

VIRGOZ OILS & FATS PTE LTD

(Company Registration No. 200411727K)

20 Cecil Street, #18-08 Equity Plaza, Singapore 049705

Tel No: (65) 6532 7777 Fax No: (65) 6532 0787 E-mail: virgoz@virgoz.com

30 July 2010

Palm Stearin Methyl Ester (PSME)

SPECIFICATIONS

	Property	Specified Range
1	Ester Content	96.5% (m/m) Min
2	Density at 15°C	860 – 900 kg/m ³
3	Viscosity at 40°C	3.5 – 6.0 mm ² /s
4	Flash Point	120°C Min
5	Sulfur Content	10 mg/kg Max
6	Carbon Residue (at 10% Distillation Residue)	0.3% (m/m) Max
7	Cetane Number	51.0 Min
8	Sulfated Ash Content	0.02% (m/m) Max
9	Moisture (Water Content)	500 PPM Max
10	Total Contamination	24 mg/kg Max
11	Copper Strip Corrosion (3 Hours at 50°C)	Class 1 Rating
12	Oxidation Stability, 110°C	6 Hours Min
13	Acid Value	0.5 mg KOH/g Max
14	Iodine Value	120 Max
15	Linolenic Acid Methyl Ester	12% (m/m) Max
16	Polyunsaturated (>= 4 double bonds) Methyl Esters	1% (m/m) Max
17	Methanol Content	0.2% (m/m) Max
18	Monoglyceride Content	0.8% (m/m) Max
19	Diglyceride Content	0.2% (m/m) Max
20	Triglyceride Content	0.2% (m/m) Max
21	Free Glycerol	0.03% (m/m) Max
22	Total Glycerol	0.25% (m/m) Max
23	Group I Metals (Na+K)	5 mg/kg Max
24	Group II Metals (Ca+Mg)	5 mg/kg Max
25	Phosphorus Content	10 mg/kg Max
26	CFPP (Cold Filter Plugging Point)	+20°C Max

All data including the formulations and procedures discussed herein believed to be correct. However, this should not be accepted as a guarantee of their accuracy, and confirming tests should be run in your own plant or laboratory. No statement should be construed as a recommendation for any use which would violate any patent rights. Sales of all products are pursuant to term and conditions included in Permata Hijau Group documents. Nothing contained herein shall constitute a guarantee or warranty with respect to the products described or their use. Safety information regarding these products is contained in their Material Safety Data Sheets. Users of these products are urged to study and use this information.