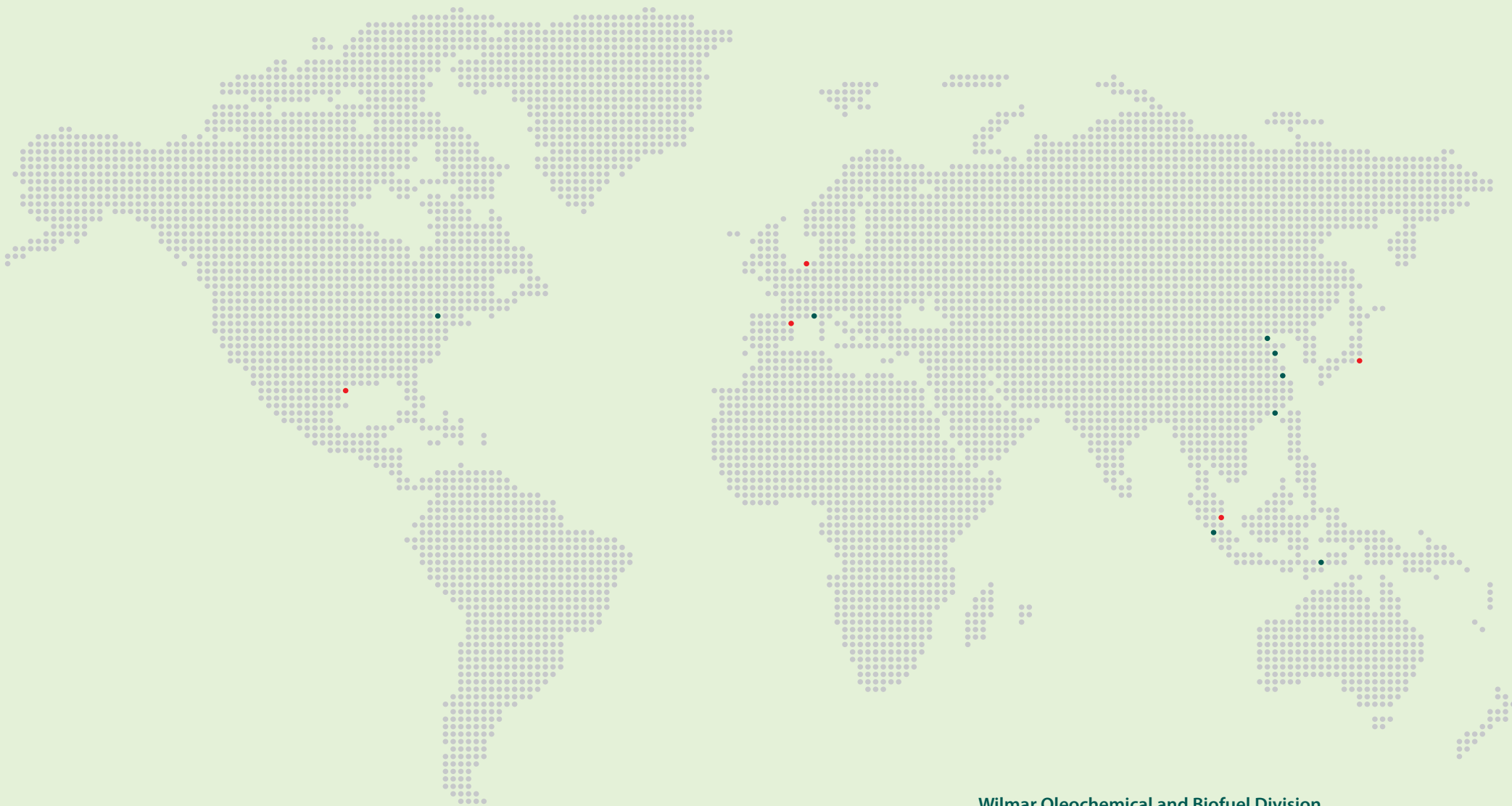


Oleochemicals



Wilmar Oleochemical and Biofuel Division

- Office
- Production Site and Storage Facility



Wilmar International Limited, founded in 1991, is Asia's leading agribusiness group. Wilmar is ranked among the largest listed companies by market capitalisation on the Singapore Exchange.

Wilmar's business activities include oil palm cultivation, oilseeds crushing, edible oils refining, sugar, specialty fats, oleochemicals and biodiesel manufacturing and grains processing. Headquartered in Singapore, Wilmar has over 300 manufacturing plants and an extensive distribution network covering China, India, Indonesia and some 50 other countries to support a well established processing and merchandising business. Wilmar also manufactures and distributes fertilisers and owns a fleet of vessels. The Group is backed by a multi-national team of about 88,000 people.

Wilmar's oleochemical and biofuel business currently comprises production sites in China, Malaysia and Indonesia. In the near future, we will be adding India and Europe to our operations as well as other accompanying storage locations designed to ideally service our customers. Wilmar is the largest producer of basic oleochemicals globally and is expanding into downstream products.

Our product range includes basic oleochemicals such as Fatty Acids, Fatty Alcohols, Methyl Esters, Glycerine and derivatives such as Soap Noodles, Cosmetic Esters, Palm Waxes, Alkyl Ketene Dimers, Acid Chlorides, Distilled Monoglycerides, Epichlorohydrin, Primary and Tertiary Amines amongst others.

For further information, please visit www.wilmar-international.com

Distilled Fatty Acids

WILFARIN™

PRODUCT CODE		WILFARIN™ DC-0818	WILFARIN™ DC-0818H	WILFARIN™ DC-1218	WILFARIN™ DC-1218H	WILFARIN™ DK-0818	WILFARIN™ DK-0818H
PRODUCT DESCRIPTION		Distilled Coconut Fatty Acid	Hardened Distilled Coconut Fatty Acid	Distilled Topped Coconut Fatty Acid	Hardened Distilled Topped Coconut Fatty Acid	Distilled Palm Kernel Fatty Acid	Hardened Distilled Palm Kernel Fatty Acid
SPECIFICATION							
Acid Value	mg KOH/g	265 - 275	265 - 275	250 - 260	251 - 260	248 - 263	248 - 263
Sap. Value	mg KOH/g	266 - 275	266 - 275	251 - 261	252 - 261	249 - 264	249 - 264
Iodine Value	g I ₂ /100g	7 - 11	0.5 Max	15 Max	0.5 Max	20 Max	1 Max
Titre	°C	22 - 26	24 - 30	23 - 30	29 - 32	20 - 28	28 - 34
Color	Lov, R/Y	1 / 10 Max	0.5 / 5 Max	1 / 10 Max	1 / 10 Max	0.5 / 5 Max	0.5 / 5 Max
Moisture	%	0.1 Max	0.2 Max	0.2 Max	0.2 Max	-	-
Unsap Matter	%	-	0.5 Max	-	0.5 Max	-	-
Composition	%						
C6		1 Max	0.5 Max	2 Max	0.3 Max	0.5 Max	0.5 Max
C8		5 - 8	5 - 8			2 - 5	2 - 5
C10		5 - 8	5 - 8		0.5 Max	2 - 5	2 - 5
C12		47 - 53	47 - 53	48 - 58	50 - 58	46 - 54	46 - 54
C14		15 - 21	15 - 21	16 - 23	18-24	13 - 18	13 - 18
C16		8 - 12	8 - 12	7 - 15	9 - 14	6 - 12	6 - 12
C18		4 Max	6 - 13	2 - 6	7 - 15	1 - 4	14 - 24
C18-1		5 - 12	0.5 Max	5 - 12	0.5 Max	12 - 18	1 Max
C18-2		2 Max	-	4 Max		4 Max	-
Others		0.5 Max	-	-		-	-
PRODUCT FORM		Liquid	Liquid	Liquid	Liquid	Liquid	Liquid
PACKAGING		PE, DR, ISO, Bulk	PE, DR, ISO, Bulk	PE, DR, ISO, Bulk	PE, DR, ISO, Bulk	PE, DR, ISO, Bulk	PE, DR, ISO, Bulk
REMARKS		*Known as DCFA in Natoleo	*Known as DHCFA in Natoleo	*Known as DTCFA in Natoleo	*Known as DTHCFA in Natoleo	*Known as DKFA in Natoleo	*Known as DHKFA in Natoleo

PE = 180kg pe drum DR = 180kg steel drum ISO = 20mt iso tank



Passover



Distilled Fatty Acids

WILFARIN™

PRODUCT CODE		WILFARIN™ DK-1218	WILFARIN™ DK-1218H	WILFARIN™ DP-1601	WILFARIN™ DP-1601H	WILFARIN™ DP-1602	WILFARIN™ DP-1602H	WILFARIN™ DP-1603	
PRODUCT DESCRIPTION		Distilled Topped Palm Kernel Fatty Acid	Hardened Distilled Topped Palm Kernel Fatty Acid	Distilled Palm Oil Acid	Distilled Palm Oil Partially Hardened	Distilled Palm Stearine Fatty Acid	Distilled Palm Stearine Fatty Acid Partially Hardened	Distilled Palmitic Acid	
SPECIFICATION									
Acid Value	mg KOH/g	246 - 255	246 - 258	203 - 210	204 - 211	206 - 214	205 - 210	210 - 225	
Sap. Value	mg KOH/g	247 - 256	247 - 259	204 - 211	205 - 212	207 - 215	206 - 211	211 - 226	
Iodine Value	g I ₂ /100g	14 - 22	1 Max	45 - 56	30 Min	28 Min	30 - 42	5 - 10	
Titre	°C	25 - 28	33 - 38	45 - 48.5	42 - 50	47 - 54	42 - 52	58 - 63	
Color	Lov, R/Y	0.5 / 5 Max	0.5 / 5 Max	2 / 20 Max	1 / 5 Max	0.5 / 5 Max	2 / 10 Max	3 / 30 Max	
Moisture	%	0.5 Max	0.2 Max	0.2 Max	0.2 Max	-	-	-	
Unsap Matter	%	1 Max	-	0.5 Max	-	-	-	-	
Composition	%								
C6		0.1 Max	2 Max	-	-	-	-	3 Max	
C8									
C10									
C12		48 - 58	48 - 58	1 Max	3 Max	1 Max	2 Max		
C14		14 - 20	14 - 20	2 Max				2 Max	
C16		7 - 12	7 - 12	43 - 48	40 - 50	55 - 65	40 - 48	83 Min	
C18		1.5 - 4	14 - 24	3 - 10	11 - 21	4 - 8	12 - 22	17 Max	
C18-1		12 - 20	1 Max	37 - 40	28 - 36	20 - 35	28 - 38		
C18-2		1 - 4	0.5 Max	6 - 11	2 - 6	8.0 Max	8 Max		
Others		-	-	1 Max	1 Max	-	-	-	
PRODUCT FORM		Liquid	Liquid	Solid	Solid	Solid	Solid	Solid	
PACKAGING		PE, DR, ISO, Bulk	PE, DR, ISO, Bulk	PE, DR, ISO, Bulk	PE, DR, ISO, Bulk	PE, DR, ISO, Bulk	PE, DR, ISO, Bulk	PB, BB, PE, DR, ISO, Bulk	
REMARKS		*Known as DTKFA in Natoleo	*Known as DTHKA in Natoleo	*Known as DPFA in Natoleo		*Known as DSFA in Natoleo			

PB = 25kg net pp laminated paper bag BB = 800kg net jumbo bag PE = 180kg pe drum DR = 180kg steel drum ISO = 20mt iso tank



Passover



Fractionated Fatty Acids

WILFARIN™

PRODUCT CODE		WILFARIN™ CC-0810	WILFARIN™ DC-0810	WILFARIN™ CA-0899	WILFARIN™ CA-1099	WILFARIN™ LA-1299	WILFARIN™ LA-1298	WILFARIN™ LA-1275
PRODUCT DESCRIPTION		Caprylic / Capric Acid	Caprylic / Capric Acid	Caprylic Acid 99 %	Capric Acid 99%	Lauric Acid 99%	Lauric Acid 98%	Lauric Acid 75%
SPECIFICATION								
Acid Value	mg KOH/g	352 - 365	350 - 375	383 - 390	321 - 329	278 - 282	279 - 281	265 - 275
Sap. Value	mg KOH/g	354 - 367	351 - 376	384 - 391	322 - 330	279 - 283	279 - 282	266 - 276
Iodine Value	g I ₂ /100g	1.5 Max	0.5 Max	0.5 Max	0.5 Max	0.2 Max	0.2 Max	0.5 Max
Titre	°C	7 Max	7 Max	15 - 18	30 - 32	42 - 45	42 - 45	32 - 38
Color	Lov, R/Y	3 / 25Y	0.5 / 5 Max	0.5 / 5 Max	0.5 / 5 Max	0.2 / 2 Max	0.2 / 1 Max	0.3 / 3 Max
Moisture	%	-	-	-	-	-	-	-
Unsap Matter	%	-	-	-	-	-	-	-
Composition	%							
C6		4 Max	2 Max	1 Max	0.5 Max	-	0.5 Max	1 Max
C8		45 - 60	52 Min*	99 Min	1 Max	-		
C10		35 - 50	42 - 48*	1 Max	99 Min	1 Max	2 Max	
C12		2 Max	1.5 Max	-	1 Max	99 Min	98 Min	72 - 78
C14		-	-	-	-	1 Max	2 Max	22 - 28
C15		-	-	-	-	-	-	-
C16		-	-	-	-	-	-	4 Max
C16-1		-	-	-	-	-	-	-
C17		-	-	-	-	-	-	-
C18		-	-	-	-	-	-	0.5 Max
C18-1		-	-	-	-	-	-	
C18-2		-	-	-	-	-	-	
C18-3		-	-	-	-	-	-	-
> C18		-	-	-	-	-	-	-
Others		-	-	-	-	-	-	-
PRODUCT FORM		Liquid / Solid / Flakes / Beads	Liquid / Solid / Flakes / Beads	Liquid / Solid / Flakes / Beads	Liquid / Solid / Flakes / Beads	Liquid / Solid / Flakes / Beads	Liquid / Solid / Flakes / Beads	Liquid / Solid / Flakes / Beads
PACKAGING		DR, ISO, Bulk	DR, ISO, Bulk	DR, ISO, Bulk	DR, ISO, Bulk	PB, BB, ISO, Bulk	PB, BB, ISO, Bulk	DR, ISO, Bulk
REMARKS		*Customised Blend Available Upon Request	*Customised Blend Available Upon Request					

PB = 25kg net pp laminated paper bag BB = 800kg net jumbo bag DR = 180kg steel drum ISO = 20mt iso tank



Passover



For more details and trade inquiries please contact oleo@wilmar.com.sg

Fractionated Fatty Acids

WILFARIN™

PRODUCT CODE		WILFARIN™ MA-1499	WILFARIN™ MA-1498	WILFARIN™ PA-1698	WILFARIN™ PA-1695	WILFARIN™ OA-7075	WILFARIN™ OA-7070
PRODUCT DESCRIPTION		Myristic Acid 99%	Myristic Acid 98%	Palmitic Acid 98%	Palmitic Acid 95%	Oleic Acid Vegetable Based C18:1 (75%)	Oleic Acid Vegetable Based C18:1 (70%)
SPECIFICATION							
Acid Value	mg KOH/g	244 - 248	244 - 248	217 - 220	217 - 221	195 - 205	195 - 205
Sap. Value	mg KOH/g	245 - 249	245 - 249	218 - 221	218 - 222	197 - 207	197 - 207
Iodine Value	g I ₂ /100g	0.5 Max	0.5 Max	0.5 Max	2 Max	90 Min	88 - 96
Titre	°C	53 - 55	53 - 55	61 - 63	60 - 63	9 Max	10 Max
Color	Lov, R/Y	0.2 / 2 Max	0.2 / 2 Max	0.3 / 2 Max	0.3 / 3 Max	1 / 10 Max	1.5 / 15 Max
Moisture	%	-	-	-	-	-	0.3 Max
Unsap Matter	%	-	-	-	-	-	-
Composition	%						
C6		-	-	0.2 Max	5 Max	11 Max	15 Max
C8		-	-				
C10		-	-				
C12		1 Max	1.5 Max				
C14		99 Min	98 Min	2 Max	1 Max	75 Min	70 Min
C15		-	0.5 Max	1 Max	1 Max		
C16		1 Max	1 Max	98 Min	95 Min		
C16-1		-	-	-	-		
C17		-	-	1.5 Max	-	14 Max	13 Max
C18		-	-	1 Max	5 Max		
C18-1		-	-				
C18-2		-	-				
C18-3		-	-			-	-
> C18		-	-	-	-	-	-
Others		-	-	-	-	-	1 Max
PRODUCT FORM		Liquid / Solid / Flakes / Beads	Liquid / Solid / Flakes / Beads	Liquid / Solid / Flakes / Beads	Liquid / Solid / Flakes / Beads	Liquid	Liquid
PACKAGING		PB, BB, ISO, Bulk	PB, BB, ISO, Bulk	PB, BB, ISO, Bulk	PB, BB, ISO, Bulk	DR, ISO, Bulk	DR, ISO, Bulk

PB = 25kg net pp laminated paper bag BB = 800kg net jumbo bag DR = 180kg steel drum ISO = 20mt iso tank



Passover



Stearic Acid

WILFARIN™

PRODUCT CODE		WILFARIN™ SA-1892	WILFARIN™ SA-1865	WILFARIN™ SA-1850	WILFARIN™ SA-1843	WILFARIN™ SA-1838	WILFARIN™ SA-1810	WILFARIN™ SA-1804
PRODUCT DESCRIPTION		Stearic Acid 92 %	Stearic Acid 65 %	Stearic Acid 50 % Triple Pressed	Stearic Acid 43 % Triple Pressed	Stearic Acid 38 % Triple Pressed	Rubber Grade Stearic Acid	Rubber Grade Stearic Acid
SPECIFICATION								
Acid Value	mg KOH/g	195 - 199	202 - 209	206 - 209	205 - 211	206 - 213	195 Min	195 Min
Sap. Value	mg KOH/g	196 - 200	203 - 210	207 - 210	206 - 211	207 - 214	196 Min	196 Min
Iodine Value	g I ₂ /100g	2 Max	0.5 Max	0.5 Max	0.5 Max	1 Max	4 Max	10 Max
Titre	°C	66 - 70	58 - 63	55 - 57	54 - 57	54 - 56	52 - 57	52 Min
Color	Lov, R/Y	0.5 / 2 Max	0.2 / 1.5 Max	0.3 / 1.3 Max	0.5 / 5 Max	0.5 / 1.3 Max	0.5 / 5 Max	5 / 50 Max
Moisture	%	0.2 Max	0.1 Max	0.2 Max	-	-	-	-
Unsap Matter	%	1 Max	0.5 Max	-	-	1 Max	-	-
Composition	%							
C10		-	-	-	-	-	-	VARIABLE
C12		-	-	-	1 Max	1 Max	-	
C14		-	2 Max	2 Max	2 Max	2 Max	-	
C15		-	-	0.5 Max	-	-	-	
C16		8 Max	30 - 33	45 - 49	49 - 58	57 - 65	75 Max	
C17		-	-	0.5 Max	-	-	-	
C18		92 Min	65 - 69	50 - 54	42 - 48	35 - 40	25 Min	
C18-1		2 Max	1 Max	0.5 Max	1 Max	2 Max	-	
C18-2		1 Max	0.5 Max	-	-		-	
C18-3		-	-	-	-		-	
C20		3 Max	1 Max	1 Max	-		-	
Others		-	-	-	-	-	-	
PRODUCT FORM		Liquid / Solid / Flakes / Beads	Liquid / Solid / Flakes / Beads	Liquid / Solid / Flakes / Beads	Liquid / Solid / Flakes / Beads	Liquid / Solid / Flakes / Beads	Liquid / Solid / Flakes / Beads	Liquid / Solid / Flakes / Beads
PACKAGING		PB, BB, DR, ISO, Bulk	PB, BB, DR, ISO, Bulk	PB, BB, DR, ISO, Bulk	PB, BB, DR, ISO, Bulk	PB, BB, DR, ISO, Bulk	PB, BB, DR, ISO, Bulk	PB, BB, DR, ISO, Bulk

PB = 25kg net pp laminated paper bag BB = 800kg net jumbo bag DR = 180kg steel drum ISO = 20mt iso tank



Passover



Refined Glycerine

WILFARIN™

PRODUCT CODE		WILFARIN™ USP-997	WILFARIN™ EP-997	WILFARIN™ BP-997
PRODUCT DESCRIPTION		USP Grade	EP Grade	BP Grade
SPECIFICATION				
Appearance		Transparent	Transparent	Transparent
Glycerine Content	%	99.7 Min	99.7 Min	99.7 Min
Moisture Content	%	0.3 Max	0.3 Max	0.3 Max
Color	mL of FeCl ₃	0.4 Max	-	-
Color	APHA	-	10 Max	10 Max
Identification A	IR	Conform	-	-
Identification B				
- Diethylene Glycol		0.1 Max	-	-
- Ethylene Glycol		0.1 Max	-	-
Identification C	GC	Conform	-	-
Identification A, B, C & D		-	Conform	Conform
Specific Gravity	at 25°C	1.2612 Min	-	-
Residue On Ignation	%	0.01 Max	-	-
Sulphated Ash	%	-	0.01 Max	0.01 Max
Chlorides	ppm	10 Max	10 Max	10 Max
Sulphates	%	0.002 Max	-	-
Heavy Metal	ppm	5 Max	5 Max	5 Max
Chlorinated Compounds	%	0.003	-	-
Halogenated Compounds	ppm	-	35 Max	35 Max
Fatty Acids & Esters	mL of 0.5N NaOH/50 g	1 Max	-	-
Impurity A (Deg) & Related Compounds		-	Conform	Conform
Related Compounds				
- Individual Impurity	%	0.1 Max	-	-
- Total Impurities	%	1 Max	-	-
Acidity & Alkalinity	mL of 0.1M NaOH/50 mL solution S	-	0.2 Max	0.2 Max
Refractive Index	n ₂₀ /D	-	1.470 - 1.475	1.470 - 1.475
Aldehydes	ppm	-	10 Max	10 Max
Esters	mL of 0.1M HCl/50 mL solution S	-	8 Min	8 Min
Sugar		-	Pass	Pass
PRODUCT FORM		Liquid	Liquid	Liquid
PACKAGING		PE, DR, ISO, FB	PE, DR, ISO, FB	PE, DR, ISO, FB

FB = 20mt flexibag PE = 250kg pe drum DR = 250kg steel drum IBC = 1250kg ibc tank ISO = 20mt iso tank

For more details and trade inquiries please contact oleo@wilmar.com.sg



Passover



Soap Noodle

WILFARIN™

PRODUCT CODE	WILFARIN™ SN-6040	WILFARIN™ SN-7030	WILFARIN™ SN-8020	WILFARIN™ SN-8021	WILFARIN™ SN-9010	WILFARIN™ SN-9015	WILFARIN™ SN-9050
SPECIFICATION							
Colour	White	White	White	White	White	White	White
TFM %	79.5 - 81.5	78.5 - 81.5	78.5 - 81.5	78.5 - 81.5	78 Min	72 Min	74 Min
Moisture %	11 - 13	10.5 - 13.5	10.5 - 13.5	10.5 - 13.5	15 Max	20 Max	18 Max
FFA % as Palmitic	1.5 Max	1.5 Max	1.5 Max	-	1.5 Max	-	1.5 Max
Free Alkali % as NaOH	-	-	-	0.05 Max	-	0.1 Max	-
Titre °C	41 Max	44 Max	46 Max	47 Max	52 Max	47 Max	-
Chloride % as NaCl	0.4 - 0.7	0.4 - 0.7	0.4 - 0.7	0.4 - 0.7	0.4 - 0.7	0.4 - 0.7	0.4 - 0.7
Glycerine %	1 Max	1 Max	1 Max	1 Max	1 Max	1 Max	1 Max
Chelating Agent	Present	Present	Present	Present	Present	Present	Present
PACKAGING	PB, BB	PB, BB	PB, BB	PB, BB	PB, BB	PB, BB	PB, BB

PB = 25kg net pp laminated paper bag BB = 800kg net jumbo bag



Passover



Split Fatty Acids & Hydrogenated Products

WILFARIN™

PRODUCT CODE		WILFARIN™ SPKFA	WILFARIN™ SPSFA	WILFARIN™ SCNFA	WILFARIN™ HRPS	WILFARIN™ HRPO	WILFARIN™ HSFA
PRODUCT DESCRIPTION		Split Undistilled Palm Kernel Fatty Acid	Split Undistilled Palm Stearine Fatty Acid	Split Undistilled Coconut Fatty Acid	Hydrogenated Refined Palm Stearine	Hydrogenated Refined Palm Oil	Hydrogenated Split Stearine Fatty Acid
SPECIFICATION							
Degree of Split	%	98 Min	98 Min	98 Min	-	-	98 Min
Acid Value	mg KOH/g	254 - 260	204 - 214	262 - 272	-	-	204 - 214
Sap. Value	mg KOH/g	-	-	-	195 - 205	-	205 - 215
Iodine Value	g I ₂ /100g	22 Max	48 Max	11 Max	0.5 Max	1 Max	2 Max
Moisture, Impurities, Unsap	%	2 Max	2 Max	2 Max	0.5 Max	0.2 Max	-
Melting Point	°C	-	-	-	58 - 61	56 Min	-
Color	Lov, R/Y	-	-	-	2.5R Max	3R / 30Y Max	10R / 50Y Max
Composition	%						
C6		0.5 Max	-	0.8 Max	-	-	-
C8		2 - 5	-	9 Max	-	-	-
C10		2 - 5	-	5 - 9	-	-	-
C12		44 - 52	1 Max	43 - 52	-	-	-
C14		13 - 18	2 Max	15 - 20	-	-	-
C16		7 - 11	55 - 65	6 - 11	-	-	-
C18		1 - 3	4 - 8	6 Max	36 Min	-	-
C18-1		13 - 18	20 - 30	5 Min		-	-
C18-2		3 Max	8 Max	3 Max		-	-
Others		-	-	-	-	-	-
PRODUCT FORM		Liquid	Liquid	Liquid	Liquid / Solid	Liquid / Solid	Liquid / Solid
PACKAGING		PE, DR, ISO, Bulk	PE, DR, ISO, Bulk	PE, DR, ISO, Bulk	PB, BB, PE, DR, ISO, Bulk	PB, BB, PE, DR, ISO, Bulk	PB, BB, PE, DR, ISO, Bulk
REMARKS		*Known as CKFA in Natoleo	*Known as CSFA in Natoleo	*Known as CCFA in Natoleo			

PB = 25kg net pp laminated paper bag BB = 800kg net jumbo bag PE = 180kg pe drum DR = 180kg steel drum ISO = 20mt iso tank



Passover



Ester

WILFARESTER™

PRODUCT CODE		WILFARESTER™ MCT	WILFARESTER™ IPL	WILFARESTER™ IPM	WILFARESTER™ IPP	WILFARESTER™ 2-EHP
PRODUCT DESCRIPTION		Caprylic/Capric Triglycerides (55/45)	Isopropyl Laurate 99%	Isopropyl Myristate 98%	Isopropyl Palmitate 98%	2-Ethyl Hexyl Palmitate 98%
SPECIFICATION						
Acid Value	mg KOH/g	0.1 Max	0.5 Max	0.5 Max	0.5 Max	0.2 Max
Sap. Value	mg KOH/g	325 - 345	228 - 234	206 - 211	185 - 191	150 - 155
OHV	mgKOH/g	10 Max	-	-	-	-
Color	APHA	50 Max	30 Max	30 Max	25 Max	30 Max
Moisture	%	0.1 Max	0.1 Max	0.1 Max	0.1 Max	0.1 Max
Ash Content	%	0.1 Max	0.1 Max	0.1 Max	0.1 Max	0.1 Max
PV	meq/Kg	1 Max	0.6 Max	0.6 Max	0.6 max	0.6 Max
Viscosity	mPa.s 20°C	25 - 33	4 - 5	5 - 6	5 - 10	5 - 10
Density	g/cm³ 20°C	0.930 - 0.960	0.851 - 0.854	0.852 - 0.855	0.852 - 0.855	0.855 - 0.865
Refractive Index	20°C	1.448 - 1.451	1.428 - 1.432	1.434 - 1.437	1.436 - 1.440	1.446 - 1.448
Composition	%					
C6		0.5 Max	-	-	-	-
C8		53 Min	-	-	-	-
C10		36 - 47	1 Max	-	-	-
C12		1.5 Max	99 Min	-	-	-
C14		-	1 Max	98 Min	-	-
C16		-	-	-	95 Min	98 Min
PRODUCT FORM		Liquid	Liquid	Liquid	Liquid	Liquid
PACKING		DR, IBC, ISO	DR, IBC, ISO	DR, IBC, ISO	DR, IBC, ISO	DR, IBC, ISO

DR = 180kg steel drum IBC = 900kg ibc tank ISO = 20mt iso tank



Passover



Glycerine Monostearate & Glycerine Monooleate

WILFARESTER™

PRODUCT CODE	WILFARESTER™ DMG-98	WILFARESTER™ DMG-95	WILFARESTER™ DMG-90	WILFARESTER™ GMS-60	WILFARESTER™ GMS-40	WILFARESTER™ GMO-60
PRODUCT DESCRIPTION	Distilled Glycerin Monostearate 98%	Distilled Glycerin Monostearate 95%	Distilled Glycerin Monostearate 90%	Glycerin Monostearate 60%	Glycerin Monostearate 40%	Glycerin Monooleate 60%
SPECIFICATION						
GMS Content %	98 Min	95 Min	90 Min	60 Min	40 Min	-
GMO Content %	-	-	-	-	-	60 Min
Acid Value mg KOH/g	2 Max	2 Max	2.5 Max	2.5 Max	5 Max	6 Max
Iodine Value g I ₂ /100g	1 Max	1 Max	1 Max	2 Max	2 Max	65 - 95
Glycerine %	1 Max	1 Max	1 Max	1 Max	1 Max	6 Max
Titre °C	60 - 70	60 - 70	60 - 70	-	-	-
Melting Point °C	-	-	-	55 - 65	55 - 65	36 - 40
Arsenic %	0.0001 Max	0.0001 Max	0.0001 Max	0.0002 Max	0.0002 Max	Conforms
Lead %	0.0001 Max	0.0001 Max	0.0001 Max	0.0002 Max	0.0002 Max	Conforms
Heavy Metal %	0.0005 Max	0.0005 Max	0.0005 Max	0.0005 Max	0.0005 Max	Conforms
Ash %	0.1 Max	0.1 Max	0.1 Max	0.5 Max	0.5 Max	0.1 Max
PRODUCT FORM	Beads	Beads	Beads	Beads	Beads	Liquid
PACKING	PB, BB	PB, BB	PB, BB	PB, BB	PB, BB	FB, PE, DR, ISO, Bulk

PB = 25kg net pp laminated paper bag BB = 800kg net jumbo bag FB = 20mt flexibag PE = 180kg pe drum DR = 180kg steel drum ISO = 20mt iso tank



Passover



Fatty Alcohol

WILFAROL™

PRODUCT CODE		WILFAROL™ 0810	WILFAROL™ 1299	WILFAROL™ 1214	WILFAROL™ 1216	WILFAROL™ 1499	WILFAROL™ 1218	WILFAROL™ 1618
PRODUCT DESCRIPTION		Octyl-Decyl Alcohol	Lauryl Alcohol	Lauryl-Myristyl Alcohol	Lauryl-Cetyl Alcohol	Myristyl Alcohol	Stripped Palm Kernel Lauryl Alcohol	Cetyl-Stearyl Alcohol
SPECIFICATION								
Acid Value	mg KOH/g	0.1 Max	0.1 Max	0.1 Max	0.1 Max	0.1 Max	0.1 Max	0.1 Max
Sap. Value	mg KOH/g	1.5 Max	0.4 Max	0.5 Max	0.5 Max	0.5 Max	1.2 Max	1 Max
Iodine Value	g I ₂ /100g	0.5 Max	0.2 Max	0.3 Max	0.3 Max	0.3 Max	0.5 Max	0.5 Max
Carbonyl Value	mg/kg	150 Max	150 Max	150 Max	150 Max	150 Max	150 Max	150 Max
Hydroxyl Value	mgKOH/g	385 - 410	298 - 302	285 - 295	280 - 290	255 - 262	265 - 279	210 - 220
Color	APHA	10 Max	10 Max	10 Max	10 Max	10 Max	10 Max	10 Max
Moisture Content	%	0.5 Max	0.1 Max	0.1 Max	0.1 Max	0.1 Max	0.2 Max	0.3 Max
Fatty Alcohol Content	%	99 Min	99 Min	99 Min	99 Min	99 Min	99 Min	99 Min
Fatty Alcohol Composition	%							
C6		5 Max	-	-	-	-	3 Max	-
C8		45 - 65	-	-	-	-		-
C10		35 - 55	2 Max	2 Max	2 Max	2 Max		-
C12		5 Max	98 Min	68 - 78	65 - 71	98 Min	48 - 58	3 Max
C14			2 Max	20 - 30	22 - 28		18 - 24	
C16			2 Max	2 Max	4 - 8	2 Max	8 - 12	22 - 32
C18			-	-	0.5 Max		11 - 15	66 - 76
C20			-	-	-	-	1 Max	3 Max
PRODUCT FORM		Liquid	Liquid	Liquid	Liquid	Liquid	Liquid	Liquid
PACKAGING		DR, ISO, Bulk	DR, ISO, Bulk	DR, ISO, Bulk	DR, ISO, Bulk	DR, ISO, Bulk	DR, ISO, Bulk	DR, ISO, Bulk

DR = 180kg steel drum ISO = 20mt iso tank



Passover



For more details and trade inquiries please contact oleo@wilmar.com.sg

Epichlorohydrin

WILFARIN™

PRODUCT CODE		WILFARIN™ ECH-999	WILFARIN™ ECH-995	WILFARIN™ ECH-990
PRODUCT DESCRIPTION		Epichlorohydrin 99.9%	Epichlorohydrin 99.5%	Epichlorohydrin 99.0%
SPECIFICATION				
Color	APHA	15 Max	20 Max	25 Max
Epichlorohydrin Content	%	99.9 Min	99.5 Min	99 Min
Moisture	%	0.02 Max	0.06 Max	0.1 Max
Density	g/cm³ 20°C	1.180 - 1.183	1.180 - 1.184	1.179 - 1.184
PRODUCT FORM		Liquid	Liquid	Liquid
PACKING		DR, IBC, ISO	DR, IBC, ISO	DR, IBC, ISO

DR = 200kg steel drum IBC = 900 kg ibc tank ISO = 20mt iso tank

Palm Wax

WILFAWAX™

PRODUCT CODE		WILFAWAX™ PF-1705	WILFAWAX™ PF-1508	WILFAWAX™ PF-1505	WILFAWAX™ PF-363
SPECIFICATION					
Acid Value	mg KOH/g	209 - 214	110 - 140	125 - 165	-
FFA as Palmitic Acid	%	-	-	-	1 Max
Colour Lovibond	Lov, R/Y	0.5R / 5Y	2.5R / 25Y	2.5R Max	3R / 30Y
Iodine Value	g I ₂ /100 g	0.5 Max	10 Max	8 Max	6 - 8
Sap. Value	mg KOH/g	210 - 215	-	-	-
Titre	°C	53 - 55	-	-	-
SMP	°C	-	45 - 55	50 - 60	56 - 60
M&I	%	-	-	0.25 Max	1 Max
PRODUCT FORM		Liquid / Solid	Liquid / Solid	Liquid / Solid	Liquid / Solid
PACKING		PB, BB, Bulk	PB, BB, Bulk	PB, BB, Bulk	PB, BB, Bulk

PB = 25kg net pp laminated paper bag BB = 800kg net jumbo bag



Passover



Alkyl Ketene Dimer

WILFAWAX™

PRODUCT CODE	WILFAWAX™ AKD-42	WILFAWAX™ AKD-40	WILFAWAX™ AKD-67	WILFAWAX™ AKD-65	WILFAWAX™ AKD-97	WILFAWAX™ AKD-95
PRODUCT DESCRIPTION	AKD (C18 40%)	AKD (C18 40%)	AKD (C18 65%)	AKD (C18 65%)	AKD (C18 95%)	AKD (C18 95%)
SPECIFICATION						
Appearance	Slight Yellow / Yellow	Slight Yellow / Yellow	Slight Yellow / Yellow	Slight Yellow / Yellow	Slight Yellow / Yellow	Slight Yellow / Yellow
AKD Content %	90 Min	88 Min	90 Min	88 Min	90 Min	88 Min
Acid Value mgKOH/g	5 Max	5 Max	5 Max	5 Max	5 Max	5 Max
Melting Point °C	47 Min	47 Min	50 Min	50 Min	60 Min	60 Min
Toluene Content %	Negative	Negative	Negative	Negative	Negative	Negative
PRODUCT FORM	Solid	Solid	Solid	Solid	Solid	Solid
PACKING	PB, BB	PB, BB	PB, BB	PB, BB	PB, BB	PB, BB

PB = 25kg net pp laminated paper bag BB = 800kg net jumbo bag

Fractionated Methyl Ester

WILMARIN™

PRODUCT CODE		WILMARIN™ ME-0898	WILMARIN™ ME-1098	WILMARIN™ ME-1299	WILMARIN™ ME-1498	WILMARIN™ ME-1699	WILMARIN™ ME-0810
PRODUCT DESCRIPTION		C8 Methyl Ester	C10 Methyl Ester	C12 Methyl Ester	C14 Methyl Ester	C16 Methyl Ester	C8-C10 Methyl Ester
SPECIFICATION							
Acid Value	mg KOH/g	0.3 Max	0.5 Max	0.5 Max	0.5 Max	1 Max	0.5 Max
Sap. Value	mg KOH/g	352 - 358	299 - 309	260 - 263	224 - 240	200 - 206	320 - 335
Iodine Value	g I ₂ /100 g	0.5 Max	0.3 Max	0.3 Max	0.5 Max	1 Max	0.5 Max
Color	Lovibond	0.2R Max	0.2R Max	0.2R Max	0.2R Max	0.2R Max	-
Color	APHA	-	-	-	-	-	80 Max
Moisture	%	0.1 Max	0.1 Max	0.1 Max	0.1 Max	0.1 Max	0.2 Max
Composition	%						
C6		2 Max	-	-	-	-	4 Max
C8		98 Min	2 Max	-	-	-	50 - 58
C10		2 Max	98 Min	1 Max	-	-	35 - 50
C12		-	2 Max	99 Min	2 Max	-	1 Max
C14		-	-	1 Max	98 Min	1 Max	-
C16		-	-	-	2 Max	99 Min	-
C18-0		-	-	-	-	1 Max	-
C18-1		-	-	-	-	-	-
C18-2		-	-	-	-	-	-
Others		-	-	-	-	-	-
PRODUCT FORM		Liquid	Liquid	Liquid	Liquid	Liquid	Liquid
PACKAGING		PE, DR, ISO, BULK	PE, DR, ISO, BULK	PE, DR, ISO, BULK	PE, DR, ISO, BULK	PE, DR, ISO, BULK	PE, DR, ISO, BULK

PE = 180kg pe drum DR = 180kg steel drum ISO = 20mt iso tank



Passover



For more details and trade inquiries please contact oleo@wilmar.com.sg

Fractionated Methyl Ester

WILMARIN™

PRODUCT CODE		WILMARIN™ ME-1214	WILMARIN™ ME-1618	WILMARIN™ ME-1218K	WILMARIN™ ME-0818K	WILMARIN™ ME-1218C	WILMARIN™ ME-0818C
PRODUCT DESCRIPTION		C12-C14 Methyl Ester	C16-C18 Methyl Ester	C12-C18 Stripped Palm Kernel Methyl Ester	C8-C18 Palm Kernel Methyl Ester	C12-C18 Stripped Coconut Methyl Ester	C8-C18 Coconut Methyl Ester
SPECIFICATION							
Acid Value	mg KOH/g	0.5 Max	1 Max	1 Max	1 Max	1 Max	1 Max
Sap. Value	mg KOH/g	250 - 260	185 - 195	230 - 240	238 - 248	235 - 245	245 - 265
Iodine Value	g I ₂ /100 g	0.5 Max	56 - 74	16 - 20	14 - 19	9 - 13	7 - 12
Color	Lovibond	0.2R Max	-	0.5R Max	0.5R Max	0.5R Max	0.5R Max
Color	APHA	-	100 Max	-	-	-	-
Moisture	%	0.1 Max	0.1 Max	0.1 Max	0.2 Max	0.1 Max	0.2 Max
Composition	%						
C6		-	-	-	1 Max	-	1 Max
C8		1 Max	-	3 Max	1 - 5	3 Max	2 - 10
C10		2 Max	-		1 - 5		5 - 8
C12		70 - 75	0.5 Max	47 - 54	45 - 50	48 - 58	45 - 53
C14		22 - 30	1 Max	15 - 19	14 - 18	19 - 24	14 - 21
C16		2 Max	20 - 35	7 - 11	7 - 10	9 - 12	7 - 13
C18-0		-	65 - 80	1 - 3	1 - 3	2 - 4	2 - 4
C18-1		-	-	14 - 20	12 - 19	6 - 9	3 - 9
C18-2		-	-	2 - 4	2 - 4	2 Max	2 Max
Others		-	1.5 Max	0.5 Max	0.5 Max	0.5 Max	0.5 Max
PRODUCT FORM		Liquid	Liquid	Liquid	Liquid	Liquid	Liquid
PACKAGING		PE, DR, ISO, BULK	PE, DR, ISO, BULK	PE, DR, ISO, BULK	PE, DR, ISO, BULK	PE, DR, ISO, BULK	PE, DR, ISO, BULK

PE = 180kg pe drum DR = 180kg steel drum ISO = 20mt iso tank



Passover



For more details and trade inquiries please contact oleo@wilmar.com.sg

PRODUCT CODE		WILMARIN™ BD-11A	WILMARIN™ BD-13A	WILMARIN™ BD-15A
PRODUCT DESCRIPTION		PME ASTM D6751-09	PME ASTM D6751-09	PME ASTM D6751-09
SPECIFICATION				
Flash Point, PMCC	°C	130 Min	130 Min	130 Min
Methanol Content	% vol	0.2 Max	0.2 Max	0.2 Max
Water & Sediment	% vol	0.05 Max	0.05 Max	0.05 Max
Kinematik Viscosity at 40 °C	mm ² /s	1.9 - 6	1.9 - 6	1.9 - 6
Sulfated Ash	% mass	0.02 Max	0.02 Max	0.02 Max
Sulphur	ppm	15 Max	15 Max	15 Max
Copper Strip Corrosion		No. 3 Max	No. 3 Max	No. 3 Max
Cetane Number		47 Min	47 Min	47 Min
Cloud Point	°C	14 Max	16 Max	18 Max
Carbon Residue (100% sample)	% mass	0.05 Max	0.05 Max	0.05 Max
Acid Number	mgKOH/g	0.5 Max	0.5 Max	0.5 Max
Free Glycerine	% mass	0.02 Max	0.02 Max	0.02 Max
Total Glycerine	% mass	0.24 Max	0.24 Max	0.24 Max
Phosphorous Content	% mass	0.001 Max	0.001 Max	0.001 Max
Distillation, T90 AET	°C	360 Max	360 Max	360 Max
Calcium & Magnesium, combined	ppm	5 Max	5 Max	5 Max
Sodium & Potassium, combined	ppm	5 Max	5 Max	5 Max
Oxidation Stability	hours	3 Min	3 Min	3 Min
Cold Filter Plugging Point	°C	11 Max	13 Max	15 Max
Cold Soak Filtration	seconds	360 Max	360 Max	-
PRODUCT FORM		Liquid	Liquid	Liquid

*ASTM D7501



Passover



PRODUCT CODE		WILMARIN™ BD-11E	WILMARIN™ BD-13E	WILMARIN™ BD-15E
PRODUCT DESCRIPTION		PME EN 14214-08	PME EN 14214-08	PME EN 14214-08
SPECIFICATION				
Ester Content	% m/m	96.5 Min	96.5 Min	96.5 Min
Density at 15 °C	kg/m ³	860 - 900	860 - 900	860 - 900
Viscosity at 40 °C	mm ² /s	3.5 - 5	3.5 - 5	3.5 - 5
Flash Point, PMCC	°C	101 Min	101 Min	101 Min
Sulphur Content	mg/kg	10 Max	10 Max	10 Max
Carbon Residue (10% Distillation Residue)	% mass	0.3 Max	0.3 Max	0.3 Max
Cetane Number		51 Min	51 Min	51 Min
Sulfated Ash Content	% mass	0.02 Max	0.02 Max	0.02 Max
Water Content	mg/kg	500 Max	500 Max	500 Max
Total Contamination	mg/kg	24 Max	24 Max	24 Max
Copper Strip Corrosion (3 h at 50°C)	rating	class 1	class 1	class 1
Oxidation Stability, 110°C	hours	6 Min	6 Min	6 Min
Acid Value	mgKOH/g	0.5 Max	0.5 Max	0.5 Max
Iodine Value	% I ₂	52 Min	49 - 51	38 - 40
Linolenic Acids Methyl Esters	% mass	12 Max	12 Max	12 Max
Polyunsaturated (>= 4 double bond) Methyl Ester	% m/m	1 Max	1 Max	1 Max
Methanol Content	% m/m	0.2 Max	0.2 Max	0.2 Max
Monoglyceride Content	% m/m	0.8 Max	0.8 Max	0.8 Max
Diglyceride Content	% m/m	0.2 Max	0.2 Max	0.2 Max
Triglyceride Content	% m/m	0.2 Max	0.2 Max	0.2 Max
Free Glycerine	% m/m	0.02 Max	0.02 Max	0.02 Max
Total Glycerine	% m/m	0.25 Max	0.25 Max	0.25 Max
Alkaline Metals (K+Na)	mg/kg	5 Max	5 Max	5 Max
Alkaline Metals (Ca+Mg)	mg/kg	5 Max	5 Max	5 Max
Phosphorus Content	mg/kg	4 Max	4 Max	4 Max
Cold Filter Plugging Point	°C	11 Max	13 Max	15 Max
PRODUCT FORM		Liquid	Liquid	Liquid



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Notes



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