AKEBONO

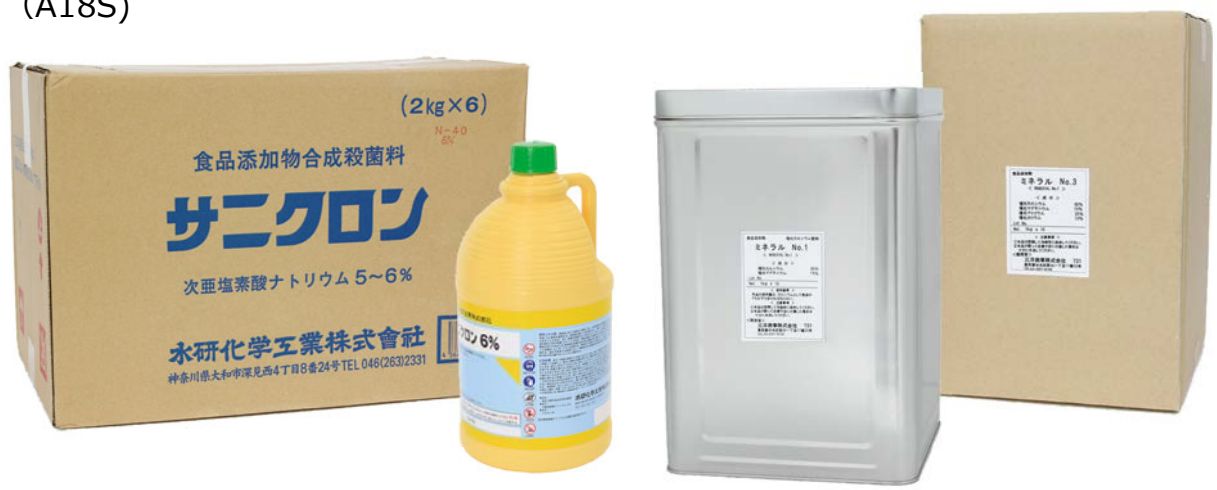
SHIP DRINKING WATER ADDITIVE

CHLORINE・MINERAL・INHIBITOR

To keep safe of ship drinking water, inject ship drinking water additives and manage concentration.

A Chlorine is 1 bottle, minerals and inhibitors are quantified in subdivision bags. According to the effect by the additives, it is possible to safe drinking water.

CHLORINE (SANICHLON 6%)	・・・	Sterilization treatment・Anti-corruption
MINERAL (MINERAL No.1・2・3)	・・・	Hardness adjustment・Electrolyte supply
INHIBITOR (A18S)	・・・	Piping protection・Red water prevention



Criteria for keeping ship drinking water safe

● Maintain the chlorine concentration of residual chlorine of 0.5 mg / L or more.
Sterilization of pathogens, suppression of legionella bacteria, and prevention of water spoilage.

● Maintain the mineral hardness of 60 mg / L or less.
Prevent piping corrosion, feed electrolyte to drinking water.

● Maintain the phosphate concentration of an inhibitor 5.0 mg / L or less.
Prevention of corrosion of piping by phosphate coating.

■ The World Health Organization (WHO) is an organization that demonstrates global leadership in the United Nations system and instructs and coordinates health care.

■ The International Maritime Organization (IMO) aims to prevent the safety and marine pollution of vessels engaged in international trade as UN related organizations.The World Health Organization and the International Maritime Organization are in a cooperative relationship through a global partnership within the International Health Regulation (IHR)
Drinking Water Quality Guidelines (GDWQ) and Ship Sanitation facilities Guidance (GSS) are used as a reference in order to keep drinking water of ships safe.

■ Rust inhibitors are based on the Japan Water Supply Rust Preventive Association.
(guideline for rust preventives for water supply).

AKEBONO CHEMICAL CO.,LTD.

■Chlorine　Food additive

Product name	SANICHLON	
Ingredient	sodium hypochlorite(NaClO) 6%	
Quantity (1 box)	2kg x 6bottles	5kg x 4bottles

■Inhibitor　Ministry of Health, Labor and Welfare Certification

Product name	A18S
Ingredient	Phosphate (P_2O_5) 60%
Quantity (1can)	1kg x 18bags

■Mineral　Food additive material

Product name	MINERAL No.1	MINEARAL No.2	MINERAL No.3
Ingredient	Calcium chloride ($CaCl_2 \cdot 2H_2O$) 85% Magnesium chloride ($MgCl_2 \cdot 6H_2O$) 15%	Sodium hydrogen carbonate ($NaHCO_3$) 80% Dipotassium phosphate (K_2HPO_4) 20%	Calcium chloride ($CaCl_2 \cdot 2H_2O$) 38% Magnesium chloride ($MgCl_2 \cdot 6H_2O$) 14% Sodium chloride ($NaCl$) 35% Potassium chloride (KCl) 13%
Quantity (1can)	1kg x 16bags	0.7kg x 20bags	0.8kg x 20bags

■CHLORINE

2kg　5kg　1 box (cardboard box)

■MINERAL

No.1 1kg x 16bags
No.2 0.7kg x 20bags
No.3 0.8kg x 20bags

Subdivision bag

Storage Cans

Cardboard box (packing style)

■INHIBITOR

Subdivision bag 1kg x 18bags

Storage Cans

Cardboard box (packing style)

Basic knowledge of sterilization and mineral

Disinfectant · Residual chlorine · · · Sterilization treatment using sodium hypochlorite, residual effect and easy concentration measurement

Mineral · Hardness · · · Demineralized water has invasiveness to piping and it needs re-curing. Add mineral No. 1.

Mineral · Electrolyte · · · Mineral No. 1 can supply calcium (Ca +), magnesium (Mg +), chloride (Cl -).By adding mineral No. 1 to mineral No. 2, Calcium (Ca +) magnesium (Mg +), chloride (Cl -), sodium (Na +), potassium (k +), bicarbonate (HCO 3 -) , Phosphate (HPO 4 -) can be supplemented.Mineral No. 3 contains calcium (Ca +), magnesium (Mg +), chloride (Cl -) sodium (Na +) Potassium (k +).

Electrolyte· · · 60% of human body is composed of water (extracellular fluid, internal liquid), and inorganic salts(Na +, K +, Cl -, etc.) contained in extracellular fluid and internal liquid are called electrolytes.
Extracellular fluids include gastric juice, intestinal juice, feces, sweat, and the like.

Moisture balance· · · The balance of the body can be kept as good as the water intake amount (drinking water, food, metabolism) and the discharge amount (urination, sweat, feces) are equal.

Moisture deficiency dehydration · · · State where moisture is lost during rest and exercise. Plasma osmotic pressure rises, symptoms such as thirst, urination reduction, excitement occur.In order to supplement moisture to the cell, take a low osmotic pressure drink of sodium (Na +), potassium (K +) concentration.

Na deficiency dehydration · · · During sweating, diarrhea, vomiting in hard exercise, sodium salt (Na +, Cl -) in sweat, gastric juice, intestinal fluid, Potassium (K +) and bicarbonate (HCO 3 -) are lost in large amounts. Circulating blood volume decreases, symptoms such as headache, dizziness, blood pressure lowering vomiting occur. It is recommended to take a salt-rich beverage with osmotic pressure close to that of plasma.

Inhibitor· · · Chelate effect by phosphoric acid film blocks metal ions to prevent red water.

Ultraviolet (UV) sterilization · · · Sterilization to Cryptosporidium is effective, but there is no residual effect, and it is effective to use in combination with sodium hypochlorite sterilization.

UF membrane (ultrafiltration) · · · Precision filtration treatment with hollow fiber membrane. Bacteria and viruses such as Escherichia coli and Cryptosporidium can be separated, and compared to the RO membranes, the water flow efficiency is high, and backwashing treatment can be carried out in the field.

Intestinal hemorrhagic Escherichia coli · · · The most common symptoms of shipboard waterborne infections and contaminated supply water is involved. Sodium hypochlorite disinfection is effective.

Consumables · Related products

●Drinking water sterilizetion unit
●ASU-R

●ASU-H

●Filter Housing
●ASU-CH

●Filter
●ASU-CF250
●ASU-CF500

●Injection Pump
●ACFA TYPE

●Ship water quality measuring instrument
●Ship water quality measurement reagent

●Specifications or appearance are subject to change without prior notice for improvement.　●In pamphlets and actuals, colors may differ depending on the printing.

Manufacturer

AKEBONO CHEMICAL CO.,LTD.

624-2 Hongo Tokorozawa -city
Saitama 359-0022 Japan
TEL +81-4-2968-3401
FAX +81-4-2968-3402
https://www.akebono-kagaku.co.jp

Sales agency