

# ENOC STRATA MSDO

## PRODUCT DESCRIPTION

**ENOC STRATA MSDO** are a range of generation III high performance engine oils for all types of marine medium speed diesel engines operating on high sulphur residual fuels. They have been developed from the latest complex dispersant and detergent technology to provide long lubrication life and enhanced engine performance in particular in low emission engines and those with anti-bore glazing piston designs.

## APPLICATIONS

- ◆ A range of high Total Base Number oils for use in Trunk Piston Engines burning variable quality residual fuel with high sulphur content available in the market
- ◆ Provide gear lubrication qualities for reduction gear applications where similar viscosities might be used
- ◆ Suitable for high output turbocharged engines
- ◆ It is recommended that Strata MSD oils are suitable for centrifuging and/or filtered in accordance with the manufacturers instructions
- ◆ Suitable for MAN (B&W), KHD DEUTZ, PIELSTICK , NIGATA, MAK, DAIHATSU, MIRLESS BLACKSTONE trunk piston diesel engines (4 Stroke )

## PERFORMANCE STANDARDS

API	CF
CCMC	D2
Caterpillar	CMOT pass

## BENEFITS

### STRATA MSDO provides:

- ◆ Suitability for engines using high sulphur residual or distillate fuels
- ◆ Superior resistance to oxidation and oil thickening
- ◆ Effective neutralisation of acidic combustion products
- ◆ Proven detergent/dispersant technology to reduce deposit formation
- ◆ Long engine and oil service life
- ◆ Excellent centrifugal separator operation

Technical Data*					
Product Grade	320	330	340	350	355
SAE Viscosity	30	30	30	30	30
Density @ 29.5 deg. C	0.8920	0.8945	0.9000	0.9310	0.9360
Kinematic Viscosity, mm <sup>2</sup> /s @ 100°C	11.66	12.23	12.09	11.66	12.09
Kinematic Viscosity, mm <sup>2</sup> /s @ 40°C	104.3	110.3	107.2	104.3	107.2
Flash Point °C	240	256	258	240	250
Pour Point, °C	-15	-15	-15	-15	-15
Total Base Number, ASTM D2896	20	30	40	50	55
FZG fail stage (A8.3/90)	12	12	12	12	12
Sulphated Ash %	2.45	3.66	4.89	6.1	6.7
Product code	252021	252022	252023	252024	252025

Issued by ENOC International Sales, Dubai, U.A.E.

Last Updated on : November 2013- RA

## ENOC STRATA MSDO

Technical Data*					
Product Grade	420	430	440	445	450
SAE Viscosity	40	40	40	40	40
Density @ 29.5 deg. C	0.8938	0.8940	0.8942	0.9044	0.9310
Kinematic Viscosity, mm <sup>2</sup> /s @ 100°C	14.55	15.16	15.16	15.4	14.9
Kinematic Viscosity, mm <sup>2</sup> /s @ 40°C	147	151	151	149.3	148
Flash Point °C	258	252	254	270	258
Pour Point, °C	-15	-15	-15	-15	-15
Total Base Number, ASTM D2896	20	30	40	45	50
FZG fail stage (A8.3/90)	12	12	12	12	12
Sulphated Ash %	2.45	3.66	4.98	5.22	6.1
Product code	252026	252027	252028	252033	252029

Technical Data*			
Product Grade	455	530	540
SAE Viscosity	40	50	50
Density @ 29.5 deg. C	0.9315	0.9318	0.9320
Kinematic Viscosity, mm <sup>2</sup> /s @ 100°C	14.9	20.18	20.18
Kinematic Viscosity, mm <sup>2</sup> /s @ 40°C	148	228	228
Flash Point °C	258	252	252
Pour Point, °C	-15	-15	-15
Total Base Number, ASTM D2896	55	30	40
FZG fail stage (A8.3/90)	12	12	12
Sulphated Ash %	6.7	3.66	4.86
Product code	252030	252031	252032

\*The information prepared provides the typical properties that are considered as representative. Some variation which will not affect performance is possible

### HEALTH AND SAFETY, ENVIRONMENT

The information on this product is available in the ENOC Material Safety Data Sheet (MSDS) as a guide to the precautions and safe handling of this product and its disposal. For further information we recommend you review the MSDS. Handled correctly there are no special precautions suggested.