



# PROCESS ECONOMICS PROGRAM

SRI INTERNATIONAL  
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## Abstract

Process Economics Program Report No. 1C

### ISOCYANATES/POLYISOCYANATES

In this supplementary report, several processes for manufacture of TDI and PMPPI/MDI are compared; methyl isocyanate production is described and evaluated; other isocyanates and isocyanate adducts are described. The following are some of the important findings.

The carbonylation process for making TDI or PMPPI requires higher capital outlay than the phosgenation process, and also higher production cost, based on prevailing prices of raw material. The situation may change to some extent if cheap carbon monoxide is available.

For making PMPPI or MDI by phosgenation, a clay-catalyzed process based on an Upjohn patent for making the starting amine has some cost advantage over the conventional HCl-catalyzed process and also over other new processes claimed in patents.

Report No. 1 C

**ISOCYANATES  
PART I**

SUPPLEMENT C

YEN-CHEN YEN

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**PROCESS ECONOMICS PROGRAM**

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For detailed marketing data and information, the reader is referred to one of the SRI programs specializing in marketing research. The CHEMICAL ECONOMICS HANDBOOK Program covers most major chemicals and chemical products produced in the United States and the WORLD PETROCHEMICALS Program covers major hydrocarbons and their derivatives on a worldwide basis. In addition, the SRI DIRECTORY OF CHEMICAL PRODUCERS services provide detailed lists of chemical producers by company, product, and plant for the United States and Western Europe.

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