



## FAME EN 14214:2012+A1:2014

Property	Units	Limits		Test Method <sup>a</sup> (See Clause 2)
		Min	Max	
FAME content	% (m/m)	96,5		EN 14103
Density at 15 °C <sup>b</sup>	kg/m <sup>3</sup>	860	900	EN ISO 3675 <sup>c</sup> EN ISO 12185
Viscosity at 40 °C <sup>d</sup>	mm <sup>2</sup> /s	3,50	5,00	EN ISO 3104
Flash point <sup>e</sup>	°C	101	-	EN ISO 2719 EN ISO 3679
Cetane number <sup>e, h</sup>	-	51,0	-	EN ISO 5165
Copper strip corrosion (3 h at 50 °C)	Rating		class 1	EN ISO 2160
Oxidation stability (at 110 °C)	h	8,0	-	EN 14112 <sup>c</sup> , EN 15751
Acid value	mg KOH/g	-	0,50	EN 14104
Iodine value	g iodine/100 g	-	120,0	EN 14111 <sup>c</sup> EN 16300
Linolenic acid methyl ester Polyunsaturated (• 4 double bonds)	% (m/m)	-	12,0	EN 14103
methyl esters	% (m/m)	-	1,00	EN 15779
Methanol content	% (m/m)	-	0,20	EN 14110
Monoglyceride content	% (m/m)	-	0,70 <sup>j</sup>	EN 14105
Diglyceride content	% (m/m)	-	0,20	EN 14105
Triglyceride content	% (m/m)	-	0,20	EN 14105
Free glycerol	% (m/m)	-	0,02	EN 14105 <sup>c</sup> EN 14106
Water content	mg/kg	-	500	EN ISO 12937
Total contamination	mg/kg	-	24	EN 12662
Sulfated ash content	% (m/m)	-	0,02	ISO 3987
Sulfur content	mg/kg	-	10,0	EN 14108 <sup>c</sup> EN 14109 EN 14538
Group I metals (Na+K) <sup>e</sup>	mg/kg	-	5,0	EN 14108 <sup>c</sup> EN 14109 EN 14538
Group II metals (Ca+Mg)	mg/kg	-	5,0	EN 14538
Phosphorus content	mg/kg	-	4,0	EN 14107 <sup>c</sup> EN 16294

### Notes

a See 5.5.1. in EN 14214:2012+A1:2014.

b Density may be measured over a range of temperatures from 20 °C to 60 °C. Temperature correction shall be made according to the formula given in Annex B in EN 14214:2012+A1:2014.

c See 5.5.2. in EN 14214:2012+A1:2014

d If CFPP is • 20 °C or lower, the viscosity shall be measured at • 20 °C. The measured value shall not exceed 48 mm<sup>2</sup>/s. In this case, EN ISO 3104 is applicable without the precision data owing to non-Newtonian behaviour in a two-phase system.

e See Annex A for precision data in EN 14214:2012+A1:2014.

f Procedure A shall be applied. Only a flash point test apparatus equipped with a suitable detection device (thermal or ionisation detection) shall be used.

g A 2 ml sample and apparatus equipped with a thermal detection device shall be used. See also 5.5.2. in EN 14214:2012+A1:2014

h See 5.5.3. in EN 14214:2012+A1:2014

i An additional determination method has been developed by CEN, but first needs to be assessed for actual field performance prediction [3].

j For use as an extender to diesel fuel Table 3 applies in EN 14214:2012+A1:2014.

k A lower limit may come into force after validation by work on the measurement standard precision.

l A lower limit of 2,5 mg/kg may come into force after validation work on the measurement standard and on engine oil impacts.