40 C.F.R. § 1037.805

Symbols, abbreviations, and acronyms.

The procedures in this part generally follow either the International System of Units (SI) or the United States customary units, as detailed in NIST Special Publication 811 (incorporated by reference in § 1037.810). See 40 CFR 1065.20 for specific provisions related to these conventions. This section summarizes the way we use symbols, units of measure, and other abbreviations.

(a) *Symbols for chemical species.* This part uses the following symbols for chemical species and exhaust constituents:

Table 1 to Paragraph (a) of § 1037.805—Symbols for Chemical Species and Exhaust Constituents

Symbol	Species
C	carbon.
CH4	methane.
CO	carbon monoxide.
CO2	carbon dioxide.
H2O	water.
HC	hydrocarbon.
NMHC	nonmethane hydrocarbon.
NMHCE	nonmethane hydrocarbon equivalent.
NO	nitric oxide.
NO2	nitrogen dioxide.
NOX	oxides of nitrogen.
N2O	nitrous oxide.
PM	particulate matter.
THC	total hydrocarbon.
THCE	total hydrocarbon equivalent.

(b) *Symbols for quantities.* This part 1037 uses the following symbols and units of measure for various quantities:

Table 2 to Paragraph (b) of § 1037.805—Symbols for Quantities

Symbol	Quantity	Unit	Unit symbol	Unit in terms of SI base units
A	vehicle frictional load	pound force or newton	lbf or N	$kg \cdot m \cdot s^{-2}$.
a	axle position regression coefficient			
α	atomic hydrogen-to-carbon ratio	mole per mole	mol/mol	1.
α	axle position regression coefficient			
α_0	intercept of air speed correction			
α_1	slope of air speed correction			
a_g	acceleration of Earth's gravity	meters per second squared	m/s^2	$m \cdot s^{-2}$.
a_0	intercept of least squares regression			
a_1	slope of least squares regression			
B	vehicle load from drag and rolling resistance	pound force per mile per hour or newton second per meter	lbf/(mi/hr) or N·s/m	$kg \cdot s^{-1}$.
b	axle position regression coefficient			
β	atomic oxygen-to-carbon ratio	mole per mole	mol/mol	1.
β	axle position regression coefficient			
β_0	intercept of air direction correction			
β_1	slope of air direction correction			
C	vehicle-specific aerodynamic effects	pound force per mile per hour squared or newton-second squared per meter squared	lbf/mph^2 or $N \cdot s^2/m^2$	$kg \cdot m^{-1}$.

c	axle position regression coefficient			
c_i	axle test regression coefficients			
C_i	constant			
ΔC_dA	differential drag area	meter squared	m^2	m^2.
C_dA	drag area	meter squared	m^2	m^2.
C_d	drag coefficient			
CF	correction factor			
C_{rr}	coefficient of rolling resistance	newton per kilonewton	N/kN	10^{-3}.
D	distance	miles or meters	mi or m	m.
e	mass-weighted emission result	grams per ton-mile	g/ton-mi	g/kg-km.
Eff	efficiency			
F	adjustment factor			
F	force	pound force or newton	lbf or N	kg·m·s^{-2}.
f_n	angular speed (shaft)	revolutions per minute	r/min	π·30·s^{-1}.
G	road grade	percent	%	10^{-2}.
g	gravitational acceleration	meters per second squared	m/s^2	m·s^{-2}.
h	elevation or height	meters	m	m.
i	indexing variable			
k_a	drive axle ratio			1.
k_d	transmission gear ratio			
$k_{topgear}$	highest available transmission gear			
L	load over axle	pound force or newton	lbf or N	kg·m·s^{-2}.
m	mass	pound mass or kilogram	lbm or kg	kg.
M	molar mass	gram per mole	g/mol	10^{-3}·kg·mol^{-1}.

M	vehicle mass	kilogram	kg	kg.
M_e	vehicle effective mass	kilogram	kg	kg.
$M_{rotating}$	inertial mass of rotating components	kilogram	kg	kg.
N	total number in series			
n	number of tires			
n	amount of substance rate	mole per second	mol/s	$mol \cdot s^{-1}$.
P	power	kilowatt	kW	$10^3 m^2 \cdot kg \cdot s^{-3}$.
p	pressure	pascal	Pa	$kg \cdot m^{-1} \cdot s^{-2}$.
ρ	mass density	kilogram per cubic meter	kg/m^3	$kg \cdot m^{-3}$.
PL	payload	tons	ton	kg.
φ	direction	degrees	°	°.
ψ	direction	degrees	°	°.
r	tire radius	meter	m	m.
r^2	coefficient of determination			
$Re\#$	Reynolds number			
SEE	standard error of the estimate			
σ	standard deviation			
$TRPM$	tire revolutions per mile	revolutions per mile	r/mi	
$TRRL$	tire rolling resistance level	newton per kilonewton	N/kN	10^{-3}.
T	absolute temperature	kelvin	K	K.
T	Celsius temperature	degree Celsius	°C	$K - 273.15$.
T	torque (moment of force)	newton meter	N·m	$m^2 \cdot kg \cdot s^{-2}$.
t	time	hour or second	hr or s	s.
Δt	time interval, period, 1/frequency	second	s	s.
UF	utility factor			
v	speed	miles per hour or meters per second	mi/hr or m/s	$m \cdot s^{-1}$.

w	weighting factor			
w	wind speed	miles per hour	mi/hr	m·s^{-1}.
W	work	kilowatt-hour	kW·hr	3.6·m^2·kg·s^{-1}.
*w*C	carbon mass fraction	gram per gram	g/g	1.
WR	weight reduction	pound mass	lbm	kg.
x	amount of substance mole fraction	mole per mole	mol/mol	1.

This document is only available to subscribers. Please log in or purchase access.

Purchase Login