

Ship-To:
Halonas Chemicals (M) Sdn Bhd
50450 KUALA LUMPUR
MALAYSIA

Mailing address:
Lot 1, Jalan Perak,
Kawasan Perusahaan,
42500, Telok Panglima Garang,
Selangor, Malaysia.
Tel: (603) 33268686
Fax: (603) 31226771

CERTIFICATE OF ANALYSIS

Page 1 of 1

PRODUCT : EMERCOL® C16-18 30:70 MY PS
OUR CONTRACT NO. : 380772
PURCHASE ORDER NO. : PO-00101
DATE : Dec 14 2022
BATCH NUMBER : M122327010
DELIVERY NO : 80527273
DATE OF SHIPMENT : Nov 28 2022
SAMPLE DETAILS : Representative sample of bag

TEST	RESULT	SPEC	REF.METHOD
Acid value (mgKOH/g)	0.01	<= 0.10	ISO 660 (Part 5):1996
Iodine value gI2/100g	0.01	<= 0.50	AOCS Tg 1-64:2017
Saponification value (mgKOH/g)	0.07	<= 1.00	AOCS Tl 1a-64:2017
* Hydroxyl value (mgKOH/g)	216.0	210.0 -220.0	AOCS Cd 13-60:2017
Water (Karl Fischer) %	0.12	<= 0.30	ISO 760 (Part 7) :1978
* Solidification Point °C	53.0	50.0 -54.0	ISO 3841:1977
<u>Carbon Chain Distribution by GC, %</u>			
C14 & below	0.2	<= 3.0	EM QCA006:2011
C16	27.0	22.0 -32.0	EM QCA006:2011
C18	72.1	66.0 -76.0	EM QCA006:2011
C20	0.0	<= 3.0	EM QCA006:2011
DATE OF MANUFACTURE	Nov 23 2022		
BEST BEFORE	Nov 21 2024		

We hereby certify the analysis of the sample as shown above.

BATCH QTY: 560 BGS



HAMIZAH AMMARAH
QA/QC SR.CHEMIST M.SC.(UKM) M.M.I.C M/4885/7573/16/18
Edenor Oleochemicals Laboratory

Remarks: SAMM : Laboratory Accreditation Scheme of Malaysia
*Test conducted every 3 month(s).



This certificate has been prepared with care and to the best of our knowledge as part of the quality assurance system of Edenor Oleochemicals Laboratory. However, it does not relieve our customers of their obligation to inspect the goods upon receipt or establish any warranties to third parties, to whom it might be passed on. No additional warranty of any kind, expressed or implied, is linked here. The certificate shall not be reproduced, except in full, without the written approval of Edenor Oleochemicals Laboratory. The results relate only to the items and batch tested and sampled.