

Some Classes of Organic Compounds

<u>General Formula</u>	<u>Class Name</u>	<u>Specific Example</u>	<u>IUPAC Name</u>
R-H	alk <u>ane</u>	H ₃ CCH ₂ CH ₃	propan <u>e</u>
R ₂ C=CR' ₂	alk <u>ene</u>	H ₂ C=CHCH ₃	prop <u>ene</u>
R-C≡C-R'	alk <u>yne</u>	HC≡CCH ₃	prop <u>yne</u>
RX	haloalkane (alkyl halide)	H ₃ CCH ₂ CH ₂ Br	1-bromopropane
ROH	alcoh <u>ol</u>	H ₃ CCH ₂ CH ₂ OH	1-propan <u>ol</u>
ROR'	ether	H ₃ COCH ₂ CH ₂ CH ₃	1-methoxypropane
RCOH	aldehy <u>de</u>	H ₃ CCH ₂ COH	propanal
RCOR'	ket <u>one</u>	H ₃ CCOCH ₃	propan <u>one</u>
RCH(OR') ₂	acetal	H ₃ CCH ₂ CH(OCH ₃) ₂	1,1-dimethoxypropane
RCOOH	carboxylic <u>acid</u>	H ₃ CCH ₂ COOH	propanoic <u>acid</u>
RCOOR'	ester	H ₃ CCH ₂ COOCH ₃	methyl propanoate
RC(OR') ₃	orthoester	H ₃ CCH ₂ C(OCH ₃) ₃	1,1,1-trimethoxypropane
RCOOCOR'	acid <u>anhydride</u>	H ₃ CCH ₂ COOCOCH ₂ CH ₃	propanoic <u>anhydride</u>
RCOCl	acid halide	H ₃ CCH ₂ COCl	propanoyl chloride
RCONR' ₂	<u>amide</u>	H ₃ CCH ₂ CON(CH ₃) ₂	<i>N,N</i> -dimethylpropan <u>amide</u>
RC≡N	<u>nitrile</u>	H ₃ CCH ₂ C≡N	propanenitri <u>le</u>
RNH ₂	1° <u>amine</u>	H ₃ CCH ₂ CH ₂ NH ₂	1-propan <u>amine</u>
R ₂ NH	2° <u>amine</u>	H ₃ CCH ₂ CH ₂ NHCH ₃	<i>N</i> -methyl-1-propan <u>amine</u>
R ₃ N	3° <u>amine</u>	H ₃ CCH ₂ CH ₂ N(CH ₃) ₂	<i>N,N</i> -dimethyl-1-propan <u>amine</u>

Note: Each "O" in the table denotes an oxygen that is doubly-bonded to a carbon.