



BP MARINE

Technology Centre, Sunbury

DATE : 17th January 2001

**TITLE: Assessment of the Compatibility of Militec-1
and BP Marine Energol CLO**



Approval No. 924730

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1. COMPATIBILITY

The compatibility test is an internal MTU method (OTC-721 -006). This test is a visual method which evaluates the compatibility on mixing marine lubricating oils. A 50: 50 mixture of BP Energol CLO 50M and Militec 1 was stored at an ambient temperature and at 60 deg C. The samples were checked and observations recorded after 1, 2, 4 and 6 weeks.

The Militec seems to cause no compatibility problems with the CLO 50M. The sample remained light and clear and bright at both temperatures for the full 6 week period. A deposit was not observed throughout this period.

2. PANEL COKER

The Panel Coker test was carried out in accordance with the MTU procedure OTC-721-001, details of which are presented in Table 1.

Table 1.
Panel Coker Conditions

Test Duration 2 x 4 (Hrs)	8	Sump Temp (°C)	120
Splash/Blake time (sec's)	15/45	Plate Temp (°C)	320

This test is a quick laboratory method that can determine the relative deposit forming tendency of the lubricant. This is achieved by intermittently splashing the lubricant against a heated metal plate, thermal and oxidative stresses cause lubricant degradation which can result in the formation of deposits the weight of which is measured. Results obtained from the Panel Coker tests are presented in Table 2 and compared to Energol CLO 50M.

Table 2.
Panel Coker Results for the CLO 50M Lubricants

Product	Laboratory Number ,	Dep. On 1 st Plate (mg)	Dep. On 2 nd Plate (mg)	Total Deposit (mg)	Mean Deposit (mg)
CLO 50M & Militec	L00/41647	22.8	22.5	48.3	24.2
CLO 50M	L00/41166	36.5	38.7	76	38

The Militec mixed with the Energol CLO 50M does not affect the thermal oxidate stability of the lubricant.