

## SPECIFICATION

### PALM METHYL ESTER – EN 14214:2012

| TEST PARAMETER                                  | UNIT                                    | SPECIFICATION           | ANALYSIS METHOD |
|-------------------------------------------------|-----------------------------------------|-------------------------|-----------------|
| ESTER CONTENT                                   | %                                       | 96.5 MIN                | EN 14103        |
| DENSITY AT 15 DEG C                             | Kg/m <sup>3</sup><br>Kg/l <sup>-1</sup> | 860 - 900<br>0.86 - 0.9 | EN ISO 12185    |
| KINEMATIC VISCOSITY AT 40 DEG C                 | mm <sup>2</sup> /sec                    | 3.50 - 5.00             | EN ISO 3104     |
| FLASH POINT                                     | Deg C                                   | 101 MIN                 | EN ISO 2719     |
| SULFUR CONTENT                                  | mg/kg<br>% mass                         | 10 MAX<br>0.001 MAX     | EN ISO 20846    |
| CETANE - NUMBER                                 | -                                       | 51.0 MIN                | EN ISO 5165     |
| SULFATED ASH CONTENT                            | % (m/m)                                 | 0.02 MAX                | EN ISO 3987     |
| WATER CONTENT                                   | mg/kg<br>% mass                         | 500 MAX<br>0.05 MAX     | EN ISO 12937    |
| TOTAL CONTAMINATION                             | mg/kg                                   | 24 MAX                  | EN 12662        |
| COPPER STRIP CORROSION (3H AT 50 DEG C)         | Rating                                  | Class 1                 | EN ISO 2160     |
| OXIDATION STABILITY, 110DEG C                   | Hrs                                     | 8.0 MIN                 | EN 14112        |
| ACID VALUE                                      | mg KOH/g                                | 0.50 MAX                | EN 14104        |
| IODINE VALUE                                    | g I/100g                                | 120 MAX                 | EN 14111        |
| LINOLEIC ACID METHYLESTER CONTENT               | % (m/m)                                 | 12.0 MAX                | EN 14103        |
| POLYUNSATURATED(≥ 4 DOUBLE BONDS) METHYL ESTERS | % (m/m)                                 | 1 MAX                   | EN 15779        |
| METHANOL CONTENT                                | % (m/m)                                 | 0.20 MAX                | EN 14110        |
| MONOGLYCERIDES CONTENT                          | % (m/m)                                 | 0.70 MAX                | EN 14105        |
| DIGLYCERIDES CONTENT                            | % (m/m)                                 | 0.20 MAX                | EN 14105        |
| TRIGLYCERIDES CONTENT                           | % (m/m)                                 | 0.20 MAX                | EN 14105        |
| CONTENT OF FREE GLYCEROL                        | % (m/m)                                 | 0.02 MAX                | EN 14105        |
| CONTENT OF TOTAL GLYCEROL                       | % (m/m)                                 | 0.25 MAX                | EN 14105        |
| CONTENT OF ALKALI (Na + K)                      | mg/kg                                   | 5.0 MAX                 | EN 14538        |
| CONTENT OF METAL (Ca + Mg)                      | mg/kg                                   | 5.0 MAX                 | EN 14538        |
| PHOSPHOROUS CONTENT                             | mg/kg                                   | 4.0 MAX                 | EN 14107        |