

# CREATING A BETTER CONNECTED WORLD



**KEMAMAN BITUMEN COMPANY SDN BHD**  
*A Subsidiary of TIPCO Asphalt Public Company Limited*

Incorporated on



21 APRIL 2003  
in Malaysia

Owned 100% by



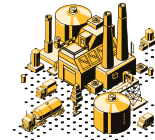
TIPCO ASPHALT  
Public Company Ltd

Exports to more than



~30 COUNTRIES  
worldwide

Operating on



100 ACRES  
dedicated facility

## KEMAMAN BITUMEN COMPANY SDN BHD (KBC)

# ONE OF A KIND UNRIVALLED **NAPHTHENIC ASPHALT** PRODUCING REFINERY IN THE REGION

KBC uses the **Straight-Run Process** to produce high quality **Naphthenic Asphalt** grades that are very complex to achieve using other secondary processing techniques

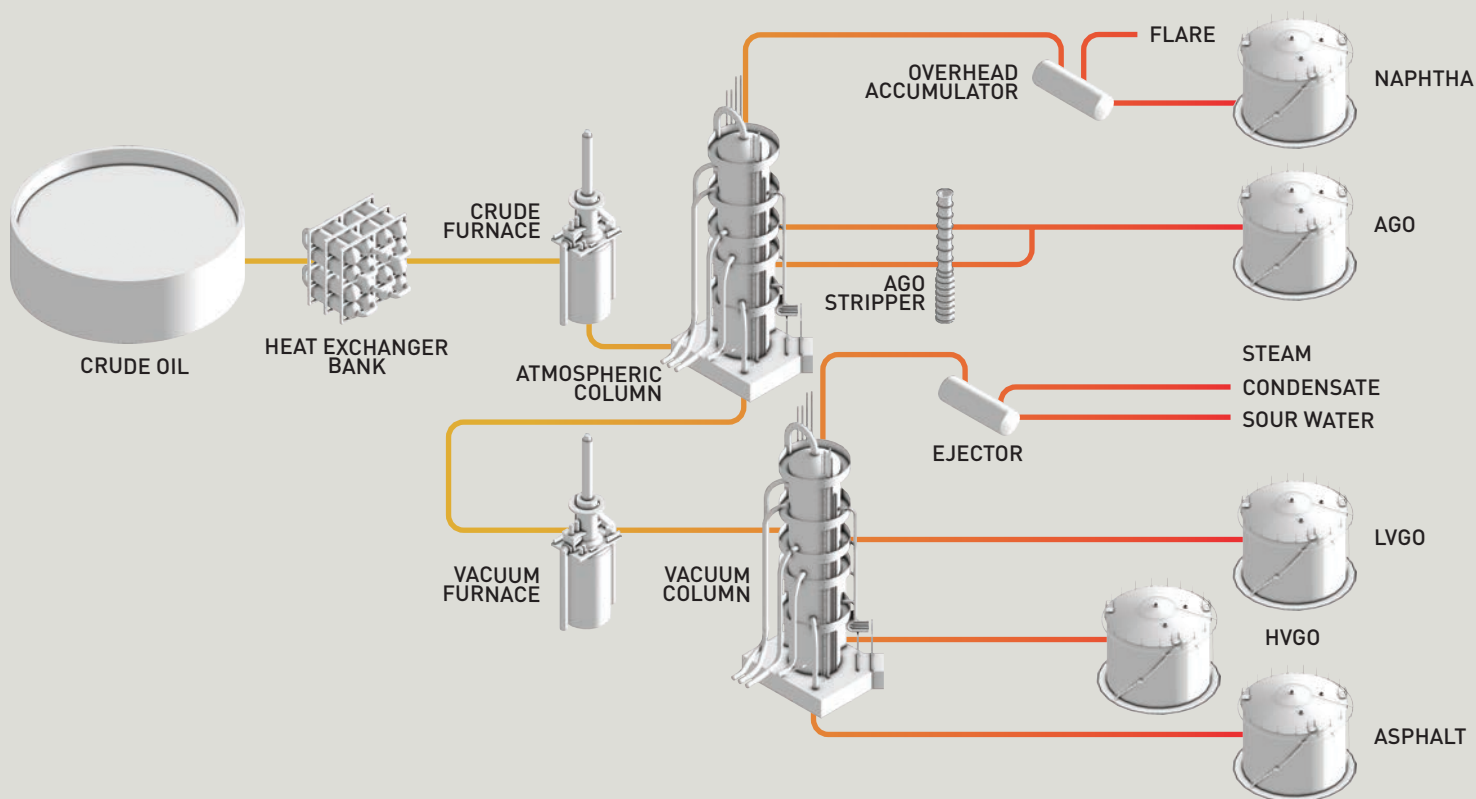
We are proud to be accredited and certified with the world's most recognised quality management standards

✓ ISO 9001

✓ ISO 17025

✓ ISO 14001

✓ ISO 45001



## OUR CAPABILITIES

30,000  
bbl/day



Refining  
Capacity

~350,000  
mt



Crude Oil  
Storage Capacity

120,000  
mt



Product  
Storage Capacity

1,200,000  
mt



Annual Asphalt  
Production  
Capacity

>20  
types



Grades of  
Asphalt  
Produced



# CHARACTERISTICS OF CRUDE OIL

KBC'S BASKET OF CRUDE OIL IS  
SELECTED TO GIVE THE **HIGHEST  
ASPHALT YIELD**

KBC is the leading supplier and the only refinery in Asia Pacific that consistently produces Naphthenic Asphalt; which is superior to Paraffinic Asphalt in almost all parameters and gives much better performance in many key areas



## SOUTH AMERICAN CRUDE OIL



Naphtha	1-5%
Kerosene	1-5%
AGO	10-25%
VGO	5-15%
Asphalt	50-75%

## NAPHTHENIC CRUDE OIL



Asphaltic Nature  
Excellent feedstock for  
Asphalt manufacture

## HEAVY CRUDE OIL



Low API Gravity  
Ranges within  
10-16

## HIGH ASPHALTENE CONTENT



Leading to a much  
higher yield of  
asphalt

## HIGHER VISCOSITY



Produces higher  
Vacuum Residue  
viscosity

# PRODUCT QUALITY CONTROL

## ISO 17025 CERTIFIED LABORATORY



### 24/7 OPERATIONS

Our refinery and laboratory operates around the clock with full testing capabilities complying to international specifications



### ACCESS TO TECHNICAL SUPPORT

From Tipco Asphalt R&D Centre, Bangkok and Colas Campus for Science and Techniques, Paris



### STRONG AND LONG -STANDING ASSOCIATION

With third-party laboratories at universities and standards bodies



# REGIONAL ASPHALT SPECIFICATIONS

Property Fresh Binder	Test Method	Unit	Malaysia AC60-70	Thailand AC60-70	Vietnam AC60-70	Indonesia AC60-70	China AH70	India VG20
Penetration @ 25°C	ASTM D 5	0.1 mm	60-70	60-70	60-70	60-70	60-80	≥ 60
Penetration Index (PI)	ASTM D 5	-	-	-	-1.5 to +1.0	-	-1.5 to +1.0	-
Softening Point (Ring & Ball Test)	ASTM D 36	°C	48-56	45-55	≥ 46	≥ 48	≥ 46	≥ 45
Ductility @ 25°C	ASTM D 113	cm	≥ 100	≥ 100	≥ 100	≥ 100	-	-
Ductility @ 15° C	ASTM D 113	cm	-	-	-	-	≥ 100	-
Ductility @ 10° C	ASTM D 113	cm	-	-	-	-	≥ 20	-
Wax Content	DIN EN 1260-1 / 2	%	Report	-	≤ 2.2	≤ 2.0	≤ 2.2	-
Flash Point (Cleveland Open Cup)	ASTM D 92	°C	≥ 250	≥ 232	≥ 232	≥ 232	≥ 260	≥ 220
Density @ 15°C	ASTM D 70	g/cm³	-	-	-	-	Report	-
Density @ 25°C	ASTM D 70	g/cm³	-	-	1.00 to 1.05	-	-	-
Specific Gravity @ 15 °C or 25°C	ASTM D 70	-	-	-	-	≥ 1.0	-	-
Solubility in Trichloroethylene	ASTM D 2042	%	≥ 99.0	≥ 99.0	≥ 99.0	≥ 99.0	≥ 99.5	≥ 99.0
Dynamic Viscosity @ 60°C	ASTM D 2171	Pa·s	Report	-	≥ 180	-	≥ 180	160-240
Kinematic Viscosity @ 135°C	ASTM D 2170	mm²/s	Report	-	-	≥ 300	-	-
Dynamic Shear @ 64°C	AASHTO T 315	kPa	-	≥ 1.0	-	-	-	-
Thin Film Oven Test (TFOT) @ 163°C / 5 hrs (ASTM D 1754)								
Change in Weight	ASTM D 1754	%	-	≤ 0.8	≤ 0.8	≤ 0.8	-0.8 to +0.8	-
Retained Penetration	ASTM D 5	%	≥ 52	≥ 54	≥ 54	≥ 54	≥ 61	-
Ductility @ 25°C	ASTM D 113	cm	-	≥ 50	≥ 50	≥ 50	-	-
Ductility @ 15°C	ASTM D 113	cm	-	-	-	-	-	-
Ductility @ 10°C	ASTM D 113	cm	-	-	-	-	≥ 6	-
Rolling Thin Film Oven Test (RTFOT) @ 163°C / 85 mins (ASTM D 2872)								
Ductility @ 25°C	ASTM D 113	cm	-	-	-	-	-	≥ 50
Variation in Viscosity @ 60°C	ASTM D 2171	%	-	-	-	-	-	≤ 4000
Loss on Heating @ 163 °C / 5 hrs (ASTM D6)								
Change in Weight	ASTM D 1754	%	≤ 0.2	-	-	-	-	-
Drop in Penetration	ASTM D 5	%	≤ 20	-	-	-	-	-

(\*) updated October 2019

## MAKE THAT CONNECTION – BETTER

### CORPORATE INQUIRIES

E-mail: [info@kbc.com.my](mailto:info@kbc.com.my)

#### KEMAMAN BITUMEN COMPANY SDN BHD (HEAD OFFICE)

Suite 12-1, Level 12, Tower 6,  
UOA Business Park,  
No. 1, Jalan Pengaturcara, U1/51A,  
Seksyen U1, Shah Alam 40150,  
Selangor Darul Ehsan,  
Malaysia.

Tel: (+60)3 5561 8500  
Fax: (+60)3 5561 8539  
Website: [www.kbc.com.my](http://www.kbc.com.my)

### MALAYSIAN DOMESTIC SALES

E-mail: [salesdept@kbc.com.my](mailto:salesdept@kbc.com.my)

#### KEMAMAN BITUMEN COMPANY SDN BHD (REFINERY)

Plot PT 7195,  
Telok Kalong Industrial Area,  
Kemaman 24000,  
Terengganu Darul Iman,  
Malaysia.

Tel: (+60)9 860 1800  
Fax: (+60)9 860 1806  
Website: [www.kbc.com.my](http://www.kbc.com.my)

### INTERNATIONAL SALES

E-mail: [info@tipcoasphalt.com.my](mailto:info@tipcoasphalt.com.my)

#### TIPCO ASPHALT PUBLIC COMPANY LTD (TIPCO GROUP HEAD OFFICE)

24th Floor, Tipco Tower,  
118/1 Rama 6 Road,  
Samsen Nai, Phayathai District,  
Bangkok 10400,  
Thailand.

Tel: (+66) 2273 6000  
Fax: (+66) 2271 1601  
Website: [www.tipcoasphalt.com](http://www.tipcoasphalt.com)

# NAPHTHENIC VS PARAFFINIC ASPHALT

## PROPERTIES

## ADVANTAGES

1	HIGHER VISCOSITY	>	Better stiffness modulus at high temperature
2	HIGHER PENETRATION GRADE (PG)*	>	Better rutting resistance at high temperature
3	LOWER WAX CONTENT	>	Less brittle at low temperature
4	HIGHER PENETRATION INDEX	>	Better resistance to ageing
5	HIGHER ACID INDEX	>	Better suitability for surface treatment emulsion


\* Our 60/70 Pen. Grade Naphthenic Asphalt produces PG70-22 grade compared to PG64-22 on Paraffinic Asphalt

## BETTER HOT MIX ASPHALT PERFORMANCE WITH NAPHTHENIC ASPHALT



**Marshall Stability**

Higher (~10%)



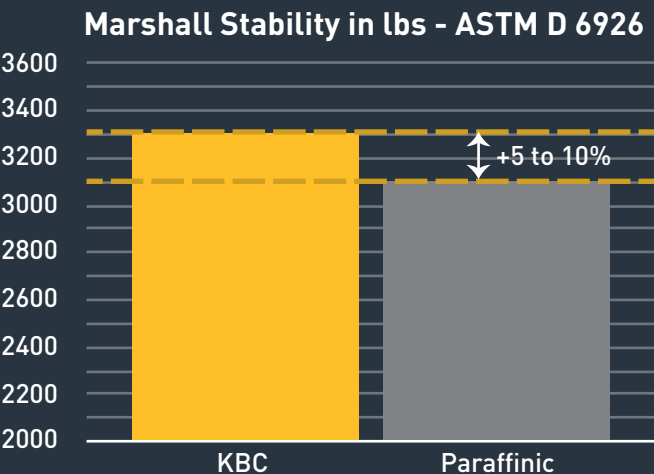
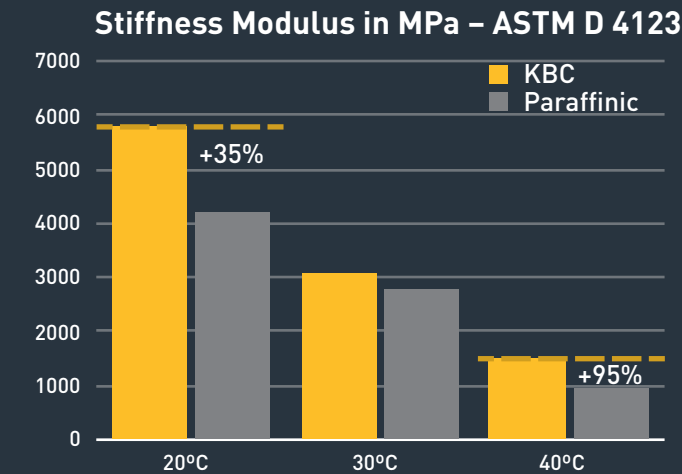
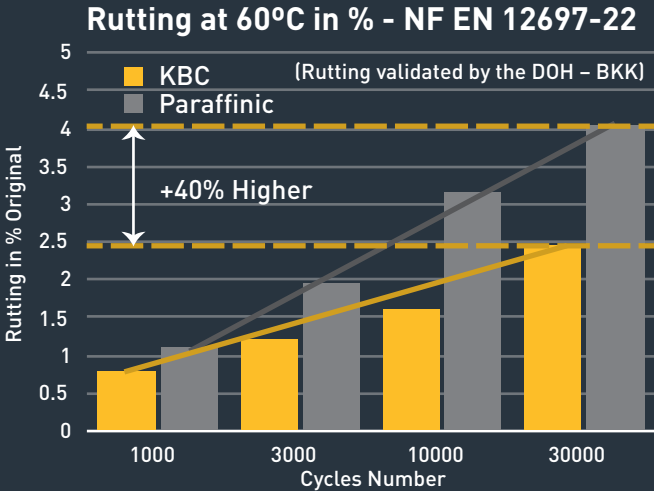
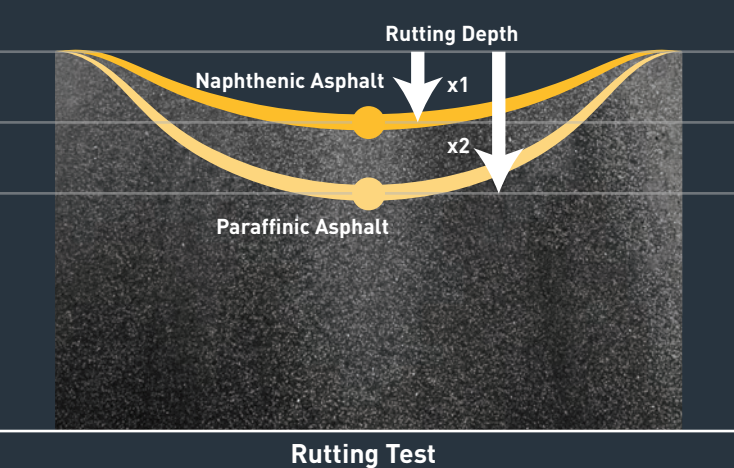
**Stiffness Modulus**

Higher (35 to 95%)



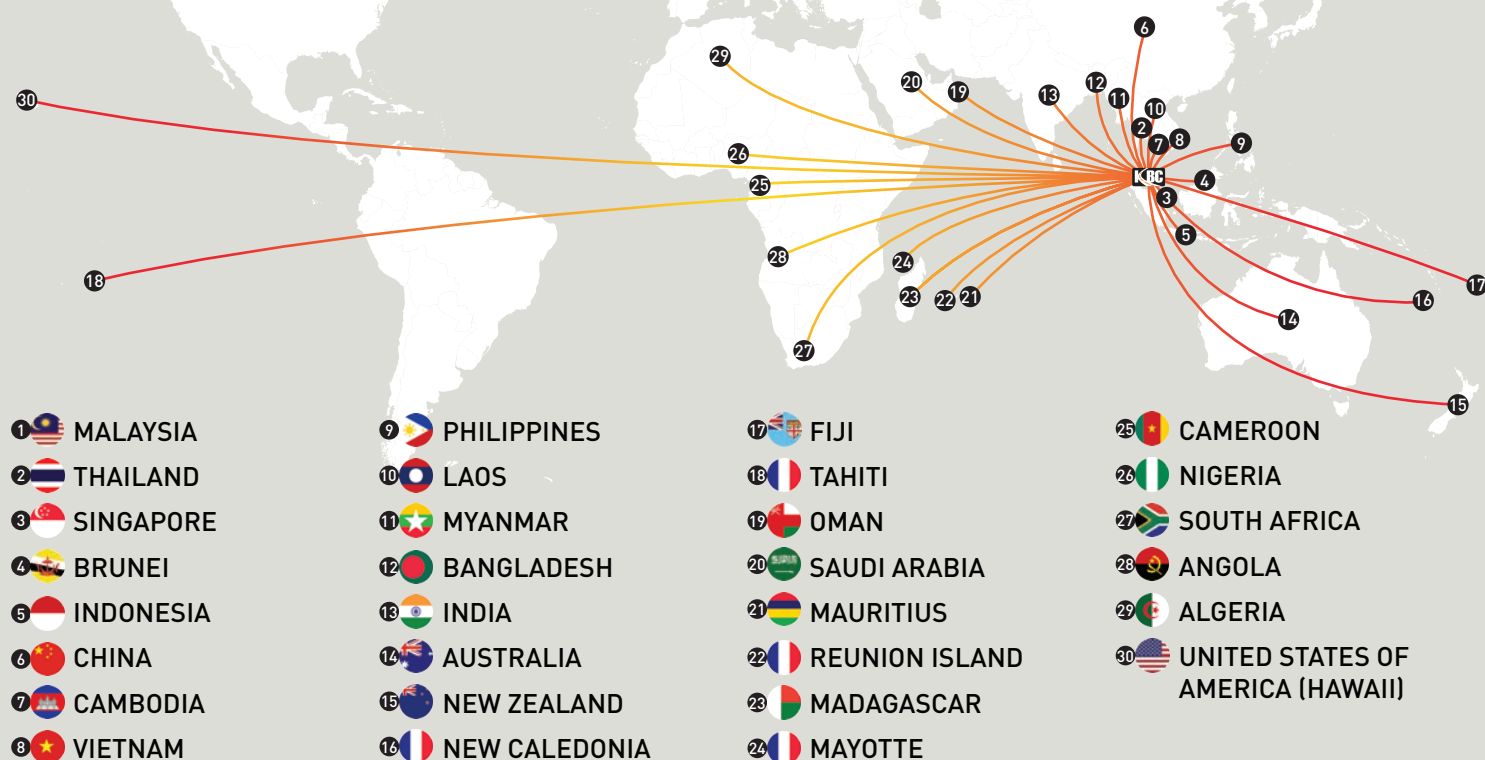
**Rutting Resistance**

Higher (40%)



\*\* The charts above are based on typical results

# OUR MARKET COVERAGE



# OUR VALUE CHAIN



The finished products are distributed through the road tanker loading facility in the refinery area and exported through our two dedicated jetties. Both West Wharf and LCB can handle vessel sizes up to 150,000 DWT.