



PHTHALIC ANHYDRIDE

Chemical Trends Analysis

Prospectus for a
Comprehensive Global Study, 2000-2005

COMPLETED NOVEMBER 2001

- ***Global Phthalic Anhydride Producers & Capacities***
- ***Phthalic Anhydride Markets: In-Depth Profiles & Analysis***
- ***Raw Material Integration & Suppliers***
- ***Detailed Growth Driver Trees Covering all Markets***
- ***Value In End-Use Analysis***
- ***Historical Trade Data***
- ***Impact of Downstream Environmental Issues***
- ***Strategic Analysis & Options for Current Producers***



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A Comprehensive Global Study Chemical Trends Analysis 2000-2005

INDUSTRY OVERVIEW

Phthalic anhydride is manufactured by the oxidation of either naphthalene or ortho-xylene. Currently, most of the PAN is made from ortho-xylene.

There has been overcapacity of phthalic anhydride in the world. Phthalic anhydride has been primarily used for the manufacture of phthalate plasticizers. The major applications of PAN include: (1) phthalates, (2) unsaturated polyester resins, (3) alkyd resins, (4) polyester polyols, (5) dyes and pigments and other applications.

The global demand for phthalic anhydride was 3,263 thousand metric tons (7,195 million pounds) in 1999. The overall global growth rate for PAN is expected to be about 3.5% per annum for the next five years. The four major regions, North America, Europe, China and Japan, accounted for 68% (4,864 million pounds) of the demand. The rest of the world accounted for the remainder including: (1) other Asian countries, (2) Latin America and (3) other regions (including South Africa and the Middle East).

Due to the environmental pressures on phthalates, the demand for PAN has been sluggish in Europe and Japan. The demand in rest of Asia, especially China, is expected to show robust growth.

BENCHMARK STUDY

To assist companies in understanding the current market status and help them monitor the recent developments within the industry, Chemical Market Resources, Inc. (CMR), presents **PHTHALIC ANHYDRIDE 2000-2005** part of the ongoing **Chemical Trends Analysis Series**. CMR has extensive experience in PAN, plasticizer and PVC related markets. This study represents a comprehensive report with focus on business strategic analysis and includes an in-depth analysis of the status of PAN and its markets. The report will be valuable in assessing opportunities and strategies in the phthalic anhydride industry.

MAJOR OBJECTIVES

- *Assist phthalic anhydride suppliers in assessing the attractiveness of various end use markets*
- *Provide phthalic anhydride suppliers with detailed growth driver trees and value in end-use analysis*
- *Assist suppliers and end users in evaluating and quantifying the impact of regulations and health-related issues on the plasticizer industry*



KEY ISSUES ADDRESSED

Worldwide supply & demand for phthalic anhydride
In-depth analysis of the global PAN markets
Impact of regulations on various plasticizer end-use markets
Detailed trends for all significant PAN applications
Value in End-Use Analysis
Vulnerability of raw material suppliers
Upstream & Downstream Integration of PAN producers
Strategic analysis and detailed trends for all regions of the world

APPROACH

The information, data and conclusions of this analysis were developed from sources in North America, Europe, China, Japan and the Rest of the World, and are based upon, but not limited to, the following methods:

Interviews with industry experts, leading suppliers of phthalic anhydride, and major end-users in each market segment

A search, a review and an interpretation of information from government sources, trade and industry groups, published articles and product promotional information

A review and update of information from non-proprietary CMR projects related to phthalic anhydride

Comprehensive Historical Data based on published data and previous studies completed by CMR

A review and update of other multiclient studies completed by CMR

A detailed "value in end-use analysis" based on our extensive databases and interviews

An analysis of future trends based on "growth driver tree analysis," a technique used by CMR and well accepted by our major clients.

TIMING, SUBSCRIPTION & ORDERING INFORMATION

This study was completed in November 2001 and is available for immediate delivery. The price of the study is U.S. \$4,500 for two copies of the report. Additional copies are available for \$300 each. To subscribe, simply sign the attached order form and mail or fax to CMR. This study is part of the Chemical Trends Analysis Series. For further information call us at 281-557-3320



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ABOUT OUR COMPANY...

CHEMICAL MARKET RESOURCES, INC. was founded in 1990 to focus in the areas of marketing research and strategic planning. Our global clientele is concentrated within the chemical, petrochemical, plastics and related industries. Prior to joining CMR our associates held supervisory positions in chemical and allied industries. Our teams of professionals have strong technical backgrounds combined with hands-on business experience. Compilations of data, strategic analyses, writing and editing are entirely conducted in our state of the art facilities in-house to assure quality control at each stage of development. Our strength is in closely interacting with our clients to maximize effectiveness. We provide in-depth analyses with actionable statements in a cost-effective and timely fashion. Following are highlights of just some of our work in chemicals.

Multiclient Studies

Plasticizers - North America, Europe and Asia 2000-2005 - Markets Technologies & Trends - Completed November 2001

North American Chemical Consumption Databases. Completed databases are: Caustic Soda and Potash Series, Isocyanates Series, Glycol Series and Phenol/Acetone Series

North American Unsaturated Polyesters 1994-2000 - Markets, Technologies and Intermaterial Competition - Completed January 1994

North American Antifreeze Recycling Markets 1994-2000 - Markets, Technologies and Trends - Completed January 1994

Upcoming Studies

Ethylene Oxide & Derivatives - North America, Europe and Asia 2001-2006 - Markets Technologies & Trends - To Be Completed January 2002

Flame Retardants - A Comprehensive Global Study 2001-2006 - Chemical Trends Analysis Series - To Be Completed January 2002

Other Chemical Trends Analysis Studies include: Hydrogen Peroxide, Alpha Olefins, Propylene Oxide, Biocides, Oxo Alcohols, Polyalphaolefins, Bio Solvents, Carbon Dioxide, Heat Stabilizers, Acrylamides, Anti-microbial Agents, Activated Carbons and Helium.

Periodicals

New Generation Polyolefins - Bimonthly Global Review of Technologies & Trends. On-going service, published six times a year. Qualifying companies can call for a complimentary copy!

Proprietary Studies

We have positioned numerous polyolefin and chemical products in the markets in North and Latin America, Europe, and Asia Pacific. We have conducted studies for most of the major chemical suppliers and end users - Call us for a list of proprietary studies.

Conferences

We conduct a highly successful Annual Conference FlexPO that covers intermaterial competition among flexible polymers including fPVC, polyolefins, TPEs and rubbers. FlexPO 2002 will be held September 18th through the 20th in the San Luis Hotel, Resort and Conference Center in Galveston (Houston), Texas.

***For fresh and innovative ideas on Chemicals
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