

DESCRIPTION

COMPATIBILITY/ STABILITY TEST is a modified version of the ASTM D4740-94 method. The test methods list two separate procedures for predicting stability of residual fuel oil and the compatibility of residual fuel oil with a blend stock.

Product Name : **COMPATIBILITY/STABILITY TEST**
Document No : SP-KS-379

TEST KIT CONTENTS

Filter paper	1002-055
Holder for filter paper	1001436
Magnetic stirrer w/ heater	A-159
Tweezers (stainless steel)	O3225221
Magnetic stirring bars	5700440
PTFE / Aluminum oven	1001404
Reference Spot Sheet ASTM D 4740	1001403
Digital thermometer	E910560
Erlenmeyer	4110204
Spot dropper	1001409



APPLICATION, FEATURES & BENEFITS

- ✓ Available in small and compact sturdy case.
- ✓ The test method used by conventional laboratories.
- ✓ No dangerous solvents involved for washing the spot.
- ✓ Quick and reliable determination.
- ✓ Designed specifically for on-board use.
- ✓ Separation of blending/mixing components in various tanks and centrifuge can be avoided.

PACKING INFORMATION

Container : Sturdy Case

TESTING PROCEDURE

STABILITY (on fuels as received)

1. Pour approx. 60 mL of fuel into the 100ml conical flask and add one magnet.
2. Turn on the heater to 100°C and place the conical flask on the heater. Proper temperature is reached after approx. 15 minutes.
3. Place the oven on the heater and put the conical flask in the oven back and let it warm up again. Temperature can be measured by putting the sensor of the digital thermometer in the small hole of the oven.
4. If needed adjust the temperature to 100°C.
5. As soon as the oil has reached a stable temperature of approx. 100°C remove the conical flask from the oven.
6. Let a drop of the oil fall on the filter paper by using the pin.
7. By using the tweezers, place the filter paper on the filter holder and place the holder in the oven and allow drying for approx. 20 minutes.
8. Compare the spot with the reference spot chart.

COMPATIBILITY (different, new fuel and remainder of stock)

1. Pour equal quantities of the stock to be mixed into the conical flask (say 30ml of each) and add one magnet.
2. Turn on the heater to 100°C and place the oven on the heater.
3. Put the conical flask in the oven, and put the sensor of the digital thermometer into the small hole at the side of the oven.
4. If needed adjust the temperature to 100°C. Proper temperature is reached after approx. 15 minutes.
5. As soon as the oil has reached a stable temperature of approx. 100°C remove the conical flask from the oven.
6. Let a drop of the oil mixture fall on the filter paper by using the pin.
7. By using the tweezers, place the filter paper on the filter holder and place the holder in the oven and allow to dry for approx. 20 minutes.
8. Compare the spot with the reference spot chart.

INTERPRETATION

1. Homogeneous spot (no inner ring), reference spot 1.
2. Faint or poorly defined inner ring, reference spot 2.
3. Well-defined inner ring, only slightly darker than the background, reference spot 3.
4. Well-defined inner ring, thicker than the ring in reference spot no. 4 and somewhat darker than the background.
5. Very dark solid or nearly solid area in the centre, the central area is much darker than the background, reference spot 5.

COMPATIBILITY OF FUEL OIL BLENDS BY SPOT TESTS

Reference Spot



No. 1



No. 2



No. 3



No. 4



No. 5

CONCLUSIONS

1 and 2 - the fuels are compatible.

3 - the fuels most likely are compatible.

4 and 5 - the fuels are incompatible.