Unitor™ Seaclean Plus™ is a modern low-toxic, biodegradable solvent based product. This product is excellent as a tank cleaner and degreaser.

### Product information

Unitor™ Seaclean Plus™ meets IMO's requirements regarding safety and pollution hazards of chemicals.

### Features

- The emulsifying agents in this product are biodegradable
- Does not contain nonylphenol ethoxylates or other estrogenic compounds
- Versatile, can be used for a wide range of applications.
- Easy to use by any conventional means
- Can be used for cleaning and gas-freeing of double bottom, deep, and fuel oil tanks at sea
- Can also be used for cleaning and gas-freeing of crude and refined mineral oil cargo tanks
- Can be used for degreasing and cleaning of bilge spaces and engine rooms
- Safe to use on most metal surfaces, painted surfaces and tank coatings

### Benefits

- Highly concentrated tank cleaner with quick penetration and powerful emulsifying properties
- Easy rinse off, leaving clean and oil-free surfaces
- Economical, very low dosage rates

### Specification

#### General

| Invent Hazard Material (IMO/EU) classification | C-49 |

#### Physical properties

<table>
<thead>
<tr>
<th>Appearance</th>
<th>Pale yellow</th>
</tr>
</thead>
<tbody>
<tr>
<td>Density [g/ml]</td>
<td>0.8</td>
</tr>
<tr>
<td>Flash Point [°C]</td>
<td>Above 61</td>
</tr>
<tr>
<td>Form</td>
<td>Liquid</td>
</tr>
</tbody>
</table>

#### Performance data

| Pump Speed [cpm] |

#### Variants

<table>
<thead>
<tr>
<th>Product name</th>
<th>Product number</th>
</tr>
</thead>
<tbody>
<tr>
<td>SEACLEAN PLUS 210 LTR</td>
<td>654723</td>
</tr>
<tr>
<td>SEACLEAN PLUS 25 LTR</td>
<td>654715 [supersedes 571406]</td>
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</table>
Approvals

*Unitor™ Seaclean Plus™ has been evaluated by the BLG Working Group on the Evaluation of Safety and Pollution Hazards of Chemicals (ESPH) and found to meet the requirements of paragraph 13.5.2 of the MARPOL Annex II and is consolidated into annex 10 of the MEPC.2/Circular. * This composition meets the criteria for not being harmful to the marine environment according to MARPOL Annex V and may be discharged into the sea when used to clean cargo holds and external surfaces on ships.

Directions for use

Direct injection method - for tank cleaning machines
The dose rate should be between 0.1-0.2% i.e.1-2 litres per ton wash water.

Recirculation method - for tank cleaning machines
It is advised to use a solution of 0.1-0.2% i.e. 1-2 litres per ton wash water mixed in the tank to be cleaned.

Dose rates and results will vary depending on contamination, the temperature of the cleaning solution, and number of tanks to be cleaned with the solution. Best results are obtained when water is heated to a temperature between 65-80°C.

Spot cleaning
Unitor™ Seaclean Plus™ can be sprayed neat onto tank surfaces to be cleaned. The contact time should be at least 30 minutes. Bulkheads/walls can be washed down by use of tank washing machines or high pressure cleaning machines. The best result is achieved with hot water between 60-80°C. Slops should be constantly stripped from the tank and transferred to a holding tank or pumped ashore to slop tanks.

Rock and Roll method

1. Cleaning of double bottom tanks during voyages.
2. Heat the remaining fuel in the tank, trimming the vessel as required to assist in stripping tank.
3. Flush tank with sea water, stripping constantly.
4. After flushing, ensure all suction and discharge valves in the engine room are closed.
5. Dose tank with Unitor™ Seaclean Plus™ through the sounding pipe or manhole between 0.5 - 1 litre per ton of water, for 75-80% of capacity of tank to be cleaned.
6. Fill tank to 25% capacity with sea water, raise the temperature up to 60°C and maintain this for 24 hours.
7. Top up tank to 75-80% capacity with sea water and continue to heat for 48-72 hours.
8. Discharge and strip tank. Fill to 50-60% capacity with sea water and allow 2 hours rinsing time.
9. Discharge tank and strip, flushing tank with sea water for 2 hours, stripping continuously. When completed, inspect tank to ascertain if second cleaning is required. If so:
10. Add second dose of Unitor™ Seaclean Plus™, fill tank to 75-80% capacity with sea water and raise the temperature to 60°C maximum. Maintain this for 48-72 hours. In calm seas recirculate the solution in tank as long as possible.
11. Discharge and strip tank, flush with sea water, stripping continuously for 2 hours. To gas-free, fill tank with sea water to overflow through vents and sounding pipes, discharge and strip completely.

Rock and Roll cleaning dosage chart

<table>
<thead>
<tr>
<th>Fuel Oil Viscosity Centistokes at 50 degrees celsius</th>
<th>SEACLEAN PLUS per ton of water 1st Stage</th>
<th>SEACLEAN PLUS per ton of water 2nd Stage</th>
</tr>
</thead>
<tbody>
<tr>
<td>180 to 320</td>
<td>1 litre</td>
<td>0.75 litre</td>
</tr>
<tr>
<td>30 to 180</td>
<td>0.75 litre</td>
<td>-</td>
</tr>
<tr>
<td>Over 320</td>
<td>1 litre</td>
<td>1 litre</td>
</tr>
<tr>
<td>Up to 30</td>
<td>0.5 litre</td>
<td>-</td>
</tr>
</tbody>
</table>

Degreasing Marine Diesel Engine Cooling Water Systems

(This method can only be used when engine is out of service)

1. Drain the cooling system and flush with water.
2. Refill engine with water adding 20 litres Seaclean Plus per 1000 litres cooling water.
3. Circulate the solution through the system and heat until a temperature of about 60°C.
4. Continue circulation of the solution through the system for a minimum of 5 hours.
5. Drain engine and check the cleaning result. Repeat cleaning procedure if necessary.
6. When cleaning is completed, drain the system, and thoroughly flush with clean water. Refill while adding an anticorrosion treatment such as NALFLEET™ Rocor NB Liquid™

Unitor™ Seaclean Plus™ can also be used for local cleaning and degreasing in engine rooms and on deck. It can be applied by brush, hand spray, immersion soaking or any other conventional means. Apply undiluted onto soiled surfaces and allow a contact time of 15-30 minutes before rinsing off with water.
Soak method
Immerse heavily soiled parts into bath of undiluted Unitor™ Seaclean Plus™, medium to light soiled parts may be cleaned in a 10-30% solution in water. Parts should be soaked for at least 30 minutes before washing off with water.

Spray method
Spray Unitor™ Seaclean Plus™ undiluted onto soiled areas. Allow between 15-30 minutes of penetration time before rinsing off with water.

Related products
Is frequently bought together with

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
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<th>Description</th>
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</thead>
<tbody>
<tr>
<td>571489</td>
<td>TANKLEEN ADVANCE 210 LTR</td>
<td>766097</td>
<td>TANKLEEN BRIGHT 190 LTR</td>
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<tr>
<td>736983</td>
<td>UNIPOL 210 LTR</td>
<td>765018</td>
<td>ENVIROCLEAN 25 LTR</td>
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<tr>
<td>575613</td>
<td>AQUABREAK PX 25 LTR</td>
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