

QUARKS

LEPTONS

1st

2nd

3rd

2.2 M
 u $^{+2/3}_{1/2}$
up

1.28 G
 c $^{+2/3}_{1/2}$
charm

173.1 G
 t $^{+2/3}_{1/2}$
top

4.7 M
 d $^{-1/3}_{1/2}$
down

96 M
 s $^{-1/3}_{1/2}$
strange

4.18 G
 b $^{-1/3}_{1/2}$
bottom

0.51 M
 e $^{-1}_{1/2}$
electron

105.66 M
 μ $^{-1}_{1/2}$
muon

1.78 G
 τ $^{-1}_{1/2}$
tau

< 2
 ν_e $^0_{1/2}$
 e neutrino

< 0.19 M
 ν_μ $^0_{1/2}$
 μ neutrino

< 18.2 M
 ν_τ $^0_{1/2}$
 τ neutrino

Mass: eV/c²

Charge

Spin

Name

0
 g 0_1
gluon

0
 γ 0_1
photon

80.38 G
 $W^{\pm 1}$ $^{\pm 1}_1$
 W boson

91.19 G
 Z 0_1
 Z boson

125.09 G

H 0_0
higgs

strong nuclear force

electromagnetic force

weak nuclear force

FERMIONS

BOSONS