

Name	Symbol	Status	Grouping			Electric Charge (e)	Intrinsic Angular Momentum	Parity	Rest Mass (eV/C ²)		Rest Energy (J)		Lepton Number	Electronic Lepton Number	Muonic Lepton Number	Tauonic Lepton Number	Baryon Number	Charm	Strangeness	Truth	Beauty	Colour Charge Matrices	Isospin	Third Component of Isospin (I ₃)	Hypercharge	R-Parity	(B-L)	Weak Isospin		Third Component of Weak Isospin (T ₃)		Weak Hypercharge		X-Charge		Antiparticle Name	Antiparticle Symbol				
			Statistics	Further Detail	Generation				Lower Bound	Upper Bound	Lower Bound	Upper Bound																Left Handed	Right Handed	Left Handed	Right Handed	Left Handed	Right Handed	Left Handed	Right Handed						
Up Quark	u	Confirmed	Fermionic	Quark	1	2/3	1/2	1	1800000	3000000	0.0000000000002883917817	0.0000000000004806529695	0	0	0	0	1/3	0	0	0	0	C ₁ , C ₂ , C ₃	1/2	1/2	1/3	1	1/3	1/2	0	1/2	0	1/3	1 1/3	1	-1	Up Antiquark	\bar{u}				
Down Quark	d	Confirmed	Fermionic	Quark	1	-1/3	1/2	1	4500000	5300000	0.0000000000072097945425	0.00000000000084915357945	0	0	0	0	1/3	0	0	0	0	C ₁ , C ₂ , C ₃	1/2	-1/2	1/3	1	1/3	1/2	0	-1/2	0	1/3	-2/3	1	3	Down Antiquark	\bar{d}				
Charm Quark	c	Confirmed	Fermionic	Quark	2	2/3	1/2	1	1180000000	1340000000	0.00000000018905683467	0.00000000021469165971	0	0	0	0	1/3	1	0	0	0	C ₁ , C ₂ , C ₃	0	0	1 1/3	1	1/3	1/2	0	1/2	0	1/3	1 1/3	1	-1	Charm Antiquark	\bar{c}				
Strange Quark	s	Confirmed	Fermionic	Quark	2	-1/3	1/2	1	100000000	900000000	0.0000000001602176565	0.00000000014419589085	0	0	0	0	1/3	0	-1	0	0	C ₁ , C ₂ , C ₃	0	0	-2/3	1	1/3	1/2	0	-1/2	0	1/3	-2/3	1	3	Strange Antiquark	\bar{s}				
Top Quark	t	Confirmed	Fermionic	Quark	3	2/3	1/2	1	172310000000	172570000000	0.00000027607104391515	0.00000027648760982205	0	0	0	0	1/3	0	0	1	0	C ₁ , C ₂ , C ₃	0	0	1 1/3	1	1/3	1/2	0	1/2	0	1/3	1 1/3	1	-1	Top Antiquark	\bar{t}				
Bottom Quark	b	Confirmed	Fermionic	Quark	3	-1/3	1/2	1	4150000000	4210000000	0.00000000664903274475	0.00000000674516333865	0	0	0	0	1/3	0	0	-1	0	C ₁ , C ₂ , C ₃	0	0	-2/3	1	1/3	1/2	0	-1/2	0	1/3	-2/3	1	3	Bottom Antiquark	\bar{b}				
Electron	e	Confirmed	Fermionic	Lepton	1	-1	1/2	1	510998.9461	510998.9461	0.000000000000818710536181118	0.000000000000818710536181118	1	1	0	0	0	0	0	0	0	0	0	0	1	-1	1/2	0	-1/2	0	-1	-2	-3	-1	Positron	e ⁺					
Muon	μ	Confirmed	Fermionic	Lepton	2	-1	1/2	1	105658374.5	105658374.5	0.000000000169283371519894	0.000000000169283371519894	1	0	1	0	0	0	0	0	0	0	0	0	1	-1	1/2	0	-1/2	0	-1	-2	-3	-1	Antimuon	μ ⁺					
Tau	τ	Confirmed	Fermionic	Lepton	3	-1	1/2	1	1776660000	1776980000	0.0000000028465230159729	0.0000000028470357124737	1	0	0	1	0	0	0	0	0	0	0	0	1	-1	1/2	0	-1/2	0	-1	-2	-3	-1	Antitau	τ ⁺					
Electron Neutrino	ν _e	Confirmed	Fermionic	Lepton	1	0	1/2	1	0.001	3	0.00000000000000000001602176565	0.0000000000000000004806529695	1	1	0	0	0	0	0	0	0	0	0	0	1	-1	1/2	0	1/2	0	-1	0	-3	-5	Electron Antineutrino	$\bar{\nu}_e$					
Muon Neutrino	ν _μ	Confirmed	Fermionic	Lepton	2	0	1/2	1	0.001	200000	0.00000000000000000001602176565	0.0000000000000320435313	1	0	1	0	0	0	0	0	0	0	0	0	1	-1	1/2	0	1/2	0	-1	0	-3	-5	Muon Antineutrino	$\bar{\nu}_\mu$					
Tau Neutrino	ν _τ	Confirmed	Fermionic	Lepton	3	0	1/2	1	0.001	1830000	0.00000000000000000001602176565	0.000000000000293198311395	1	0	0	1	0	0	0	0	0	0	0	0	1	-1	1/2	0	1/2	0	-1	0	-3	-5	Tau Antineutrino	$\bar{\nu}_\tau$					
Gluon	g	Confirmed	Bosonic	Vector Boson	0	0	1	-1	0	0	0	0	0	0	0	0	0	0	0	0	0	λ ₁ , λ ₂ , λ ₃ , λ ₄ , λ ₅ , λ ₆ , λ ₇ , λ ₈	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	Gluon	g
Photon	γ	Confirmed	Bosonic	Vector Boson	0	0	1	-1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	Photon	γ		
W Boson	W	Confirmed	Bosonic	Vector Boson	0	±1	1	-1	80370000000	80400000000	0.00000012876693052905	0.0000000128814995826	0	0	0	0	0	0	0	0	0	0	0	0	±1	±1	±1	±1	±1	±1	±1	±1	±1	±1	±1	±1	±1	±1	W Boson	W	
Z Boson	Z	Confirmed	Bosonic	Vector Boson	0	0	1	-1	91185500000	91189700000	0.000000146095271167807	0.000000014610200030938	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	Z Boson	Z	
Higgs Boson	H	Confirmed	Bosonic	Scalar Boson	0	0	0	1	124880000000	125300000000	0.0000002000798094372	0.0000002007527235945	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1/2	1/2	-1/2	-1/2	1	1	-2	-2	1	-2	Higgs Boson	H			
Up Antiquark	\bar{u}	Confirmed	Fermionic	Antiquark	1	-2/3	1/2	-1	1800000	3000000	0.0000000000002883917817	0.0000000000004806529695	0	0	0	0	-1/3	0	0	0	0	C ₁ , C ₂ , C ₃	1/2	-1/2	-1/3	1	-1/3	0	1/2	0	-1/2	-1 1/3	-1/3	1	-1	Up Quark	u				
Down Antiquark	\bar{d}	Confirmed	Fermionic	Antiquark	1	1/3	1/2	-1	4500000	5300000	0.0000000000072097945425	0.00000000000084915357945	0	0	0	0	-1/3	0	0	0	0	C ₁ , C ₂ , C ₃	1/2	1/2	-1/3	1	-1/3	0	1/2	0	1/2	2/3	-1/3	-3	-1	Down Quark	d				
Charm Antiquark	\bar{c}	Confirmed	Fermionic	Antiquark	2	-2/3	1/2	-1	1180000000	1340000000	0.00000000018905683467	0.0000000021469165971	0	0	0	0	-1/3	-1	0	0	0	C ₁ , C ₂ , C ₃	0	0	-1 1/3	1	-1/3	0	1/2	0	-1/2	-1 1/3	-1/3	1	-1	Charm Quark	c				
Strange Antiquark	\bar{s}	Confirmed	Fermionic	Antiquark	2	1/3	1/2	-1	100000000	900000000	0.0000000001602176565	0.00000000014419589085	0	0	0	0	-1/3	0	1	0	0	C ₁ , C ₂ , C ₃	0	0	2/3	1	-1/3	0	1/2	0	1/2	2/3	-1/3	-3	-1	Strange Quark	s				
Top Antiquark	\bar{t}	Confirmed	Fermionic	Antiquark	3	-2/3	1/2	-1	172310000000	172570000000	0.00000027607104391515	0.00000027648760982205	0	0	0	0	-1/3	0	0	-1	0	C ₁ , C ₂ , C ₃	0	0	-1 1/3	1	-1/3	0	1/2	0	-1/2	-1 1/3	-1/3	1	-1	Top Quark	t				
Bottom Antiquark	\bar{b}	Confirmed	Fermionic	Antiquark	3	1/3	1/2	-1	4150000000	4210000000	0.00000000664903274475	0.00000000674516333865	0	0	0	0	-1/3	0	0	1	0	C ₁ , C ₂ , C ₃	0	0	2/3	1	-1/3	0	1/2	0	1/2	2/3	-1/3	-3	-1	Bottom Quark	b				
Positron	e ⁺	Confirmed	Fermionic	Antilepton	1	1	1/2	-1	510998.9461	510998.9461	0.000000000000818710536181118	0.000000000000818710536181118	-1	-1	0	0	0	0	0	0	0	0	0	1	1	0	1/2	0	1/2	0	2	1	1	3	Electron	e					
Antimuon	μ ⁺	Confirmed	Fermionic	Antilepton	2	1	1/2	-1	105658374.5	105658374.5	0.000000000169283371519894	0.000000000169283371519894	-1	0	-1	0	0	0	0	0	0	0	0	0	1	1	0	1/2	0	1/2	0	2	1	1	3	Muon	μ				
Antitau	τ ⁺	Confirmed	Fermionic	Antilepton	3	1	1/2	-1	1776660000	1776980000	0.0000000028465230159729	0.0000000028470357124737	-1	0	0	-1	0	0	0	0	0	0	0	0	1	1	0	1/2	0	1/2	0	2	1	1	3	Tau	τ				
Electron Antineutrino	$\bar{\nu}_e$	Confirmed	Fermionic	Antilepton	1	0	1/2	-1	0.001	3	0.00000000000000000001602176565	0.0000000000000000004806529695	-1	-1	0	0	0	0	0	0	0	0	0	0	1	1	0	1/2	0	-1/2	0	1	5	3	Electron Neutrino	ν _e					
Muon Antineutrino	$\bar{\nu}_\mu$	Confirmed	Fermionic	Antilepton	2	0	1/2	-1	0.001	200000	0.00000000000000000001602176565	0.0000000000000320435313	-1	0	-1	0	0	0	0	0	0	0	0	0	1	1	0	1/2	0	-1/2	0	1	5	3	Muon Neutrino	ν _μ					
Tau Antineutrino	$\bar{\nu}_\tau$	Confirmed	Fermionic	Antilepton	3	0	1/2	-1	0.001	1830000	0.00000000000000000001602176565	0.000000000000293198311395	-1	0	0	-1	0	0	0	0	0	0	0	0	1	1	0	1/2	0	-1/2	0	1	5	3	Tau Neutrino	ν _τ					