SEACLEAN
Powerful Solvent Based Cleaning Agent for Tank Cleaning at Sea

Technical Information

Physical Data

Appearance:	Clear amber liquid
Apparent Specific Gravity:	0.90 at 20°C
Flash Point:	More than 70°C (158°F)
Corrosive Action:	Metals and Coatings: None
	Rubber: Slight swelling

Description

A potent emulsifying cleaning agent designed for removing heavy crude oil, soot, asphalt, and carbon black stains using direct injection, the sea-clean method, spraying, and/or recirculation. It is based on aliphatic/aromatic hydrocarbons and ethoxylated iso-alcohol surface-active agents. This product reduces washing times by 50% and typically requires only slight agitation. It is safe for use on common metals.

Applications

▸ **Tanks**: Uniservice SEACLEAN is suitable for removing most mineral oils and fats in cargo and storage tanks.

▸ **Double Bottom Tanks**: SEACLEAN can be employed for cleaning and gas freeing of double bottom tanks. The rolling motion of the ship usually provides sufficient agitation.

Directions for Cleaning of Cargo and Storage Tanks

Pre-wash
Before cleaning with SEACLEAN, it is advisable to prewash tanks with hot water at approximately 50°C, except for crude oil, drying, and semi-drying oils, where a prewash with cold water is recommended.
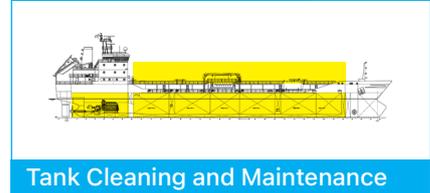
Direct Injection Method for Cargo Tanks
Inject undiluted SEACLEAN at a predetermined rate into the pressure side of the automatic tank cleaning system line on deck using an air-operated drum (barrel) pump. Typically, an injection rate of 0.1-0.2 liters of SEACLEAN per 100 liters of tank wash water is sufficient. The cleaning time is 2-6 hours, followed by rinsing with water.

Tank Cleaning Procedure from DPP to CPP/Gas Free
1. Butterworth for 2-3 hours with seawater close to a maximum temperature of 50°C.
2. Butterworth for 2 hours with seawater close to 60° to 70°C in a second round.
3. Create a mixture (5%) of SEACLEAN in a slop tank, maintain the water mixture temperature around 80°C, and use this water for recirculation inside the cargo tanks. Each tank should be recirculated for about 2 hours, and you may need to change or create a new solution when the water inside the slop tank becomes very black.
4. Butterworth for 1-2 hours with hot (80°C) seawater.

Tank Cleaning and Maintenance

IMO APPROVED
MEPC.2 ANNEX 10

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5. Check the tank for sludge. If sludge is present, you may need to vent, gas-free, and then manually de-muck the cargo tank before giving it another 1 hour of hot seawater wash.

6. Rinse with fresh water for 30 minutes at ambient temperature, followed by ventilation, mopping, drying, and de-mucking as necessary.

Hand Spraying Method

Spray undiluted SEACLEAN onto bulkheads, frames, stringers, longitudinals, etc., using an air-operated drum pump connected to a delivery hose and a hand spray gun. After a predetermined reaction time, tanks should be rinsed with water using automatic tank washing machines. For spot cleaning, use a hand-held hose for rinsing, such as a fire hose with a nozzle. The Hand Spraying Method is cost-effective in terms of chemical consumption but requires tanks to be gas-free, enabling personnel to enter the tanks. However, the practical time limitation depends on tank sizes and the total tank surface to be sprayed.

At Sea Cleaning Method (for Double Bottom Tanks)

Time, temperature, and agitation of the chemical solution are crucial factors for the successful cleaning of double bottom tanks.

1. Heat the tank to a higher than normal temperature, pump out as much fuel as possible, and trim the vessel to ensure complete stripping.

2. Close all valves on the engine room manifold.

3. Introduce the first dose of SEACLEAN through the sounding pipe in accordance with the dosage table stated below and fill the tank to 25% of its capacity with seawater. It is advised not to use the ballast lines for filling the tanks, as they may contain fuel oil, making cleaning more difficult.

4. Heat the cleaning solution to a minimum of 60°C and maintain the temperature for 48 hours. If heating coils are not available, live steam may be used for heating the solution and maintaining the temperature.

5. Empty the tanks completely, fill them to 50% capacity, and empty them again. For single-stage cleaning, the previous steps are ignored.

6. Add the second dose of SEACLEAN and fill the tank with seawater to 50% of its capacity, continue heating and maintain at this level for 48 hours.

7. Add further seawater to fill the tank to 75% capacity, continue heating and maintain for another 48 hours.

8. Empty the tanks and pressure rinse with clean water through sounding pipes for 1–1 hour under continuous stripping. Pressure should be kept as high as

safety permits.

9. When rinsing is completed, stop the discharge (stripping) pump and fill the tank until clear water runs from sounding pipes on the deck.

10. Stop the water supply and empty (strip) the tank. Trim the vessel to ensure complete stripping.

Note: If tanks are not severely contaminated and/or the fuel oil viscosity is lower than 180 cSt at 50°C, the cleaning process should be in one stage using steps 5-10 only.

Properties

SEACLEAN contains a highly concentrated blend of aromatic solvents, emulsifiers, and surface-active ingredients. It can be emulsified with water to a maximum of 50%. When undiluted at room temperature or in emulsions with water up to 6% at a maximum temperature of 60°C, it can also be used on plastic materials, epoxy, and zinc silicate coatings.

Dosage Table			
Tank Capacity	SEACLEAN (liters)		
ton	min	normal	max
2.5	2	4	6
5	4	8	12
10	8	16	24
15	12	24	36
20	16	32	48
25	20	40	60
30	24	48	72
40	32	64	96
50	40	80	120
75	60	120	180
100	80	160	240
200	160	320	480
250	200	400	600
300	240	480	720
400	320	640	960
500	400	800	1200
600	480	960	1440
700	560	1120	1680
800	640	1280	1920
900	720	1440	2160
1000	800	1600	2400

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Health Safety and Environment (HSE)

Uniservice Unisafe Srl have carefully developed their products to minimize the safety risks and environmental impact of using their products. However, Uniservice advises that, prior to using its products, users should read in detail the accompanying Safety Data Sheet and ensure that its products are applied within the required HSE regulations of the country in which the user operates. Best practice and safety requirements should be followed which will likely include method statements and risk assessments, together with any specific requirements of the user's own company HSE requirements.

Important Notice

While the descriptions, designs, data and information contained herein are presented in good faith and believed to be accurate, this information is provided for your guidance only. Because many factors may affect processing or application/use, we recommend that you do a test to determine the suitability of a product for your particular purpose prior to use. No warranties of any kind, either expressed or implied, including warranties of merchantability or fitness for a particular purpose, are made regarding products described or designs, data or information set forth, or that the products, designs, data or information may be used without infringing the intellectual property rights of others. In no case shall the descriptions, information, data or designs provided be considered a part of our terms and conditions of sale. Further, you expressly understand and agree that the descriptions, designs, data and information furnished by Uniservice Unisafe Srl hereunder are given gratis, and Uniservice Unisafe Srl assumes no obligation or liability for the description, designs, data and information given or results obtained, all such being given and accepted at your risk. Product images are for reference purposes only.

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