

OGRA Gasoil & Kerosene Conversion Glossary

Based on the supplied OGRA Ex-Refinery Sale Price Calculation sheet, effective 21 July 2026

IMPORTANT: USD/bbl to USD/MT is a price conversion. Multiply the barrel price by barrels per metric ton. The exact factor depends on product density.

1. Core barrel-to-metric-ton formula

OGRA uses 1 barrel = 158.984 liters for white products. Let density be in kg/L.

Metric tons per barrel	Density x 158.984 / 1,000
Barrels per metric ton	1,000 / (Density x 158.984)
USD per metric ton	USD/bbl x 1,000 / (Density x 158.984)
USD per barrel	USD/MT x Density x 158.984 / 1,000

Do not use one fixed factor blindly. The common 7.4-7.5 bbl/MT shortcut is only an approximation for middle-distillate densities. For invoices, customs, valuation, or claims, use the actual density from the product specification, certificate of quality, or laboratory result.

2. Sulfur-grade glossary

Sulfur grade	Equivalent ppm	Meaning
0.5%	5,000 ppm	High-sulfur gasoil
0.05%	500 ppm	Lower-sulfur gasoil; OGRA benchmark used to derive 0.5%
0.005%	50 ppm	Ultra-low-sulfur grade
0.001%	10 ppm	Very low / road-diesel-type sulfur grade

Quick rule: sulfur % x 10,000 = ppm. Example: 0.05% x 10,000 = 500 ppm.

3. OGRA gasoil pricing formula and conversions

The supplied sheet directly averages 0.05%, 0.005%, and 0.001% gasoil prices. The 0.5% sulfur gasoil price is then derived by applying a 1.70% discount to the 0.05% sulfur average.

OGRA 0.5% gasoil formula

$$0.5\% \text{ FOB} = 0.05\% \text{ FOB} \times (1 - 1.70\%)$$

$$133.40286 \times 1.70\% = 2.26785 \text{ USD/bbl discount}$$

$$133.40286 - 2.26785 = 131.13501 \text{ USD/bbl}$$

Worked USD/MT values below use an illustrative gasoil density of 0.845 kg/L. At this density, the conversion factor is 7.44372 bbl/MT.

Grade	OGRA basis	USD/bbl	Formula	USD/MT at 0.845
0.5% (5,000 ppm)	Derived from 0.05% less 1.70%	131.13501	131.13501×7.44372	976.13
0.05% (500 ppm)	Direct OGRA average	133.40286	133.40286×7.44372	993.01
0.005% (50 ppm)	Direct OGRA average	136.01714	136.01714×7.44372	1,012.47
0.001% (10 ppm)	Direct OGRA average	136.32429	136.32429×7.44372	1,014.76

Gasoil density sensitivity

Density kg/L	Barrels/MT	0.5% USD/MT	0.05% USD/MT	0.005% USD/MT	0.001% USD/MT
0.820	7.67066	1,005.89	1,023.29	1,043.34	1,045.70
0.835	7.53286	987.82	1,004.91	1,024.60	1,026.91
0.845	7.44372	976.13	993.01	1,012.47	1,014.76
0.850	7.39993	970.39	987.17	1,006.52	1,008.79
0.860	7.31389	959.11	975.69	994.81	997.06

4. Kerosene conversion to USD/MT

The OGRA sheet shows kerosene in USD/bbl, then adds the white-product premium (including freight) to obtain C&F; USD/bbl.

Worked values use an illustrative kerosene density of 0.800 kg/L. At this density, the factor is 7.86243 bbl/MT.

Kerosene component	USD/bbl	Calculation	USD/MT at 0.800
FOB mean price	135.69571	135.69571×7.86243	1,066.90
Premium including freight	8.49869	8.49869×7.86243	66.82
C&F price	144.19440	144.19440×7.86243	1,133.72

Kerosene density sensitivity

Density kg/L	Barrels/MT	FOB USD/MT	Premium USD/MT	C&F; USD/MT
0.775	8.11605	1,101.31	68.98	1,170.29
0.800	7.86243	1,066.90	66.82	1,133.72
0.820	7.67066	1,040.88	65.19	1,106.07
0.840	7.48803	1,016.09	63.64	1,079.73

5. Quick-use checklist

Step 1	Take the OGRA price in USD/bbl.
Step 2	Confirm the correct sulfur grade and whether it is a direct average or a derived value.
Step 3	Obtain density in kg/L at the stated reference temperature.
Step 4	Calculate barrels/MT = $1,000 / (\text{density} \times 158.984)$.
Step 5	Calculate USD/MT = USD/bbl x barrels/MT.

Note: The USD/MT numbers in this glossary are worked examples, not a substitute for the actual cargo density. A higher density gives fewer barrels per MT and therefore a lower USD/MT conversion; a lower density gives more barrels per MT and a higher USD/MT conversion.

Appendix: Supplied OGRA source sheet

Annex-I

OIL AND GAS REGULATORY AUTHORITY										
Ex - Refinery Sale Price Calculation										
With effect from July 21, 2026										
Arab Gulf FOB Mean Prices										
		NAPHTHA	HSFO 180 CST	KEROSENE	GAS OIL 0.05% (500 ppm)	GAS OIL 0.005% (50 ppm)	GAS OIL 0.001% (10 ppm)	GASOLINE 95 RON	GASOLINE 92 RON	Exchange Rate
SR.NO	PRICES EFFECTIVE	\$/MT	\$/MT	\$/BBL	\$/BBL	\$/BBL	\$/BBL	\$/BBL	\$/BBL	Rs/ USD
		AVG	AVG	AVG	AVG	AVG	AVG	AVG	AVG	Selling
1	Friday, July 10, 2026	639.85000	388.23000	116.40000	118.21000	118.76000	118.86000	92.45000	88.16000	278.19650
2	Monday, July 13, 2026	660.02500	406.04000	122.85000	125.11000	125.66000	125.76000	94.80000	90.51000	278.15960
3	Tuesday, July 14, 2026	737.02500	466.10000	151.36000	146.24000	146.79000	146.89000	105.18000	100.89000	278.15180
4	Wednesday, July 15, 2026	744.77500	474.67000	141.90000	137.16000	139.75000	140.16000	103.66000	100.80000	278.14650
5	Thursday, July 16, 2026	697.95000	452.05000	136.18000	132.03000	136.56000	137.03000	102.42000	99.56000	278.10670
6	Friday, July 17, 2026	713.50000	456.48000	139.73000	137.09000	141.62000	142.09000	104.59000	100.73000	278.10180
7	Monday, July 20, 2026	752.50000	479.62000	141.45000	137.98000	142.98000	143.48000	109.17000	105.31000	278.09650
		706.51786	446.17000	135.69571	133.40286	136.01714	136.32429	101.75286	97.99429	278.13706
			0.5% and 0.05% Gasoil differential 1.70%		2.26785					
			Derived FOB price of 0.5% Sulphur Gasoil		131.13501					
IMPORT PARITY PRICES:										
	PRODUCTS	FOB PRICE	PREMIUM	C & F	C & F	CONV.FACT	IMPORT PARITY PRICE			
		\$/BBL	\$/BBL	\$/BBL	RS/BBL	LITERS/BBL	RS/LITERS			
	KERO	135.69571	8.49869	144.19440	40,105.80648	158.9840	252.26			
	PREMIUM (Including freight)									
		WHITE PRODUCTS : \$/BBL			8.49869	(1 BBL = 158.984 LITERS)				
		BLACK PRODUCTS : \$/MTON			0.00000	(FUEL OIL) - 180 CST				

Source: image supplied by the user. Values in this glossary were transcribed from this sheet.