) | |

00960010 Star Marine Potable Bacteria Kit

- | | |
|---|--|
| 1 x Marine Heavy Duty Plastic Case & Foam | 1 x Coliform/E Coli Test Pack (Detects 1 CFU/100ml) (25) |
| 1 x Digital Incubator (110v/240v) | 1 x HPC (TVC) Aerobic Bacteria Test (0 – 1400 CFU/ml) (40) |
| 1 x UV Lamp | 1 x Instruction Manual & Log Book |

WATER TREATMENT TEST KITS

POTABLE WATER TEST KITS *continued*

00960003 Star Standard Potable Kit Annual Consumables Pack

1 x Aerobic Bacteria Pack (0 – 1400 CFU/ml) (40)	1 x Chlorine LR (0 – 5ppm) Comparator Pack (100)
1 x Coliforms/E Coli Pack (Detects 1 CFU/100ml) (25)	1 x Chlorine HR (0 – 250ppm) Comparator Pack (100)
1 x Chlorine LR (0 – 1ppm) Comparator Pack (100)	1 x pH (4 – 11) Comparator Pack (100)

00960009 Star Full Potable Kit Annual Consumables Pack

1 x Aerobic Bacteria Pack (0 – 1400 CFU/ml) (40)	1 x Chlorine LR (0 – 1ppm) Comparator Pack (100)
1 x Coliforms/E Coli Pack (Detects 1 CFU/100ml) (25)	1 x Chlorine LR (0 – 5ppm) Comparator Pack (100)
1 x Enterococci Pack (Detects 1 CFU/100ml) (20)	1 x Chlorine HR (0 – 250ppm) Comparator Pack (100)
1 x Pseudomonas Pack (Detects 1 CFU/100ml) (20)	1 x pH (4 – 11) Comparator Pack (100)

Extras

00960016	Legionella Biofilm Kit (5) (Stored Water)
00960017	Legionella Industrial Kit (5) (Distribution System)
00960013	Colour Comparator Test (0 – 500 APHA) (Unlimited)
00960015	Iron Test Strips (0 – 5ppm) (25)
00960168	Copper Test Strips (0 – 5ppm) (25)
00960018	Turbidity Test (5 – 500 JTU) (Unlimited)

Pesticide Test Kit

AGRI STICK is a qualitative colorimetric detection method:

- Rapid results within 30 minutes
- Easy to use
- Up to 12 months shelf life 25 tests Qualitative results

Detection Limits

Organothiophosphates:

Chlorpyrifos – 0.1ppm
Diazinon – 0.1ppm
EPN – 0.2ppm
Fenitrothion – 5.0ppm
Methidathion – 0.2ppm

Organophosphates:

Methamidophos – 50ppm
Carbamates:
Carbaryl – 5.0ppm
Methomyl – 2.0ppm
Carbofuran – 0.2ppm

00960012 Star AGRI STICK Pesticide Test Kit

25 x Pesticide Test
25 x 100ml sterile sample bags
1 x De-ion pack (makes up to 5 litres of deionised water)

SILVER IONISATION

Description

Without effective and accurate silver ionisation testing, any vessel or offshore installation can fall victim to biohazards. The threat to the health of crew members and passengers cannot and should not be underestimated, so every operator needs to be aware of the importance of testing on a regular basis. Star supply high quality testing kits which should be incorporated into your first line of defence against problems.

Our silver ionisation systems include testing kits as well as a range of consumables, which means we can provide all the support you need on board every vessel and offshore installation. Silver ionisation systems are a feature on both vessels and offshore installations, and as always prevention is infinitely better than cure. We should be your first point of contact in this hugely important sphere, so talk to Star today and let us help you to maintain safe and healthy maritime environments at all times.



SPECIFICATION

00960023 Star Marine Silver Ionisation Kit

1 x Marine Plastic Case & Foam
100 x Silver Sachets
100 x 13mm 8µm Filter papers

1 x 13mm Filter Holder
1 x 60mm Syringe
Instruction Manual

Replacement Consumables

00960058 13mm Filter Holder
00960059 13mm 8µm Filter Papers (100)
00960060 60ml Syringe
00960061 Silver Sachets (100)

Alternative options

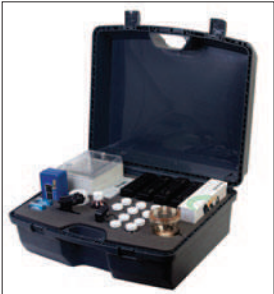
00960180 Silver (ion) Test Strips 0 – 1000ppb (50 strips) (0, 50, 100, 250, 500 & 1000)
00960062 DPD Glycine Powder (Used with Silver (Ion) Strips (20g)

WATER TREATMENT TEST KITS

BALLAST WATER EXCHANGE

Description

As everyone in the industry knows, ballast water exchange is an important process, but it's one which involves several complex processes. There are a number of recognised guidelines which need to be followed in order to ensure the water is as safe and hygienic as it can possibly be. The presence of any harmful bacteria, viruses and invasive species on a ship can have catastrophic effects, so our highly developed ballast water test kits are vital. Easy to use and reliably accurate, the kit enables user companies to remain compliant with current and future legislation and guidelines.



Exchanging ballast water in a timely, efficient and safe manner is an important aspect of modern marine life, but it should always be monitored effectively. With STAR on your side, you can be sure that your vessels and offshore installations are operating properly, and that your crew members have access to water of the highest possible standard.

SPECIFICATION

00960001 Star Ballast Water Kit

- | | |
|---|---|
| 1 x Marine Heavy Duty Plastic Case & Foam | 12 x Vibrio Cholerae (0139) Test (Presence/Absence 1 CFU/100ml) |
| 1 x Star Digital Incubator (110v/240v) | 50 x 10µm Filter Test |
| 1 x UV Lamp | 50 x 50µm Filter Test |
| 12 x E-Coli Bacteria Test (0 – 2424 CFU/100ml) | 1 x Salinity Refractometer (0 – 100%) |
| 12 x Enterococci Bacteria Test (0 – 115 CFU/100ml) | 1 x Instruction Manual & Log Book |
| 12 x Vibrio Cholerae (01) Test (Presence/Absence 1 CFU/100ml) | |

00960000 Star Ballast Water Kit Consumables Pack

- | | |
|---|---|
| 12 x E-Coli Bacteria Test (0 – 2424 CFU/100ml) | 12 x Vibrio Cholerae (0139) Test (Presence/Absence 1 CFU/100ml) |
| 12 x Enterococci Bacteria Test (0 – 115 CFU/100ml) | 50 x 10µm Filter Test |
| 12 x Vibrio Cholerae (01) Test (Presence/Absence 1 CFU/100ml) | 50 x 50µm Filter Test |

FUEL BACTERIA TESTING

Description

Without adequate fuel testing processes, vessels can soon suffer from major problems. Both aerobic and anaerobic bacteria can develop and multiply when the conditions are right, and this can soon lead to damaging and costly issues involving the rapid degradation of vital fuel systems. With our highly developed microbiological testing kits you can ensure your fuel systems are operating as they should at all times, and if problems develop you will be able to react accordingly.

Our kits are easy to operate, and offer vital real-time information that can save your organisation a small fortune in repair bills. As well as fuel testing and coolant/cutting testing kits, we supply a wide range of consumables. Thanks to STAR, you can keep your systems working efficiently and free from microbial contamination. Contact us today and find out more about protecting your vessel from the ravages of bacterial or fungal infection.



SPECIFICATION

Fuel Bacteria Testing

00960181 STAR Fuel Bacteria Testing Kit

1 x Clear Zip Bag	1 x Sulphate Reducing Bacteria (SRB) Dip Slide
2 x Disposable Gloves	1 x Sterile Tweezer
1 x Aerobic Bacteria (BT2) Dip Slide	1 x Instruction Sheet and Comparison Chart

Consumables

Aerobic Bacteria (TVC) (1000 CFU/ml – 10000000 CFU/ml)

00960115 STAR BT2 Dip Slides (10) Sulphate Reducing Bacteria (SRB)

00960127 STAR SRB Dip Slides (10) Sterile Tweezers Required for SRB Dip Slides

00960128 3cm Sterile Tweezer (10)

WATER TREATMENT TEST KITS

MARINE SEWAGE TREATMENT

Description

As any vessel operator will already know, marine sewage treatment is a hugely important issue, and it's one which is bound by a number of complex maritime regulations. The way a ship installation is allowed to process and dispose of sewage can vary from region to region, and because of this the operator needs to ensure high standards are always maintained. Vessels need to be compliant with regulations at all times, and with the help of STAR you can ensure you operate legally, efficiently and responsibly.

Our sewage effluent test kits give you accurate information about the integrity of your system, and can give you vital early warnings about any issues which may be causing problems. Our marine sewage treatment products are designed to provide you with the data you need in a simple and straightforward manner. Easy to operate and offering precision accuracy, they are a must-have for all operators.



SPECIFICATION

00960035 STAR Sewage Effluent Kit

1 x Marine Heavy Duty Plastic Case & Foam	12 x Coliform Bacteria Test (0 – 2424 CFU/100ml)
1 x BOD Test (7.5 – 255mg/l) (Unlimited)	1 x pH Test Strips (4.5 – 10) (100)
1 x Chlorine (Free & Total) Comparator Test (0 – 1 mg/l) (100)	1 x Spirit Thermometer
1 x Chlorine (Free) Drop Test (0 – 30 mg/l) (100)	1 x Total Suspended Solids (5 – 500 mg/l) (Unlimited)
1 x COD Test (0 – 300 mg/l) (100)	1 x Digital Incubator (110v/240v)
	1 x Instruction Manual & Log book

00960036 STAR Sewage Effluent Consumables Pack

1 x Chlorine (Free & Total) Comparator Test (0 – 1 mg/l) (100)	1 x COD Test (0 – 300 mg/l) (100)
1 x Chlorine (Free) Drop Test (0 – 30 mg/l) (100)	12 x Coliform Bacteria Test (0 – 2424 CFU/100ml)
	1 x pH Test Strips (4.5 – 10) (100)

WATER TREATMENT TEST KITS

GALLEY HYGIENE

Description

Bacterial food poisoning can occur on board a ship and offshore installation, either as a result of eating ashore or on board. The relatively sudden onset of symptoms in a number of crew, who have not been ashore together, is a prime indication of contaminated food coming from the ship's galley or rig's kitchen. Within the galley or kitchen, surfaces and places that are in daily contact with food can be problematic. These surfaces should be cleaned with a disinfectant to kill the bacteria effectively. But disinfectants only kill bacteria that are exposed to disinfectant.

If they are not killed, bacteria can unfortunately encapsulate themselves and hide behind a slimy layer called biofilm. Biofilms, consisting of bacteria, food residues (protein) and the slimy layer can prevent the disinfectant contacting the bacteria. Biofilms arise when food residues (protein) are not removed. A thin layer is sufficient for bacteria to reproduce and build up the slimy layer, which the bacteria use to protect itself from being killed. Biofilm cannot be seen with the naked eye and can appear on surfaces that look perfectly clean. The danger of biofilms is that they contain many bacteria that under normal conditions reproduce in a very short time. **Bacteria such as:** • Escherichia Coli / Coliforms • Salmonella spp • Staphylococcus aureus



SPECIFICATION

00960037 STAR Galley Hygiene Kit

1 x Marine Heavy Duty Plastic Case & Foam	100 x E-coli/Coliform Swabs
1 x Digital Incubator (110v/240v)	100 x Salmonella Swabs
1 x UV Lamp	100 x Staphylococcus Aureus Swabs
100 x Protein Swabs	1 x Manual & Log Book

Protein Swabs

The Clean Do protein swabs are a self-contained test unit that provide rapid results. The test detects protein residues on surfaces and is used as an indicator of surface cleanliness. Rapid results within 2 minutes. Storage at room temperature. Up to 18 month shelf life. Easy to use < 50 µg sensitivity.

00960038 Clean Do Protein Swabs (100)

00960039 Clean Do Protein Swabs (1000)

Specific Bacteria Swabs

The ST Tuve bacteria swabs are a self-contained test unit that provide qualitative results within 12 – 24 hours. These swabs will test for specific bacteria on surfaces and is used as an indicator of both contamination and surface cleanliness.



WATER TREATMENT TEST KITS

GALLEY HYGIENE *continued*

Specific Bacteria Swabs *continued*

- Results within 12 – 24 hours,
- Storage at room temperature,
- Up to 18 months shelf life
- Easy to use
- Qualitative results

00960040	ST Tuve E-coli/Coliform Swabs (100)
00960041	ST Tuve E-coli/Coliform Swabs (1000)
00960042	ST Tuve Salmonella Swabs (100)
00960043	ST Tuve Salmonella Swabs (1000)
00960044	ST Tuve Staphylococcus Aureus (MRSA) Swabs (100)
00960045	ST Tuve Staphylococcus Aurues (MRSA) Swabs (1000)

ATP Testing System

The ATP testing system comprises of two main parts, the bioluminescence meter (ATP meter) and the testing swabs (surface or water). ATP is an accepted method of routine surface and water quality screening for organic matter and micro-organisms by the detection of adenosine triphosphate (ATP), a substance found in living cells.

- Rapid results within 15 seconds
- Easy to use
- Detects surface or water borne contamination
- Quantitative results (0 – 9999 RLU)
- Reporting software provided

00960046	STAR ATP Meter
00960047	STAR ATP Surface Swabs (100)
00960049	STAR ATP Water Swabs (100)

WATER TREATMENT TEST KITS

COMPARATOR SYSTEM

Description

If your organisation is operating vessels or offshore installations at sea, an effective and reliable comparator system is a must. You need to be sure that your systems are as safe and hygienic as possible, because an outbreak of any infectious disease could prove disastrous in confined maritime environments. With the help of STAR, you can ensure your operations are continually monitored, and that you can have access to accurate, real-time data as and when you need it. Our products work with you to keep your processes working as they should from the first day of a journey to the last. A comparator system from STAR is your ultimate defence against problems. It enables you to perform a variety of tests throughout the voyage, and to provide you with an effective early warning should any issues occur. You can rely on us and on our products, so speak to the experts at STAR today.



SPECIFICATION

Comparator

00960063	STAR Comparator
00960064	STAR Comparator Cells (5)
00960065	STAR Comparator Cell Cleaning Brush
00960066	STAR Comparator Tablet Crushing Rod

Disks and Reagents

Chlorine (Free & Total) VLR (0 – 1mg/l)

00960067	STAR Chlorine VLR Comparator Disc
00960069	STAR DPD No 1 & DPD No 3 Tablets (250)

Chlorine (Free & Total) LR (0 – 5mg/l)

00960068	STAR Chlorine LR Comparator Disc
00960069	STAR DPD No 1 & DPD No 3 Tablets (250)

Chlorine HR (0 – 250mg/l)

00960070	STAR Chlorine HR Disc
00960071	STAR Chlorine HR & Acidifying GP Tablets (250)

Copper (0 – 5mg/l)

00960072	STAR Copper Disc
00960073	STAR Copper (Coppercol) Tablets (250)

Iron (0 – 10mg/l)

00960074	STAR Iron Disc
00960075	STAR Iron MR Tablets (250)

pH (4 – 11)

00960076	STAR pH Disc
00960077	STAR Universal PH Tablets (250)

Phosphate (0 – 100mg/l)

00960078	STAR Phosphate Disc
00960079	STAR Phosphate HR Tablets (250)

DIGITAL INCUBATOR

Description

For accurate testing on board vessels and offshore installations, a reliable digital incubator is a major requirement. For all maritime organisations, effective testing is one of the top priorities, so make sure you choose the very best product from us at STAR.

Accurate results can only be achieved with accurate testing conditions, and that's why our digital incubator ticks all the boxes. The compact design makes it extremely portable and convenient, yet the range of innovative features means it never compromises on efficiency or reliability. If your organisation is serious about providing the very best testing systems, you need the STAR digital incubator. The many features include a rapid heating option and external operating temperature controls, so this is the product that your vessels and offshore installations desperately need. Contact us today for more information about the STAR digital incubator.



SPECIFICATION

00970076 Digital Incubator

Technical Data

Voltage Input: 5V DC, 1 Amps

Temperature Range: Ambient to 50°C

Accuracy: +/- 0.5°C

Power: 110V/240V

Dimensions: 150mm (L) x 120mm (W) x 140mm (H)

Weight: 1.5kg

Construction: ABS with Polycarbonate Lid

Application: Bacteriological Analysis

Items Supplied

STAR Digital Incubator

UK, Euro & USA plug

Manual

Other Info

Guarantee

1 year guarantee against any manufacturing defects

Certification

CE certification to comply with global standards for electromagnetic emission and interference

Manufactured

Made in the United Kingdom

WATER TREATMENT TEST KITS

MICROBIOLOGICAL TESTS

Description

Monitoring the safety of an ocean-going vessel and offshore installation has always been an important issue, of course, and it has become even more vital in the wake of various high-profile incidents of recent years. STAR are able to help you conduct the most accurate and reliable microbiological tests with ease, and to react accordingly to the results.

We supply a wide range of test-related products to the industry, helping operators of both vessels and offshore installations to monitor the safety of their employees, crew members and passengers. With our products on your side, you can rest assured that the components needed for effective testing are with you at all times. STAR carry a comprehensive selection of consumables and testing kits, so your specialists can carry out microbiological tests whenever necessary. Thanks to our excellent products, this is one aspect of maritime commerce that you know will be taken care of properly.



SPECIFICATION

HPC (TVC) Aerobic Bacteria Testing Options

IDEXX Quanti Disc (requires refrigeration) (0 – 1574 CFU/ml)

- 00960105 IDEXX Quanti Disc (20)
- 00960106 IDEXX Quanti Disc (40)
- 00960107 IDEXX Quanti Disc (200)

Required for this test

- 00960108 35ml Sterile Syringes (20)
- 00960109 55ml Sterile Syringes (40)

Dehydrated Plate Count (0 – 1400 CFU/ml) & Dilution pots

- 00960111 TC Plate Count (40)
- 00960112 TC Dilution Pots (40)

Required for this test

- 00960113 2ml Sterile Syringes (40)

Dip Slides

Standard (TVC) (1000 CFU/ml – 10000000 CFU/ml) (SHOULD NOT BE USED DUE TO MINIMUM DETECTION LEVEL)

- 00960115 BT2 Dip Slides (10)

Millipore HPC Total Count (Red) Sampler (10 – 300 CFU/ml)

- 00960117 HPC (Red) Total Count Samplers (25)

WATER TREATMENT TEST KITS

MICROBIOLOGICAL TESTS *continued*

Coliforms & E-Coli Testing Options

Colitag (Presence/Absence) (1 CFU/100ml)

00960118 Colitag Powder Capsules (25)

00960119 Colitag Powder Capsules (100)

MTS Dehydrated Plate Count ((0 – 2424 CFU/100ml)

00960120 MTS Plate Count (8)

Enterococci Testing Option

Enterolert (Presence/Absence) (1 CFU/100ml)

00960122 IDEXX Enterolert DW (20)

Pseudomonas Aeruginosa Testing Options

Pseudalert (Presence/Absence) (1 CFU/100ml)

00960126 IDEXX Pseudalert (20)

Legionella Testing Options

Legionella (Presence/Absence) Serogroup 1

00960016 Legionella Biofilm Kit (biofilm – stored water) (5)

00960017 Legionella Industrial Kit (distribution system) (5)

Sample Vessels

Required for 100ml testing samples (Colitag, Enterolert & Pseudalert)

00960129 100ml Sterile Thio Sample Bag (25)

00960130 100ml Sterile Thio Sample Bag (100)

Or

00960131 100ml Sterile Sample Bottle (25)

00960132 100ml Sterile Sample Bottle (100)

WATER TREATMENT TEST KITS

TEST METERS

Description

Here at STAR, we provide an extensive range of the finest quality test meters, enabling our customers to have ready access to accurate real-time data whenever the need arises. Our meters are easy to use and they offer the peace of mind that all operators of ocean-going vessels and offshore installations need.

Our test meters offer instant digital read-outs, and are available in both splash-proof and water-proof options. Whether you're testing for chlorine, pH, conductivity, temperature or total dissolved solids (TDS), we have the units you require. Sturdy and reliable, they will ensure your processes are correctly administered and accurately maintained. For shipping and offshore organisations, it's important to remember that testing is a vital aspect of everyday business.

Therefore, it makes sense to use the very best equipment at all stages of every process. With our help, you can enjoy peace of mind knowing that you're using the finest test meters.



SPECIFICATION

Splash Proof (supplied in plastic case with meter & calibration solution)

00960080	5021 Conductivity Meter (10 – 9990 μ S)
00960081	5011 pH Meter (0 – 14 pH)
00960082	5031 Total Dissolved Solids (TDS) (10 – 9990ppm)

Test Meter Calibration Solutions

Conductivity/TDS

00960086	1413 μ S Conductivity Solution (500ml)
00960087	12880 μ S Conductivity Solution (500ml)

pH

00960088	4.0 Buffer Solution (500ml)
00960089	7.0 Buffer Solution (500ml)
00960090	10.0 Buffer Solution (500ml)

WATER TREATMENT TEST KITS

TEST METERS *continued*

IP57 Rated (supplied in plastic case with meter & calibration solution)

00960083	7021 Conductivity/TDS Meter (CON: 0 – 20000µS / TDS: 0 – 13000ppm)
00960084	7011 pH Meter (-2 – 16 pH)
00960085	7200 Conductivity/pH/TDS Meter (as above ranges)

Test Meter Calibration Solutions

Conductivity/TDS

00960086	1413 µS Conductivity Solution (500ml)
00960087	12880 µS Conductivity Solution (500ml)

pH

00960088	4.0 Buffer Solution (500ml)
00960089	7.0 Buffer Solution (500ml)
00960090	10.0 Buffer Solution (500ml)

Temperature and UV lamps

Temperature

00960091	Spirit Thermometer (-10°C – 110°C)
00960092	Digital Temperature Meter (-50°C – 300°C)
00960094	Infrared Digital Temperature Meter (-50°C – 380°C)

UV Potable Lamp (Microbiological Testing)

00960095	UV Lamp (366nm long wave)
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Chlorine Colorometer

Chlorine (supplied in plastic case with meter & initial 100 tests)

00960096	Chlorine LR Colorimeter (0 .01 – 5.0 mg/l)
00960099	Chlorine LR & HR Colorimeter (0.01 – 5.0 mg/l & 1 – 250 mg/l)

Replacement Consumables for Chlorine Colorimeters

Chlorine LR

00960100	DPD Photometer No 1 Tablets (250)
00960101	DPD Photometer No 3 Tablets (250)

Chlorine HR:

00960071	Chlorine HR & Acidifying GP Tablets (250)
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STAR offer range of fuel oil test kits which have been tailored around current and forthcoming legislation requirements

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FUEL OIL TEST KITS

WATER IN OIL TEST KIT

The new developed electronic water in oil test cell has a 30% bigger backlit display than other cells, provides rapid on site results, comes with multilingual software and no hazardous reagents are required.

Unlike other water in oil cells, all parts (i.e. sensor, display, battery) can be replaced as and when required.

The replacement reagents which are Reagent A and Reagent B, are also interchangeable with other manufacturers' water in oil cells.

00970014 Water in Oil Test Kit

- Ranges: 0 – 1%, 0 – 10% or 0 – 1500ppm, 0 – 6000ppm
- Accuracy: +/- 0.01% Free Water
- Test Time: 3 Minutes

Reagents & Spares

00970000 Water in Oil Reagent Pack (50):

2 x Reagent A (500ml)

1 x Reagent B (EasySHIP) (50)

00970001 Test Cell/Kit Cleaner (250ml)

00970002 Battery for Test Cell

00970003 Set of O-Rings for Test Cell

00970004 Water in Oil Test Cell



TBN TEST KIT

The new developed electronic TBN test cell has a 30% bigger backlit display than other cells, provides rapid on site results, comes with multilingual software and no hazardous reagents are required.

Unlike other TBN cells, all parts (i.e. sensor, display, battery) can be replaced as and when required.

The replacement reagent which is Reagent C is interchangeable with other manufacturers' TBN cells.

The standard TBN cell can be used to test the system oil used in all kinds of diesel engines and the new CDO TBN cell can be specifically designed to test the scraped down cylinder oil in two stroke crosshead engines.

00970005 TBN Test Kit

- Range: 5 – 100 TBN
- Accuracy: +/- 5% of New Oil TBN
- Test Time: 2 Minutes

00970006 CDO BN Test Kit

- Range: 5 – 130 TBN
- Accuracy: +/- 5% of New Oil TBN
- Test Time: 2 Minutes

Reagents & Spares

00970007 TBN Reagent Pack (50)

1 x Reagent C (500ml)

00970001 Test Cell/Kit Cleaner (250ml)

00970002 Battery for Test Cell

00970003 Set of O-Rings for Test Cell

00970011 TBN Test Cell

00970012 CDO TBN Test Cell



FUEL OIL TEST KITS

COMBINED OIL TEST KIT

Comprises

- Water in oil test
- TBN test
- Insolubles test
- Salt water determination test
- Viscosity comparison test
- All necessary reagents and consumables provided
- Simple to use and provided with a full instruction manual

00970013 Combined Oil Test Kit

Reagents & Spares

00970014 Water in Oil Reagent Pack (50):

2 x Reagent A (500ml)

1 x Reagent B (EasySHIP) (50)

00970014 Water in Oil Reagent Pack (50):

2 x Reagent A (500ml)

1 x Reagent B (EasySHIP) (50)

00970014 TBN Reagent Pack (50)

1 x Reagent C (500ml)

00970016 Insolubles Spot Test



00970017 Salt Water Contamination Test

00970018 Viscosity Comparison Test - Viscostick

00970001 Test Cell/Kit Cleaner (250ml)

00970002 Battery for Test Cell

00970003 Set of O-Rings for Test Cell

00970022 Combined TBN & Water in Oil Test Cell

FUEL OIL TEST KITS

COMPATIBILITY TEST KIT

The compatibility tester will quickly identify potential fuel stability problems and will also rapidly determine if a fuel is compatible with existing fuel stocks

00970023 Electronic Compatibility Test Kit

- Range: As per ASTM D4740
- Accuracy: Variation of 1 rating in 20 repeat tests
- Test Time: 20 minutes (unattended)
- Identifies possible stability problems before mixing fuels, which gives peace of mind when accepting fuel deliveries
- Prevents sludge deposits, failure of fuel handling systems and costly combustion related engine damage

Reagents & Spares

00970024 Chromatography Papers (100)

00970025 Compatibility Tubes Pack (10)



FUEL OIL TEST KITS

THE FUEL OIL TEST CABINET

Comprises

- Water in oil test
- TBN test
- Density test
- Insolubles test
- Salt water determination test
- Heated viscosity test
- All necessary reagents and consumables provided
- Simple to use and provided with a full instruction manual



00970026 Marine Fuel & Lube Test Cabinet

Reagents & Spares

00970000 Water in Oil Reagent Pack (50):

2 x Reagent A (500ml)

1 x Reagent B (EasySHIP) (50)

00970028 TBN Reagent Pack (50)

1 x Reagent C (500ml)

00970029 Insolubles Spot Test

00970030 Salt Water Contamination Test

00970031 Hydrometer 820 – 880 kg/m³

00970032 Hydrometer 880 – 940 kg/m³

00970033 Hydrometer 940 – 1000 kg/m³

00970034 Hydrometer 1000 – 1060 kg/m³

00970001 Test Cell/Kit Cleaner (250ml)

00970002 Battery for Test Cell

00970003 Set of O-Rings for Test Cell

00970022 Combined TBN & Water in Oil Test Cell

FUEL OIL TEST KITS

DENSITY METER

The **electronic density meter** is supplied with four hydrometers. Density is measured at 50°C and directly converted to 15°C, giving fast, accurate results. No calculation is required.

The **electronic density meter pro** uses the Archimedes principle. It does not need any hydrometers and the oil can be measured at any temperature as long as it is liquid. This meter measures and displays the temperature of the liquid at the same time and converts the density automatically to 15°C.

00970008 Electronic Density Meter

- Range: 800 – 1010 kg/m³
- Accuracy: +/- 0.5%

00970009 Electronic Density Meter Pro

- Range: 600 – 1300 kg/m³
- Accuracy: +/- 0.1%

Reagents & Spares

- 00970035 Hydrometer 820 – 880 kg/m³
- 00970036 Hydrometer 880 – 940 kg/m³
- 00970037 Hydrometer 940 – 1000 kg/m³
- 00970038 Hydrometer 1000 – 1060 kg/m³
- 00970001 Test Cell/Kit Cleaner (250ml)



FUEL OIL TEST KITS

VISCOSITY METER

Measuring the oil viscosity provides an early detection of contamination, fuel ingress and shear thinning.

Suitable for all mineral oils or fuels down to 1.5 cSt up to 999 cSt (heated viscometer only)

Allows to calculate the combustion performance (CCAI) of fuel or injection/storage temperature.

The **heated viscosity meter** can measure at 40, 50 or 80°C and can correct to 40 or 50°C. Measuring the viscosity at 80°C allows to measure the viscosity index. It also allows to measure very high viscosities with pin point accuracy.

00970020 Electronic Heated Viscosity Meter

- Range: 1.5 – 999 cSt @ 40/50/80 °C
- Accuracy: +/- 2% or +/- 2 cSt



FUEL OIL TEST KITS

BUNKER SAMPLER

Sizes from 2" - 14" product numbers according to size:

00970062– 00970074

- GL Approved Certificated Bunker Sampler
- Stainless steel
- Compliant with IMO MARPOL 73/78 Annex VI
- Manufactured under strict ISO 9001 standards
- Weight optimized
- Simple to install
- Comprehensive range of consumables and sampling equipment
- Cubitainer and sample bottles ex.stock

00970019 Fuel Sampler

Size: 2" – 14"

Compliant with ISO 3170



Bunker Storage Cabinet

A robust, fully lockable metal cabinet which allows the safe and secure sample storage according to the regulations.

Everything you need is provided in the same cabinet ensuring compliance with IMO MARPOL 73/78 Annex VU regulations

00970021 MARPOL Bunker Cabinet

40 x Sample bottles and mailer kit
45 x MARPOL fuel sample label
45 x Clear adhesive MARPOL over label
40 x Seals for bottles and sampler
24 x Cubitainer (5 Litre)
1 x Log book

Cubitainers

00970039 Cubitainers – 5 Litre (24) – Neck 38 mm HDPE
00970040 Cubitainers – 10 Litre (24) – Neck 38 mm HDPE

Sample bottles

00970041 Sample Bottle & Mailer Kit 1000 ml (40) – Neck 54 mm HDPE
00970042 Sample Bottle & Mailer Kit 1000 ml (70) – Neck 54 mm HDPE
00970043 Sample Bottle & Mailer Kit 500 ml (40) – Neck 54 mm HDPE
00970044 Sample Bottle Pack 500 ml (70) – Neck 54 mm HDPE
00970045 Sample Bottles 120 ml (250) – Neck 38 mm PETG
00970046 Sample Bottles 100 ml (288) – Neck 38 mm PETG
00970047 Sample Bottles 100 ml (288) – Neck 38 mm HDPE
00970048 Sample Bottles 50 ml (360) – Neck 28mm HDPE

Sampling Accessories

00970049 Vacuum Pump 28mm Neck
00970050 Vacuum Pump 38mm Neck
00970051 Adapter for 500/1000 ml Sample Bottle – Suitable for 38 mm Neck
00970052 Sample Extraction Tube – About 15 Metres
00970053 Fuel Sample MARPOL Label (180)
00970054 Fuel Sample MARPOL Label (990)
00970055 Clear Adhesive MARPOL over Label (100)
00970056 Cubitainer Adapter for DNV Sampler
00970057 Sampler Adapter for DNV Bottles
00970058 Sampler Gauge
00970059 Elbow Kit for 45° Elbow
00970060 Elbow Kit for 90° Elbow

FUEL OIL TEST KITS

OIL TEST CENTRE

The electronic oil analysis centre provides the very best in on-site real time analysis based on the following parameters:

- Viscosity: Range: 1.5 – 999 cSt @ 40/50/80 °C
- Insolubles: Range 0 – 2.4 Vol%
- Total Base Number: Range: 5 – 100 TBN
- Total Acid Number: Range 0 – 6 AN
- Water in Oil: Ranges: 0 – 1%, 0 – 10% or 0 – 1500ppm, 0 – 6000ppm

The electronic oil analysis centre is supplied with all necessary reagents, consumables and clear instructions, which will provide the necessary test equipment for key lubrication oil control.

00970075 Electronic Oil Analysis Centre





These services are available to all ship management companies and vessel owners operating their vessels through any United Kingdom port.

- ON-BOARD WATER TESTING AND SERVICES
- FRESH WATER SAFETY PLAN
- CREW DRUG & ALCOHOL TESTING
- LABORATORY ANALYSIS
- SUPER YACHT SURFACE DRUG TESTING
- MANAGEMENT SERVICES

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ONBOARD WATER TESTING AND SERVICES

Star International now offer a new comprehensive on-board water testing service with associated services. This service is available to all ship management companies and vessel owners operating their vessels through any United Kingdom port.

All on-board sampling is performed by qualified water treatment engineers who will collect the necessary samples in sterile containers and will then send off the samples to our retained laboratory for analysis within the sensitive time frames required.



Star International can cater for any vessel specific requirements for testing. Our standard microbiological and water chemistry analysis are as follows:

00960021 Potable Water Microbiological Analysis (Per System) Includes:

Aerobic Bacteria (2 Day @ 37°C), Aerobic Bacteria (3 Day @ 22°C), Clostridium Perfringens, Coliforms & E.coli, Enterococci, Legionella and Pseudomonas.

00960022 Potable Water Chemistry Analysis (Per System) Includes:

Ammonia, Alkalinity, Aluminum, Boron, Bromate, Calcium, Chloride, Chlorine, Conductivity, Colour, Copper, Fluoride, Hardness, Iron, Lead, Magnesium, Manganese, Nitrate, Nitrite, pH and Turbidity.

Results Obtained

All results would then be reported back to the ship Management Company or vessel directly, after being analyzed by Marine Testing Solutions. All results are certificated by our retained UKAS (United Kingdom Accreditation Society) approved laboratory.

Out of Specification Results

For any 'out of specification' results obtained, Marine Testing Solutions are able to offer any remedial work that may be required. This could include:

- Cleaning and chlorination of the potable water tank and associated distribution system.
- System repairs and/or upgrades.
- Cold water storage tank relining, repainting or replacement.
- Hot water system descaling and/or replacement.

Star International also understand that any remedial work undertaken may be required to be completed in 'out of hours' circumstances to meet with any vessel departure requirements.

FRESH WATER SAFETY PLAN

To comply with the MLC (Maritime Labour Convention) (2006) and MCA (Maritime and Coastguard Agency) MGN 397, Marine Testing Solutions can assist with the creation of the required fresh water safety plan (FWSP).

For UK flag state vessels the MLC (2006) enters into force on the 7th August 2014 and by this date you will be required to have in place a fresh water safety plan.

The most effective means of ensuring safety of the fresh water supply is through the use of a risk assessment and management approach that covers the whole process from loading, storage and to the delivery at the tap and or shower.



Star International can offer vessel specific fresh water safety plans which will consist of:

- System assessment and hazard analysis
- Management plan and control measures
- Monitoring and control scheme
- Annual review

The fresh water safety plan can be offered as part of the management service, offering both vessel owners and ship management companies peace of mind that the testing regime implemented is being monitored and reviewed. This will also demonstrate that each of your vessels are performing the required testing for the MLC 2006 and that replacement consumables are supplied when required, as these are managed as part of the management system.

Other Testing Requirements

We are able to support all systems on-board for analysis if required. For example, confirmation of an oil in water contamination of the ballast water system.

For more details and to obtain a quotation please call our sales team on +44(0) 1244 504 500 or contact us at enquiries@star-international.co.uk

Key products and services:

- Marine chemicals
- Refrigeration and air conditioning
- Firefighting equipment and services
- Marine safety equipment
- LSA liferaft service and repair
- EndoSan wide-spectrum disinfectant
- Marine fuel testing and treatment
- Instrument calibration
- Marine gas detectors
- First aid and medical gases
- Jet washers
- Lorry loader and quayside services
- Narwhal Rigid Inflatable boats
- Welding equipment and services

Star International

Head Office: Star House, Turbine Business Park,
Turbine Road, Birkenhead, Merseyside CH41 9BA
United Kingdom

Birkenhead: +44 (0) 1244 504 500

Email: enquiries@star-international.co.uk

Web: www.star-international.co.uk

