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MARINE FUEL SPECIALTIES

Enhancing your fleet performance

FUTURE MARINE FUELS – A FRESH APPROACH FOR ADDITIVES

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A DIFFERENT MAKEUP

Residual Marine Fuel - Composition



Paraffinic – straight chain hydrocarbons, often from secondary refinery streams.
Paraffins are prone to rapid oxidation when heated, or drop out as wax in low temperatures.
OctamarTM HF products prevent oxidisation and stabilise these components for a more homogenous fuel

Aromatics – Similar benzene ring structures.

Asphaltenes can remain stable when surrounded by an aromatic portion (Resins, Aromatics) over extended time periods however, in the presence of a significant paraffin mixture, the Asphaltenes begin to 'agglomerate'; growing larger to form sludge in tanks, or attributing to poor combustion.

Octamar[™] HF products target and protect vulnerable Asphaltenes



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Typical blend ratios of modern residual marine fuels show a much higher proportion of the saturate (paraffinic) component in combination with aromatics, which are structurally dissimilar, causing separation and instability. **TSP VS. ISSUES**



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RESIDUAL AGING

Base Fuel SN = 14.5, Poor Asphaltene stability







DETERGENCY - CLEAN-UP & KEEP CLEAN







DETERGENCY - CLEAN-UP & KEEP CLEAN

Before







After











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BOOST FLEET PERFORMANCE

Octamar[™] Ultra HF



	Octamar™ Ultra HF - Performance Improvement	
ECN	Estimated Cetane Number	7 %
МСР	Main Combustion Period	10 %
EMC	End of Main Combustion	5 %
ABP	After Burning Period	5 %



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DETERGENCY - OPTIMUM PERFORMANCE



	Corrected Torque	Corrected Power	Corrected BSFC/Fuel Economy
MTU 183TD	+21.70%	+21.40%	-3.41%
Cummins NT855	+14.02%	+12.42%	-2.66%
Weighted Average*	+16.76%	+17.60%	-3.06%



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Technologies found in

- Octamar[™] HF-10 PLUS
- Octamar™ Ultra HF
- Octamar™ LI-5 PLUS

RESIDUAL AGING

- 100+ fuel and fuel blends tested with >90 % improvement in SN
- Lowest reliable dose rate, for the best results at the lowest treat rate per tonne



	Concentration	Treat rate
Octamar™ HF-10 PLUS	66 ppm	1 litre doses 15,000 litres
Other additives	166 ppm and above	1 litre doses < 6,000 litres

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FUEL EFFICIENCY - STARTS IN THE STORAGE TANK

1MT of VLSFO + Octamar[™] Ultra HF 42 GJ (Gigajoules) of chemical energy



70% improvement in asphaltene stability and retention, reducing sludge produced on-board and increasing the fuel available to the engine.

Improve SFOC by 2,2% and remove the effects incomplete combustion to give a 60% reduction in exhaust deposits.

Octamar[™] Ultra HF is the ultimate chemical solution to unlocking the potential of modern marine fuels. From storage tank to exhaust stack

1MT of VLSFO 42 GJ (Gigajoules) of chemical energy



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The worlds largest fuel specialist covering multiple industries

- Know-how and expertise with synergies between applications
- Broad portfolio of technologies with growing relevance for the Marine industry
 - Cold Flow Improvers
 - Bio-Fuel Stabilisers
 - etc.
- R&T-Capabilities to respond to market needs







CONTACT DETAILS

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THANK YOU!

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