

MARINE FUEL WATCH

The newsletter for Innospec Fuel Specialties

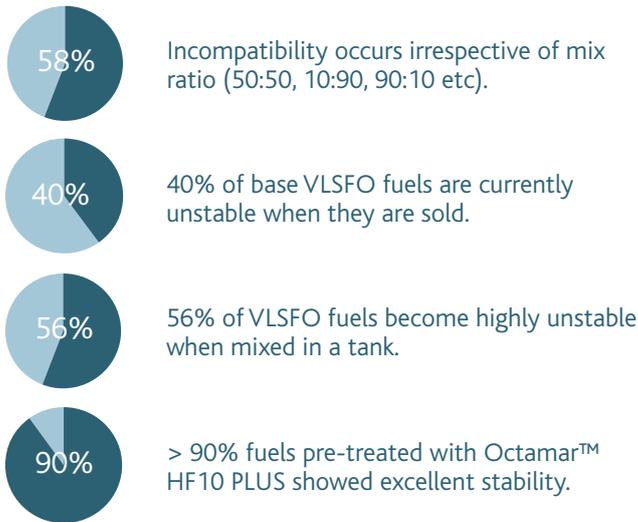


Time's running out to get your refuelling strategy ready for IMO 2020

More fears over VLSFO instability

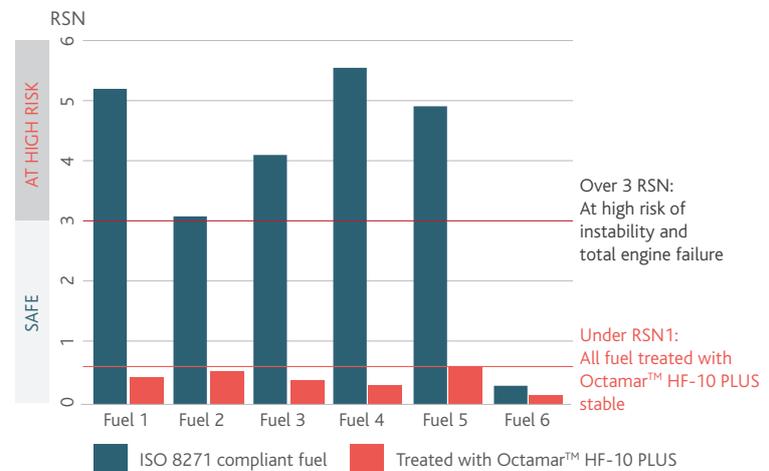
Advice from the major fuel suppliers and our own extensive laboratory testing has confirmed that compatibility and stability in VLSFO will be unpredictable. Many of the ISO 8217 compliant fuels will still cause significant issues on-board.

Over 35 ISO 8217 specification compliant fuel samples were tested, using Turbiscan, for stability and compatibility. The results show:



A sample ISO 8271 compliant fuel is mixed with itself and five other samples in a 90:10 ratio to test for both stability and compatibility. All six fuel samples had a high risk of instability. When tested with the same fuel samples treated with Octamar™ HF-10 PLUS every fuel combination tested positive with no risk of instability. For full test results visit innospecinc.com/IMO2020.

The Turbiscan Reserve Stability test (one of the most widely used tests in marine fuel labs) predicts the likelihood and speed at which a fuel will destabilise and produce excessive sludge. A Reserve Stability Number (RSN) above 3.0 means there is a high risk of instability.



Not all VLSFO is the same

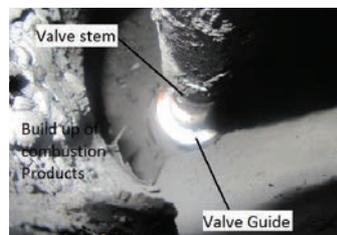
There are vast differences in VLSFO on the market and the quality varies from port to port and batch to batch. Although these fuels are all classified under the same specification, they cannot be stored, handled or heated in the same way.

There are:

- Vast differences in fuel composition purchased under the same ISO category.
- The traditional test methods have proven to be poor predictors of stability in VLSFO.

Total engine failure

These images show just what can happen. This VLSFO was supplied well within ISO 8217 specification. It was loaded into completely clean tanks and fuel system, yet failed within four hours. Total engine failure soon followed. This case is not a one-off. There have been a number of reports of fuel system failure and engine damage when using 'on spec' fuels.



Beware of making an expensive mistake

The cost of VLSFO instability is not just a full tank of fuel. Returning the vessel to port, repairing and cleaning the engine system and refuelling can run into many hundreds of thousands of dollars, before you even factor in operational losses.

Prevention is the only cure

Pre-treating fuel with Octamar™ HF-10 PLUS or Octamar™ Ultra HF is highly effective at stabilising VLSFO. However, it will not reverse sludge formation. Once a fuel has chemically broken down there is no way to reverse the process.

Take action before refuelling

Claims against fuel suppliers are rarely successful if their fuel meets specification. The oil majors have also made it clear they will not take responsibility for fuel stability after a fuel's expiry date. This rests squarely with ship operators. So, for the operators' peace of mind and significantly improved fuel stability, pre-treating fuel with Octamar™ HF-10 PLUS or Octamar™ Ultra HF is the only solution.

What's causing the problem?

To reduce the level of sulphur in fuel, VLSFO typically contains up to 90% distillates. This has been demonstrated through SARA analysis. These distillates most likely come from secondary refining streams to reduce cost and they are highly unstable, more susceptible to aging and prone to rapid oxidation, especially when mixed or heated. The result is a type of sludge formation that is very different from traditional asphaltene sludge. To stabilise it requires a different sort of chemistry.

Innospec offers a unique and cost-effective solution

By pre-treating VLSFO you can solve the problem of fuel instability and tank mix incompatibility. Octamar™ HF-10 PLUS and Octamar™ Ultra HF are the only additives that protect against both distillate sludge and asphaltene sludge.

Octamar™ HF-10 PLUS

Octamar™ HF-10 PLUS keeps your engine running by stabilising fuel blends and reducing sludge formation.

- Improved compatibility when using new fuels or unknown fuels.
- Safer fuel changeovers for ECAs.
- Stable and homogenous fuel ensures improved combustion.
- Reduced sludge means more fuel to burn.
- Higher treat rates combat injector fouling.

Octamar™ Ultra HF

Octamar™ Ultra HF provides a complete solution for VLSFO. It keeps your engine running by improving fuel blend stability and combustion while reducing soot formation.

- Combined combustion and ignition benefits from one additive.
- Cleaner running from powerful additive technology.
- Improved fuel economy and reduced fouling of exhaust gas systems.
- Increased fuel stability and compatibility of marine fuel blends.

Innospec is at the forefront of developing fuel additive technology for a changing world.

Our focus is on supporting the fuel industry as it adapts to new opportunities and challenges. By leveraging our experience and expertise in different markets, we create the reliable, highly functional and extremely competitive packages our customers demand.

Our strength is our knowledge of fuel and how to improve fuel performance for different applications. This always keeps us one step ahead of our competitors. Our products are tried and tested in many different environments whether at sea, on the road or in the air. With a worldwide network spanning 23 countries and 2,000 employees, we can deliver global solutions geared to local customer needs.



Visit [innospecinc.com/IMO2020](https://www.innospecinc.com/IMO2020)
for full test results, more details about IMO 2020 and the challenges.