

# INDUSTRIAL & MARINE ENGINE OILS

- *Salyx Series*
- *Medripal Series*
- *Meditran P Series*
- *Meditran SMX Series*
- *Diloka 448 X Series*

## SALYX 12,15,20,30,40,50 PELUMAS MESIN DIESEL PUTARAN MENENGAH

Pelumas	TBN ( mgKOH/gr)	% Wt Sulfur Fuel	Fuel Sample
Salyx 12 Series	12	< 0.5	HSD / Solar
Salyx 15 Series	15	< 0.5	HSD / Solar
Salyx 20 Series	20	< 0.5	HSD / Solar
Salyx 30 Series	30	0.5-1.5	IDO
Salyx 40 Series	40	1.5-3.5	MFO / Minyak Bakar
Salyx 50 Series	50	1.5-3.5	MFO / Minyak Bakar

### TYPICAL CHARACTERISTIC

### KARAKTERISTIK TIPIKAL

Characteristic	Testing Method	SALYX					
		312	412	315	415	320	420
SAE Viscosity Grade		30	40	30	40	30	40
Viscosity Kinematic, at 40 °C, cSt	D - 445	106.4	145.3	105.7	160.2	102.2	140.8
		11.54	14.5	11.8	14.9	11.5	15.0
Viscosity Index	D - 2270	Min 95					
Specific density, 15 °C	D - 4052	0.889	0.896	0.891	0.899	0.894	0.897
Colour ASTM	D - 1500	3.0	3.5	L3.5	3.5	L4.0	L4.5
Flash Point (COC), °C	D - 92	248	264	250	266	255	240
Pour Point, °C	D - 97	-18	-18	-18	-18	-18	-18
TBN, mg KOH/g	D - 2896	12.7	12.48	16.14	16.14	20.83	21.38

Characteristic	Testing Method	SALYX			
		330	430	440	450
SAE Viscosity Grade		30	40	40	40
Viscosity Kinematic, at 40 °C, cSt at 100 °C, cSt	D - 445	100.0	144.8	147.8	144.6
		11.4	14.9	15.0	14.5
Specific density, 15 °C	D - 4052	0.905	0.905	0.911	0,917
Colour ASTM	D - 1500	L4.0	L5.0	L7.5	> 8.0
Flash Point (COC), °C	D - 92	252	237	237	249
Pour Point, °C	D - 97	-21	-18	-18	-21
TBN, mg KOH/g	D - 2896	30.68	32.16	42.48	53.56

## SALYX 570

### MINYAK LUMAS MESIN DIESEL INDUSTRI DAN PERKAPALAN

#### TYPICAL CHARACTERISTIC

#### KARAKTERISTIK TIPIKAL

No.	Typical Characteristics	ASTM Method	SALYX 570	SALYX 540
1	No. SAE		50	50
2	Density at 15 °C (kg/L)	D-4052	0.932	0.909
3	Viscosity Kinematic, at 40 °C, cST at 100 °C, cST	D-445	226.11	191.7
		D-445	19.85	19.8
4	Viscosity Index	D-2270	100	-
5	Colour ASTM	D-1500	Dark	L.65
6	Flash Point (°C)	D-92	274	272
7	Pour Point (°C)	D-5950	-18	-21
8	Total Base Number (mg KOH/g)	D-2896	71.69	42.30

## SALYX 8 SERIES

### PELUMAS MESIN DIESEL INDUSTRI & PERKAPALAN

#### TYPICAL CHARACTERISTIC

#### KARAKTERISTIK TIPIKAL

No.	Typical Characteristics	ASTM Method	SALYX	
			308	408
1	SAE Viscosity Grade		30	40
2	Density at 15 °C (kg/L)	D-4052	0.8869	0.8921
3	Viscosity Kinematic, at 40 °C, cST at 100 °C, cST	D-445	102.10	153.32
		D-445	11.51	14.94
4	Viscosity Index	D-2270	99	97
5	Colour ASTM	D-1500	L3.5	L3.0
6	Flash Point (°C)	D-92	255	264
7	Pour Point (°C)	D-5950	-18	-18
8	Total Base Number (mg KOH/g)	D-2896	8.30	8.86

## MEDRIPAL 11,12,20,30,40,50 PELUMAS MESIN DIESEL PUTARAN MENENGAH

Lubricate	TBN ( mgKOH/gr)	% Wt Sulfur Fuel	Fuel Sample
Medripal 11	12	< 0.5	HSD / Solar
Medripal 12	15	< 0.5	HSD / Solar
Medripal 15	18	< 0.5	HSD / Solar
Medripal 20	20	< 0.5	HSD / Solar
Medripal 30	30	0.5-1.5	IDO
Medripal 40	40	1.5-3.5	MFO/Minyak Bakar
Medripal 50	50	1.5-3.5	MFO/Minyak Bakar

### TYPICAL CHARACTERISTIC

### KARAKTERISTIK TIPIKAL

Characteristic	Testing Method	MEDRIPAL						
		311	411	312	412	512	320	420
SAE Viscosity Grade		30	40	30	40	50	30	40
Viscosity Kinematic, at 40 °C, cSt	D - 445	107.2	141.7	107.1	140.2	227.8	106.5	150.3
at 100 °C, cSt		11.8	14.3	11.8	14.2	19.3	11.9	14.9
Specific density, 15 °C	D - 4052	0.891	0.895	0.893	0.896	0.901	0.895	0.898
Colour ASTM	D - 1500	4.0	4.0	4.0	4.5	4.0	L4.5	L4.5
Flash Point (COC), °C	D - 92	273	274	278	281	281	240	255
Pour Point, °C	D - 97	-18	-18	-18	-18	-9	-18	-18
TBN, mg KOH/g	D - 2896	11.84	11.84	15.13	15.25	15.72	20.64	20.64

Characteristic	Testing Method	MEDRIPAL				
		330	430	440	540	450
SAE Viscosity Grade		30	40	40	50	40
Viscosity Kinematic, at 40 °C, cSt	D - 445	104.70	141.40	146.1	229.1	150.4
at 100 °C, cSt		11.8	14.6	14.9	19.7	18.9
Specific density, 15 °C	D - 4052	0.896	0.907	0.912	0.915	0.916
Colour ASTM	D - 1500	L5.0	L5.5	L6.0	L6.5	7.5
Flash Point (COC), °C	D - 92	240	237	249	243	246
Pour Point, °C	D - 97	-18	-21	-18	-18	-18
TBN, mg KOH/g	D - 2896	31.30	32.24	43.59	41.83	50.66

# MEDITRAN P

## PELUMAS MESIN DIESEL INDUSTRI DAN PERKAPALAN

### TYPICAL CHARACTERISTIC

### KARAKTERISTIK TIPIKAL

Characteristic	MEDITRAN P 30	MEDITRAN P 40	MEDITRAN P 50
No. SAE Viscosity Grade	30	40	50
Viscosity Kinematic, at 40 °C, cSt	119.93	174.39	272.02
at 100 °C, cSt	10.84	14.40	19.00
Viscosity Index	Min 95	Min 95	Min 95
Specific density, 15 °C	0.9134	0.9089	0.9139
Colour ASTM	4.5	L5.5	5.0
Flash Point (COC), °C	231	246	249
Pour Point, °C	-27	-18	-9
Total Base Number (TBN), mg KOH/g	18.50	18.50	18.48

# MEDITRAN SMX 15W-40

## MINYAK LUMAS MESIN DIESEL PUTARAN TINGGI DENGAN KEKENTALAN GANDA (MULTIGRADE)

### TYPICAL CHARACTERISTIC

### KARAKTERISTIK TIPIKAL

No.	Typical Characteristics	ASTM Method	MEDITRAN SMX SAE 40
1	No. SAE		15 W - 40
2	Density at 15 °C (kg/L)	D-4052	0.8860
3	Viscosity Kinematic, at 40 °C, cST	D-445	112.01
	at 100 °C, cST	D-445	14.99
4	Viscosity Index	D-2270	139
5	Colour ASTM	D-1500	L 4.0
6	Flash Point (°C)	D-92	216
7	Pour Point (°C)	D-5950	-24
8	Total Base Number (mg KOH/g)	D-2896	11.35
9	Apparent Viscosity at -20 °C, cps	D-5293	6800

## MEDITRAN SMX- 40 MINYAK LUMAS MESIN DIESEL TUGAS BERAT

### TYPICAL CHARACTERISTIC

### KARAKTERISTIK TIPIKAL

Typical Characteristics	Testing Method	Test Result Typical
No. SAE Viscosity Grade		40
Specific density, 15 °C	D - 4052	0.8940
Viscosity Kinematic, at 40 °C, cSt	D - 445	136.00
at 100 °C, cSt	D - 2270	14.72
Viscosity Index		108
Colour ASTM	D - 1500	L 3.5
Flash Point (COC), °C	D - 92	251
Pour Point, °C	D - 97	-24
Total Base Number (TBN), mg KOH/g	D - 2896	11.48
Demulsibility	D - 874	14/39/0(60')

## DILOKA 448 X MINYAK LUMAS MESIN LOKOMOTIF KERETA API

### TYPICAL CHARACTERISTIC

### KARAKTERISTIK TIPIKAL

No.	Typical Characteristics	ASTM Method	Diloka 448 X
1	No. SAE		40
2	Density at 15 °C (kg/L)	D-4052	0.8967
3	Viscosity Kinematic, at 40 °C, cST	D-445	144.80
	at 100 °C, cST	D-445	14.87
4	Viscosity Index	D-2270	Min 95
5	Colour ASTM	D-1500	4.0
6	Flash Point (°C)	D-92	268
7	Pour Point (°C)	D-5950	-9
8	Total Base Number (mg KOH/g)	D-2896	13.52