

10 Units

Some common units used in the oil and gas industry are listed here as a representative selection of US and metric units, since both are used in different parts of the oil industry. The non-standard factors differ slightly between different sources.

API	American Petroleum Institute crude grade	$API = (141.5 / \text{Specific gravity}) - 131.5$ Spec gravity = $141.5 / (API + 131.5)$ kg/l
Bl	Barrel (of oil)	1 Bl = 42 Gallons 1 Bl = 159 liters 1 Bl equiv. to 5487 scf = 147 scm gas
Bpd	Barrel per day	1 Bpd \approx 50 tons/tons per year
BTU	British thermal unit	1 BTU = 0.293 Wh = 1,055 kJ
Cal	Calorie	1 Cal = 4,187 J (Joules)
MMscf	Million standard cubic feet	1 MMscf = 23.8 TOE \approx 174 barrels
psi	Pounds per square inch	1 psi = 6.9 kPa = 0.069 atm
Scf	Standard cubic feet (of gas) defined by energy, not a normalized volume	1 scf = 1000 BTU = 252 kcal = 293 Wh = 1,055 MJ \approx 0.0268 scm
Scm	Standard cubic meter (of gas, also Ncm) Defined by energy content	1 Scm = 39 MJ = 10.8 kWh 1 Scm \approx 37.33 Scf (not a volume conv.) 1 Scm \approx 1.122 kg
TOE	Tons oil equivalent	1 TOE = 1000 kg = 1 Ton (metric) oil 1 TOE = 1 Tone oil (US) 1 TOE \approx 7.33 Barrels (at 33 API) 1 TOE \approx 42.9 GJ = 11,9 MWh 1 TOE \approx 40.6 MMBTU 1 TOE \approx 1.51 ton of coal 1 TOE \approx 0.79 ton LNG 1 TOE \approx 1,125 Scm = 42,000 Scf
kWh	Kilowatt hour = 1000 joules * 3600 S	1 kWh = 3.6 MJ = 860 kcal = 3,413 BTU

Product specific gravity, API grades

Product	Liters Per Ton (metric)	API Grade	Specific Gravity (kg/m ³)	Barrels per Ton At 60°F
LPG	1835	10	1000	6.29
Jet A-1	1254	18	934	6.73
Gasoline premium/super	1353	25	904	6.98
Gasoline regular	1418	30	876	7.19
Kerosene	1273	33	860	7.33
Gas oil	1177	36	845	7.46
Diesel fuel	1159	39	830	7.60
Fuel oil 80 CST	1065	42	816	7.73
Fuel oil 180 CST	1050	50	780	8.06
Fuel oil 230 CST	1047			
Fuel oil 280 CST	1044			
Bitumen	979			

CO2 Emissions from burning of coal and hydrocarbons

Product	Average Carbon No	CO ₂ kg per kg	CO ₂ kg Per kWh	Other unit
Methane	1	2,75	0,178	1,92 kg CO ₂ / scm
Gasoline	8	3,09	0,241	2,28 kg CO ₂ / liter
Diesel	12	3,11	0,249	2,68 kg CO ₂ / liter
Fuel oil	25	3,12	0,268	3,97 kg CO ₂ / liter
Coal	1	3,67	0,325	

11 Glossary of terms and acronyms

ABS	Acrylonitrile-butadiene-styrene
AC	Alternating current
AGA	American Gas Association
AO	Asset optimization
API	American Petroleum Institute
BPA	Bisphenol A
BTX	Benzene, toluene and xylenes
CAPEX	Capital Expenses (Invested capital)
CCR	Central control room
CDU	Crude Oil Distillation Unit
CMMS	Computerized maintenance management system
CMS	Condition monitoring systems
CNG	Compressed natural gas
CPF	Central processing facility
CSP	Collector and separation platform
DC	Direct current
DEA	Diethanolamine
DEGBE	Diethylene glycol butyl ether
DEGBEA	Diethylene glycol butyl ether acetate
DETA	Diethylenetriamine
DPGEE	Dipropylene glycol ethyl ether.
DPGME	Dipropylene glycol methyl ether.
DYNPOS	Dynamic positioning (of rigs and ships)
E&P	Exploration and production
EDTA	Ethylenediamine tetraacetic acid
EG	Ethylene glycol
EGBE	Ethylene glycol butyl ether
EGBEA	Ethylene glycol butyl ether acetate
EO	Ethylene oxide
EOR	Enhanced oil recovery (new technology, cf IOR)
EPA	Propylene glycol ethyl ether acetate
EPS	Expanded polystyrene
ESD	Emergency shutdown system
ESP	Electric submerged pump
ETBE	Ethyl-tertiary-butyl-ether

F&G	Fire & gas system
FCC	Fluid catalytic cracking
FGS	Field gathering station
FPSO	Floating production storage and offloading
F-T	Fischer–Tropsch process
GB(S)	Gravity base structure
GE	Glycol ether
GOR	Gas oil ratio from the well
GOSP	Gas oil separation plant
GRP	Glass reinforced plastics
GTL	Gas to liquids
GTP	Gas treatment platform
HAZID	Hazard identification study
HAZOP	Hazard and operability study
HDPE	High-density polyethylene
HFC	Hydrofluorocarbons
HDS	Hydrodesulfurization (unit)
HIPPS	High integrity pressure (or pipeline) protection system
HP	High pressure
HPU	Hydraulic power unit (topside utility for subsea)
HVAC	Heat ventilation and air conditioning
IMS	Information management system
IO	Integrated operations
IOR	Improved oil recovery (using proven technology)
IPA	Isopropyl acetate
IR	Infrared
ISO	International Standards Organization
K-Mass Flow	Coriolis type mass flow meter
LDPE	Low-density polyethylene
LLDPE	Linear low-density polyethylene
LNG	Liquid natural gas (e.g., methane)
LP	Low pressure
LPG	Liquid petroleum gas
LPG	Liquefied petroleum gas (e.g., propane)
LVOC	Large volume organic chemicals
MCC	Motor control center
MEA	Monoethanolamine

MEG	Monoethylene glycol
MEK	Methyl ethyl ketone
MMA	Methyl methacrylate
MP	Propylene glycol methyl ether
MPA	Propylene glycol methyl ether acetate
MPG / USP	Pharmaceutical grade monopropylene glycol
MSDS	Material Safety Data Sheet (international: SDS)
MTBE	Methyl-tert-butyl-ether
MTBF	Mean time between failure
NAO	Normal alpha olefins or n-olefins (See alpha olefins)
NBR	Nitrile-butadiene rubber
NGL	Natural gas liquids
NGL	Natural gas liquids, condensates (see also, LPG)
OPEX	Operational expenses
PCP	Progressive cavity pump
PD-Meter	Positive displacement meter
PES	Unsaturated polyester resins
PET	Polyethylene terephthalate
PFD	Probability of failure on demand
PG	Propylene glycol
PGEE	Propylene glycol ethyl ether
PGEEA	Propylene glycol ethyl ether acetate
PGME	Propylene glycol methyl ether
PGMEA	Propylene glycol methyl ether acetate
PGP	Power generation platform
PID	Proportional integral derivate control algorithm
PIMS	Production information management system
PMMA	Polymethyl methacrylate
PO	Propylene oxide
PoC	Pump of controller (for artificial lift)
POM	Polyoxymethylene
POSMOOR	Position mooring for a floating facility
PSD	Process shutdown system
PVC	Polyvinyl chloride
ROV	Remote operated vehicle (for subsea workover)

RRF	Risk reduction factor
RTU	Remote terminal unit
SAN	Styrene-acrylonitrile
SAS	Safety and automation system
SBR	Styrene-butadiene rubber
SCADA	Supervisory control and data acquisition
SIF	Safety instrumented function
SIL	Safety integrity level (per IEC 61508)
SIRC	
SIS	Safety instrumented system
TAED	Tetraacetylenediamine
TAME	Tertiary-amyl-methyl-ether
TBA	Tertiary-butyl-alcohol
TDI	Toluene di-isocyanate
TEA	Triethanolamine
TEPA	Tetraethylenepentamine
TIP	Tie-in platform
TLP	Tension leg platform
UMS	Unmanned machinery space class (marine = E0)
uPES, UPR, USPE	Unsaturated polyester resins
URF	Umbilicals, risers and flowlines
UV	Ultraviolet
VAM	Vinyl acetate monomer
VCM	Vinyl chloride monomer
VDU	Vacuum distillation unit
VOC	Volatile organic compound
WHP	Well head platform
XPS	Extruded polystyrene