

CONVERSION FACTORS, DENSITIES AND LOWER CALORIFIC VALUES

Average values for the year 2024

Products and units		Density ¹ (t/m ³)	Lower calorific value (kcal/kg)
Anhydrous ethanol	m ³	0,79100	6.750
Hydrated ethanol	m ³	0,80900	6.300
Asphalt	m ³	1,02500	9.790
Pure biodiesel (B100)	m ³	0,88000	9.000
Green petroleum coke	m ³	1,04000	8.390
Dry natural gas	10 ³ m ³	0,00074	8.800
Wet natural gas	10 ³ m ³	0,00074	9.930
Refinery fuel gas	10 ³ m ³	0,00078	8.400
Gasoline A	m ³	0,74200	10.400
Gasoline C	m ³	0,75400	9.400
Aviation gasoline	m ³	0,72600	10.600
LPG	m ³	0,55200	11.100
NGL	m ³	0,58000	10.710
Naphtha	m ³	0,70200	10.630
Diesel oil	m ³	0,84000	10.100
Fuel oil	m ³	1,00000	9.590
Lubricating oil	m ³	0,87500	10.120
Other energy products	m ³	0,86400	10.200
Other non-energy products	m ³	0,86400	10.200
Paraffin	m ³	0,82000	10.410
Oil	m ³	0,88400	10.190
Jet fuel	m ³	0,79900	10.400
Lamp kerosene	m ³	0,79900	10.400
Solvent	m ³	0,74100	10.550
Source: EPE/Brazilian Energy Balance.			
¹ At 20 °C temperature and 1 atm for natural gas as well as oil and natural gas products. ² Fuel oil ATE e BTE.			

Prefixes of SI Units

(k) quilo = 10³

(M) mega = 10⁶

(G) giga = 10⁹

(T) tera = 10¹²

(P) peta = 10¹⁵

(E) exa = 10¹⁸