

# Are your ULSFs (Ultra low sulphur fuel) compatible? Test on-site with CMT's Compatibility Tester to verify fuel compatibility

**Ship owners not using scrubbers or alternative fuels like LNG and traveling in and out of the ECA's now have to change fuels in the ECA's to ULSF or MGO. Although the fuels are kept separately and most of the operators avoid any blending of fuel on board they will face the fact that fuels get mixed in the pipelines, filters and fuel booster modules during the changeover period.**

Mixing two types of fuels can lead to risk of incompatibility between them, particularly when mixing heavy fuel and low sulphur distillate fuels. If incompatibility does occur, it may result in clogging of fuel filters and separators and sticking of fuel injection pumps, all of which can lead to loss of power or even shut down of the propulsion plant, putting the ship at risk.

Compatibility problems can be caused by differences in the mixed fuels stability reserves. If the stability level of the HFO is low there can be difficulties when mixing with more paraffinic, low sulphur fuels and as a consequence the asphaltenes can precipitate of the blend as heavy sludge, causing clogging. [ABS, Fuel Switching Advisory Notice, American Bureau Survey, Houston 2010.]

A blend is regarded as being stable only if it is homogeneous immediately after preparation, remains so in normal storage and at no time produces or tends to produce sludge on a significant scale. If behaving in this way, the fuels forming the blend can be considered as compatible with each other. Incompatibility is the tendency of a residual fuel oil to produce a deposit on dilution or on blending with other fuel oils and typical incompatibility problems include sludging and blockage of bunker and service tanks, pipe runs, filters and centrifuge bowls.

In extreme circumstances the only remedy is manual removal of the sludge build up, which is both time-consuming and extremely costly. This risk can be minimized through on board compatibility test kits which follow the ASTM D 4740-4. The CMT Oil Compatibility Tester is inexpensive, easy to use and supplies essential information no marine engineer responsible for fuels can live without. A small quick test will save you from the consequences of having an incompatible fuel mix in the tanks.

## Ordering Information

OTK-CT-11216

### Electronic Compatibility Tester

Range: As per ASTM D4740  
Accuracy: Variation of 1 rating in 20 repeat tests  
Test Time: 20 minutes (attended), 1 hour (unattended)

OTS-CT-13032

### Spare Chromotography Paper (100)

OTS-CT-13030

### Consumables Glass Pack (10)

OTS-CT-13033

### Compatibilty Stirring Rod Pack (10)

OTR-CT-11000

### Test Kit Cleaner

