

Report No.21B

# OXO ALCOHOLS

SUPPLEMENT B

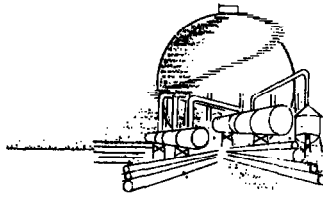
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## Abstract

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### OXO ALCOHOLS

Oxo alcohols are produced by first reacting (i.e., hydroformylating) an olefin with a synthesis gas ( $H_2 + CO$ ) to form an aldehyde. Simultaneously in the same reactor, or during subsequent processing, the aldehyde or a derivative is hydrogenated to form an oxo alcohol. The current oxo alcohol report discusses the manufacture of normal butanol, an oxo alcohol used widely as a solvent, and 2-ethylhexanol (2-EH), an oxo alcohol that when chemically modified can be used in PVC plasticizers.

Process complexity and economics in great part depend on the catalyst system used in the first step of the process wherein hydroformylation occurs. Conventional oxo processing that uses a cobalt hydrocarbonyl catalyst in the first step is compared in the report with the newer processes that use either a cobalt-phosphine or a rhodium catalyst in the hydroformylation step.

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