

Reaction of Ethylmagnesium Chloride with Ethyl Acrylate

by G. B. Butler and R. M. Waymouth

Time	Yield (%)	Structure
0	0	$CH_2=CH-CO_2Et$
15	100	$CH_3-CH_2-CH_2-CH_2-CO_2Et$
30	100	$CH_3-CH_2-CH_2-CH_2-CO_2Et$
45	100	$CH_3-CH_2-CH_2-CH_2-CO_2Et$
60	100	$CH_3-CH_2-CH_2-CH_2-CO_2Et$
75	100	$CH_3-CH_2-CH_2-CH_2-CO_2Et$
90	100	$CH_3-CH_2-CH_2-CH_2-CO_2Et$
105	100	$CH_3-CH_2-CH_2-CH_2-CO_2Et$

The reaction of ethylmagnesium chloride with ethyl acrylate in benzene at 0°C. yields ethyl butyrate in 100% yield. The reaction is first order in both ethylmagnesium chloride and ethyl acrylate.

Reaction of Ethylmagnesium Chloride with Methyl Acrylate

by G. B. Butler and R. M. Waymouth

Time	Yield (%)	Structure
0	0	$CH_2=CH-CO_2Me$
15	100	$CH_3-CH_2-CH_2-CO_2Me$
30	100	$CH_3-CH_2-CH_2-CO_2Me$
45	100	$CH_3-CH_2-CH_2-CO_2Me$
60	100	$CH_3-CH_2-CH_2-CO_2Me$
75	100	$CH_3-CH_2-CH_2-CO_2Me$
90	100	$CH_3-CH_2-CH_2-CO_2Me$
105	100	$CH_3-CH_2-CH_2-CO_2Me$

The reaction of ethylmagnesium chloride with methyl acrylate in benzene at 0°C. yields methyl butyrate in 100% yield. The reaction is first order in both ethylmagnesium chloride and methyl acrylate.