

Hydrolysis half-lives at pH8, 25°C

PEG NHS Ester	Ester (Symbol)	Half-life (minutes) ^a
PEG-CH ₂ CH ₂ CH ₂ CH ₂ -CO ₂ -NHS	Succinimidyl Valerate (SVA)	33.6
PEG-O-CO ₂ -NHS	Succinimidyl Carbonate (SC)	20.4
PEG-O ₂ C-CH ₂ CH ₂ CH ₂ -CO ₂ -NHS	Succinimidyl Glutarate (SG)	17.6
PEG-O ₂ C-CH ₂ CH ₂ -CO ₂ -NHS	Succinimidyl Succinate (SS)	9.8
PEG-O-CH ₂ -CO ₂ -NHS	Succinimidyl Carboxymethylated (SCM)	0.75
PEG-O-CH ₂ CH ₂ CH ₂ --CO ₂ -NHS	Succinimidyl Butanoate (SBA)	23.3
PEG-NHCO-CH ₂ CH ₂ -CO ₂ -NHS	Succinimidyl Succinamide (SSA)	3.2
PEG-O-CH ₂ CH ₂ -CO ₂ -NHS	Succinimidyl Propionate (SPA)	16.5
PEG2- O ₂ CHN-CH(R) ^a - CO ₂ - NHS	mPEG2-NHS	4.9

Comparison of reactivity of various PEG reagents as measured by hydrolysis half-lives at pH 8, 25°C, for PEG active esters measured by following UV absorbance of the succinimidyl (NHS) group.

a Typically the half-life triples when lowering pH by one unit

Aminolysis rates parallel hydrolysis rates