



TRANS ATLANTIC DIESELS, INC.



PROTECT AGAINST OVERHEATING WITH A HAMMERHEAD MARINE DESCALER FLUSH

Did you know?

- Marine Bio-Growth occurs more quickly with regular engine use
- It takes as little as 1/64" of scale barrier to impact engine cooling
- Less than optimum engine cooling can affect fuel economy and horsepower before overheating notifications occur
- Marine Bio-Growth occurs in all raw water cooling systems



Fouled Heat Exchanger

Why flush your cooling system regularly with Hammerhead Marine Descaler?

- Provides a cost effective method for cleaning cooling systems between maintenance intervals
- Provides for optimum cooling performance when out at sea
- Bio-Preferred solution contains no harsh acids and will not harm critical metals or soft materials, even with regular use
- Protects your investment



After closed loop flush using Bright Bay's Hammerhead Marine Descaler



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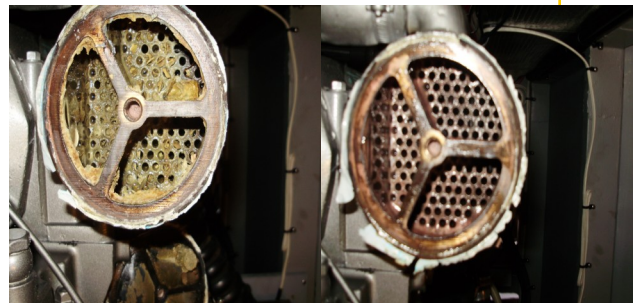
Hammerhead Marine Descaler



The Clear Solution for Keeping Water Systems Operating at Peak Performance!

Hammerhead Marine Descaler is a safe, efficient, cost effective solution for the removal of barnacles, mussels, calcium, lime and other mineral growth from marine heat transfer equipment, engine water jackets, A/C systems and ancillary equipment.

- Powerful enough to dissolve concrete, yet gentle on employees, equipment and the environment.
- Free from harsh acids such as hydrochloric and phosphoric acid.
- Ideal for ships, boats, drilling rigs, and pleasure craft.
- Clear solution will not stain or mark most nautical surfaces.
- Can be used to clean buildup from exterior drives and hulls.



Before

After

Safe for use on equipment containing:

- | | |
|-------------------|--------------------|
| ✓ copper | ✓ chrome |
| ✓ brass | ✓ glass |
| ✓ iron | ✓ gelcoats |
| ✓ steel | ✓ fiberglass |
| ✓ stainless steel | ✓ wood |
| ✓ bronze | ✓ painted surfaces |

The only product that will not damage aluminum (AL1100) parts.



“Brighter Solutions”

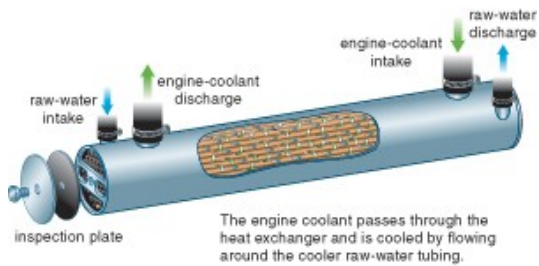
**100% Biodegradable
And Phosphate Free!**





Environmentally Friendly

Hammerhead Marine Descaler is formulated with biobased building blocks derived from renewable resources, making it a significant contributor to the quality and sustainability of life. Hammerhead Marine Descaler is safe for use in harbors and marinas seeking “green” designation.



Advanced

Assembled from EPA recognized environmentally friendly elements, Hammerhead Marine Descaler is one of the most innovative descaling agents on the market today. Its clear, odor free solution makes working in tight places a snap.

Versatile

Hammerhead Marine Descaler may be used to

- Flush all types of cooling systems using a closed loop recirculation process.
- Clean parts through immersion in a dip tank.
- Spray and rinse exterior surfaces with a low pressure pump sprayer. Simply rinse with water when complete.



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Technical Bulletin



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Hammerhead Marine Descaler BioPreferred® Scale Remover And Cleaner

Hammerhead Marine Descaler is a BioBased Descaling Solution designed for use in closed loop circulation and parts tank cleaning of Marine Heat Exchangers and related equipment. The natural cleaner is free from mineral acids known to compromise equipment integrity and cause environmental hazards.

Hammerhead Marine Descaler is ideal for the following:

✓ Heat Exchangers	✓ Air Conditioning Coils
✓ Oil Coolers	✓ Refrigeration Coils
✓ Charge Air Coolers	✓ Condensers
✓ Keel Coolers	✓ Cooling Towers
✓ Boilers	✓ Evaporators
✓ Radiators	✓ Turbines
✓ Valves and Pipes	✓ And more

Broad Spectrum Application: Hammerhead Marine Descaler is a broad spectrum cleaning solution that responds to calcium, marine growth, oil, grease, grime and other targets. It is designed specifically for applications where protection of metals and soft materials is required. Safe for use on:

✓ Aluminum (the only commercial descaler available)	✓ Stainless Steel 304 & 316
✓ Copper	✓ Iron
✓ Cupro-Nickel	✓ Natural Rubber
✓ Titanium	✓ Nitrile
✓ Bronze	✓ Plastics
	✓ And more

Prevention: This solution may be used frequently to clear passages without risk of material degradation. Regular cleaning of equipment can reduce the risk of excess wear, direct damage and full system failure due to poor heat transfer and restricted fluid flow.

Safety: Reduce hazardous chemical storage and use by replacing traditional acids. The non-volatile, non-toxic solution provides safer conditions for employees, equipment, and the environment both in-house and on-site. It is clear and odor free, making it an excellent solution for working in tight spaces.

Typical Properties of Hammerhead Marine Descaler

Properties	Values
Form	Liquid
Grade	Food
Density g/ml	1.05 - 1.07
pH @ 25°C	1.7 – 2.2
Boiling Point/Range	105°C
Flash Point, COC, °C	N/A
USDA BioPreferred® Certification	Yes

**Property values listed are representative values and are not specifications.*

BioPreferred®: Hammerhead Marine Descaler is certified in accordance with ASTM D6866 for biobased content and awarded product labeling and federal purchasing rights through the USDA BioPreferred® Program. It is made from Food Grade materials identified by the EPA as GRAS (Generally Regarded As Safe) and is classified non-toxic to people and the environment.

Non-Hazardous: Hammerhead Marine Descaler passes all of the following:

EPA SARA Title III

- ✓ Sec 302 extremely hazardous – None
- ✓ Sec 304 CERCLA hazardous substances – None
- ✓ Sec 312 hazard class- None
- ✓ Sec 313 toxic chemicals – None

Carcinogen

- ✓ OSHA – No, NTP – No, IARC-No

Regulatory

- ✓ DOT – Non-hazardous, non-regulated
- ✓ Clean Water Act Table 117 hazards - None



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