

Market Study: Ethylene



**Ceresana
Research**

Market Study: Ethylene

In 2008, the sales volume of ethylene reached its peak of more than 160 billion US\$. Even though the sales volume decreased in the following year, it will again reach the record year level of 2008 during 2017. Prices have already recovered during 2010, after they had been fallen on average by 35% in 2009. Ceresana Research expects to see a more dynamic development of the ethylene demand starting in 2010. An important factor which will impact the global ethylene market is the rigorous capacity expansion of ethylene and downstream products in the Middle East and China.

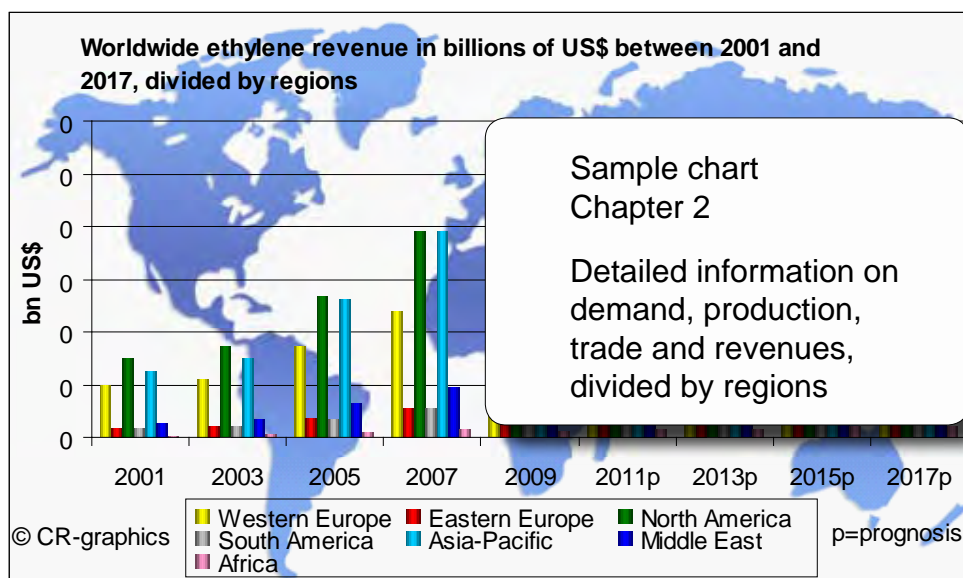
Local differences

Countries of the Middle East exhibit the largest increases in ethylene production and demand. The volumes in this area have doubled over the past eight years and we expect that they will double again until 2015. Ethylene capacities in this region will have increased by 20 million tons in 2017.

The Asia-Pacific region will continue to dominate the market in future and generate more than a third of the worldwide demand. The pioneer will be China that will rise to become the greatest ethylene consumer worldwide and will therefore drive out the United States to the second place, followed by Saudi Arabia.

Fields of application

Among the most important buyers are producers of HDPE. They account for a third of ethylene demand. On the second place are producers of LLDPE and LDPE. The production of ethylene oxide makes up approximately 11% of the worldwide ethylene demand, followed by ethylene dichloride and ethylbenzene. Other application areas account for 7%.



By 2017, we anticipate seeing the greatest increase in demand for ethylene oxide, LLDPE and HDPE with 3.5% to 4.5% per year. HDPE is primarily used for packaging and construction materials. With nearly 80%, the most important market area for LLDPE are foils and bags. Ethylene oxide is mainly used to produce ethylene glycol which is above all a pre-product for polyester. The production of textile fibers is mainly in Asia increasing considerably. In addition, ethylene oxide producers benefit from the increasing substitution of glass by PET bottles and containers.

Immediate action or reaction?

The market always reveals new challenges for decision makers. Reliable information about market participants, fields of application and consumption figures are indispensable for a successful business planning. Only with this information they can discern new trends early enough and use them actively, instead of having to react to business rivals. The practice-oriented study offers you the most important facts about the global market and a complete overview. The newest information and forecasts provide you with decisive competitive edge.

The study in brief

Chapter 2: Volume I starts with a description and analysis of the ethylene market including forecasts up to 2017: demand, production, import, export, turnover and prices are explained. In addition, the report offers a broad insight into the development of individual areas and the worldwide market dynamics.

Chapter 3: Each one of 55 countries is analyzed in detail: demand, divided among application, production, capacities and trade as well as their influencing factors.

Chapter 4: The ethylene demand worldwide and for the 7 parts of the world (divided among application areas) is analyzed. The application areas include: HDPE, LLDPE, LDPE, ethylene oxide, EDC, ethylbenzene, acetaldehyde, ethanol, linear alcohols, vinyl acetate as well as alpha-olefin.

Chapter 5: Volume II is a useful directory of manufacturers and offers 117 profiles of ethylene producers – clearly structured according to contact information, founding year and number of employees, sales and profit, product range, production facilities, linked enterprises, short profile, technologies / licenses as well as current and planned production plants with capacities.

Table of Contents (1/3)

Volume I

1 Introduction

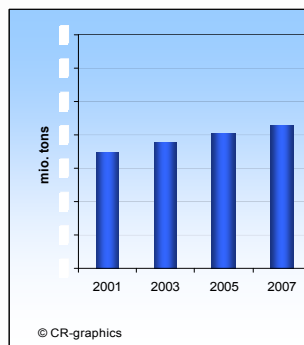
2 Market Data

- 2.1 World
- 2.2 Western Europe
- 2.3 Eastern Europe
- 2.4 North America
- 2.5 South America
- 2.6 Asia-Pacific
- 2.7 Middle East
- 2.8 Africa

3 Country Profiles

- 3.1 Western Europe
 - 3.1.1 Austria
 - 3.1.2 Belgium
 - 3.1.3 Finland
 - 3.1.4 France
 - 3.1.5 Germany
 - 3.1.6 Italy
 - 3.1.7 Norway
 - 3.1.8 Portugal
 - 3.1.9 Spain
 - 3.1.10 Sweden
 - 3.1.11 The Netherlands
 - 3.1.12 United Kingdom
- 3.2 Eastern Europe
 - 3.2.1 Belarus
 - 3.2.2 Bulgaria
 - 3.2.3 Croatia
 - 3.2.4 Czechia
 - 3.2.5 Hungary
 - 3.2.6 Poland
 - 3.2.7 Romania
 - 3.2.8 Russia
 - 3.2.9 Serbia
 - 3.2.10 Slovakia
 - 3.2.11 Turkey
 - 3.2.12 Ukraine
- 3.3 North America
 - 3.3.1 Canada
 - 3.3.2 Mexico
 - 3.3.3 USA

2.3.1 Eastern Europe – Demand



Vol. I / Chapter 2

Comprehensive market data on all 7 regions and the world from 2001 to 2017:

- 1 Demand
- 2 Revenues and Prices
- 3 Production and Capacities

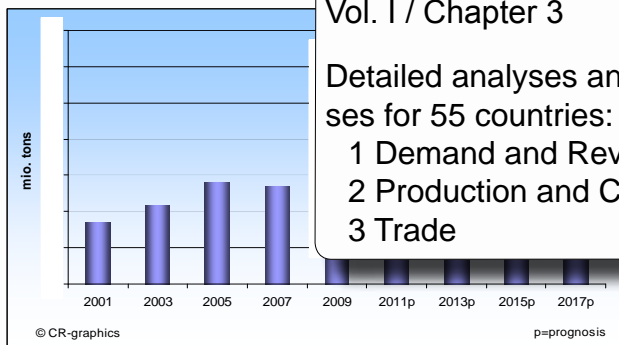
Graph: Ethylene demand in Eastern Europe between 2001 and 2017, in millions of tons

Country	Share in 2009	Share in 2017
Russia	X%	X%
Turkey	X%	X%
Poland	X%	X%
Hungary	X%	X%
Czechia	X%	X%
Slovakia	X%	X%
Bulgaria	X%	X%
Romania	X%	X%
Croatia	X%	X%
Serbia	X%	X%
Ukraine	X%	X%
Belarus	X%	X%
Total	100%	100%

Table: Shares of various countries in the Eastern European ethylene demand in 2009

3.6.6.2 Production and Capacities – Saudi Arabia

Ethylene production in Saudi Arabia increased from X million tons in 2001 to roughly X million tons in 2009, corresponding to an average growth of X% per year (Graph). Saudi Arabia's share of all ethylene production in the Middle East fell from X% to X% during this time. We anticipate seeing an average increase of X% per year between 2009 and 2017. As a result, ethylene production will grow to X million tons in 2017. However, Saudi Arabia will lose around X percentage points of its market share in the Middle East.



Vol. I / Chapter 3

Detailed analyses and prognoses for 55 countries:

- 1 Demand and Revenues
- 2 Production and Capacities
- 3 Trade

Graph: Production of ethylene in Saudi Arabia between 2001 and 2017

Producers of ethylene in Saudi Arabia had a combined capacity of more than X million tons per year in 2009 (Table). Further major projects are being completed, so that the capacity will most likely be expanded by X million tons by 2015.

Saudi-Arabia exported around X tons of ethylene in 2009 (Graph). Therefore, the country could increase its exports by X% per year, as compared to 2001. We anticipate seeing an annual growth of X% during the upcoming eight year period. Thereby, Saudi Arabia will most likely export more than X tons of ethylene in 2017.

Table of Contents (2/3)

Volume I

3.4 South America

- 3.4.1 Argentina
- 3.4.2 Brazil
- 3.4.3 Chile
- 3.4.4 Colombia
- 3.4.5 Venezuela

3.5 Asia-Pacific

- 3.5.1 Australia
- 3.5.2 China
- 3.5.3 India
- 3.5.4 Indonesia
- 3.5.5 Japan
- 3.5.6 Malaysia
- 3.5.7 Singapore
- 3.5.8 South Korea
- 3.5.9 Taiwan
- 3.5.10 Thailand
- 3.5.11 The Philippines

3.6 Middle East

- 3.6.1 Iran
- 3.6.2 Israel
- 3.6.3 Kazakhstan
- 3.6.4 Kuwait
- 3.6.5 Qatar
- 3.6.6 Saudi Arabia
- 3.6.7 United Arab Emirates
- 3.6.8 Uzbekistan

3.7 Africa

- 3.7.1 Algeria
- 3.7.2 Egypt
- 3.7.3 Nigeria
- 3.7.4 South Africa

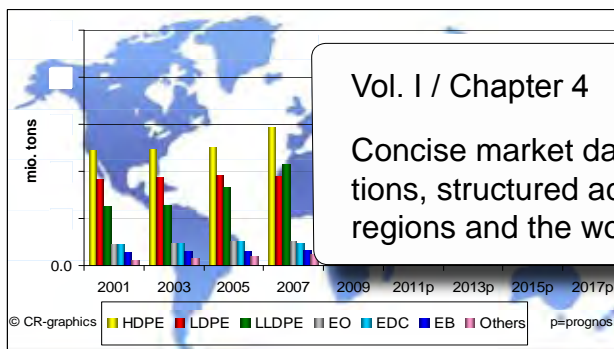
4 Market Data Applications

- 4.1 World
- 4.2 Western Europe
- 4.3 Eastern Europe
- 4.4 North America
- 4.5 South America
- 4.6 Asia-Pacific
- 4.7 Middle East
- 4.8 Africa

List of Graphs

List of Tables

4.5 South America - Applications



Vol. I / Chapter 4

Concise market data on applications, structured according to 7 regions and the world

Graph: Ethylene demand in South America between 2001 and 2017, divided by applications

Demand in million tons	2001	2003	2005	2007	2009	2011p	2013p	2015p	2017p
HDPE	X	X	X	X	X	X	X	X	X
LDPE	X	X	X	X	X	X	X	X	X
LLDPE	X	X	X	X	X	X	X	X	X
EO	X	X	X	X	X	X	X	X	X
EDC	X	X	X	X	X	X	X	X	X
EB	X	X	X	X	X	X	X	X	X
Others	X	X	X	X	X	X	X	X	X
Total	X	X	X	X	X	X	X	X	X

Table: Ethylene demand in South America between 2001 and 2017, divided by applications

Demand for ethylene in South America totaled X million tons in 2009 (Graph). With X%, the production of HDPE had the largest share of that demand. LLDPE

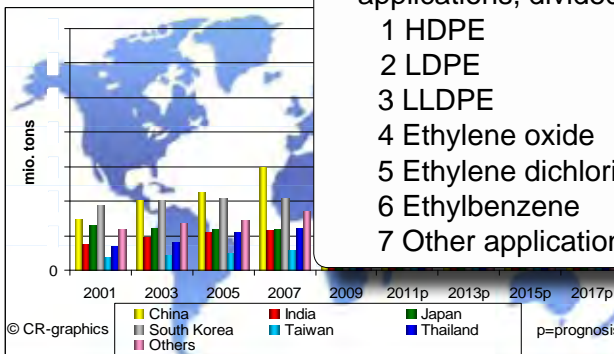
4.6.1 HDPE – Asia Pacific

In 2009, more than X million tons of ethylene were utilized for the production of HDPE, which translates to an increase of X% per year, as compared to 2001 (Graph). Following a further growth of X% per year, processing of ethylene into HDPE is anticipated to reach a volume of X million tons in 2017. China had a X% share of ethylene use in 2009, followed by South Korea, India, Thailand, Japan, and Taiwan (Table). The other countries of the Asia-Pacific region had a combined share of X%. China will see its share grow to X% one to remain stable, while all other countries will see their share decrease in some cases significant ones: South Korea will decrease X percentage points.

Vol. I / Chapter 4

All important market data on applications, divided by regions

- 1 HDPE
- 2 LDPE
- 3 LLDPE
- 4 Ethylene oxide
- 5 Ethylene dichloride
- 6 Ethylbenzene
- 7 Other applications



Graph: Ethylene demand in Asia-Pacific for HDPE between 2001 and 2017, divided by the most important countries

Country	Share in 2001	Share in 2009	Share in 2017p
China	X%	X%	X%
India	X%	X%	X%

Table of Contents (3/3)

Volume II

5 Company Profiles

5.1 Western Europe

- 5.1.1 Austria (2 Manufacturers)
- 5.1.2 Belgium (1)
- 5.1.3 France (2)
- 5.1.4 Germany (2)
- 5.1.5 Italy (1)
- 5.1.6 Spain (1)
- 5.1.7 Switzerland (2)
- 5.1.8 The Netherlands (2)
- 5.1.9 United Kingdom (1)

5.2 Eastern Europe

- 5.2.1 Belarus (1)
- 5.2.2 Croatia (1)
- 5.2.3 Hungary (1)
- 5.2.4 Poland (1)
- 5.2.5 Romania (2)
- 5.2.6 Russia (8)
- 5.2.7 Serbia (1)
- 5.2.8 Turkey (1)
- 5.2.9 Ukraine (1)

5.3 North America

- 5.3.1 Canada (2)
- 5.3.2 Mexico (2)
- 5.3.3 USA (11)

5.4 South America

- 5.4.1 Brazil (2)
- 5.4.2 Chile (1)
- 5.4.3 Colombia (1)
- 5.4.4 Venezuela (2)

5.5 Asia-Pacific

- 5.5.1 China (9)
- 5.5.2 India (5)
- 5.5.3 Indonesia (1)
- 5.5.4 Japan (10)
- 5.5.5 Malaysia (3)
- 5.5.6 Singapore (1)
- 5.5.7 South Korea (6)
- 5.5.8 Taiwan (2)
- 5.5.9 Thailand (3)
- 5.5.10 The Philippines (1)
- 5.5.11 Vietnam (2)

5.6 Middle East

- 5.6.1 Azerbaijan (1)
- 5.6.2 Iran (1)
- 5.6.3 Iraq (1)
- 5.6.4 Israel (1)
- 5.6.5 Kuwait (2)
- 5.6.6 Qatar (2)
- 5.6.7 Saudi Arabia (5)
- 5.6.8 United Arab Emirates (3)
- 5.6.9 Uzbekistan (1)

5.7 Africa

- 5.7.1 Algeria (1)
- 5.7.2 Egypt (1)
- 5.7.3 Libya (1)
- 5.7.4 Nigeria (1)
- 5.7.5 South Africa (1)

5.5.4 Japan

Sumitomo Chemical Co Ltd	
27-1, Shinkawa 2-chome, Chuo-ku	
Tokyo 104-8260	
Japan	
Tel.	81 3 5543 5500
Fax	81 3 5543 5901
Web	www.sumitomo-chem.co.jp
E-mail	n.a.
Foundation	1913
Staff	27,828 (31.03.2010)
Turnover 10	JPY 1.62 trillion (sat)
Turnover 09	JPY 1.79 trillion (sat)
Turnover 08	JPY 1.90 trillion (sat)
Turnover 07	JPY 1.79 trillion (sat)
Earnings 10	JPY 14.7 billion (net)
Earnings 09	JPY -59.2 billion (net income: fiscal year ended March 09)
Earnings 08	JPY 63.1 billion (net income: fiscal year ended March 08)
Earnings 07	JPY 93.9 billion (net income: fiscal year ended March 07)
Divisions, Product range	The company is divided into 6 divisions: <ul style="list-style-type: none"> • Basic chemicals sector • Petrochemicals & plastics sector • Fine chemicals sector • IT-related chemicals sector • Agricultural chemicals sector • Pharmaceuticals sector

Vol. II / Chapter 5

Extensive company profiles for all manufacturers, as for example BASF, Braskem, Chevron Philips Chemical, China National Petroleum Corp. (CNPC), Exxon Mobil, Formosa Plastics, Ineos Group, LyondellBasell Industries, National Petrochemical Company, Nova Chemicals, Royal Dutch Shell, SABIC, Sinopec, The Dow Chemical Company, and Total.

Associated Companies	(share: 50%), a joint venture between Qatar Petroleum International and Shell Eastern Petroleum. Sumitomo holds a share of X% in JSPC. PCS operates the ethylene cracker in Jurong Island, Singapore. <ul style="list-style-type: none"> • Keiyo Ethylene Co., Ltd. A joint venture between Mitsui Chemicals, Inc. (share: X%), Maruzen Petrochemical Co.,Ltd. (share: X%) and Sumitomo Chemical Co., Ltd. (share: X%). Engages in the production, processing and other basic petrochemical 	
Technologies / Licenses	n.a.	
Site / Plant (current)	Capacity (tons / year)	
██████████, Japan	██████████	
██████████ Saudi Arabia (JV ██████████)	██████████ % of ██████████	
██████████, Japan (JV ██████████)	██████████ % of ██████████	
██████████ Singapore (JV ██████████)	██████████ % of ██████████	
Total capacity (currently)	██████████	
Site / Plant (planned)	Capacity (tons / year)	Start-Up
██████████ Saudi Arabia (JV ██████████)	██████████ 500 + ██████████,250	██████████
	██████████ % of ██████████,000]	
Total Capacity (20██████████)	██████████,120	

Vol. II / Chapter 5

Clearly arranged data and facts on 117 manufacturers:

- Contact details
- Foundation and staff
- Turnover and earnings
- Product range
- Production sites
- Associated companies
- Profile summary
- Technologies / Licenses
- Current and planned production plants and capacities

6 reasons to order now

1. Get the most extensive overview of the markets!

Detailed profiles offer you precise facts about producers as well as useful information to applications, characteristics and demand of the most important products.

2. Profit from the newest data!

Our market studies provide you with the newest information about innovations, technology trends, and market dynamics. Thanks to these facts, you can assess projects more quickly, recognize risks on time and use your opportunities.

3. Use well-founded forecasts for your decisions!

Use objective analysis of factors which influence your business as a reliable basis for a successful business plan.

4. Recognize opportunities on time!

Be timely informed of changes and M&A in order to exploit market potentials and improve purchasing, production, service and communication.

5. Gain reliable information

Our studies are clearly structured and the valuable data is illustrated by tables and graphs. The convenient studies offer you all essential information at a glance.

6. Convince your business partners

Use our detailed research results for your publications, public relations, or as powerful arguments in front of business partners.

Up-to-date Market Studies from Ceresana Research

(More Infos: Click covers)



Plasticsers

69 Products; 145 Producers; 273 Pages, 19 Graphs, 18 Tables; 08/05



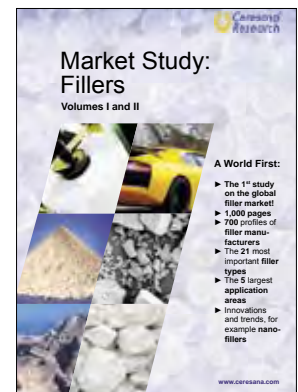
Solvents

77 Products; 270 Producers; 452 Pages, 80 Graphs, 8 Tables; 01/06



Flame Retardants

44 Products; 241 Producers; 627 Pages, 82 Graphs, 33 Tables; 07/06



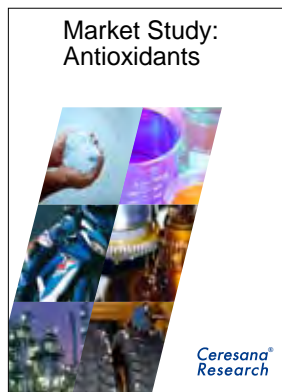
Fillers

21 Products; 702 Producers; 2 Vol., 1,074 P., 88 Graphs, 28 Tables; 07/07



Pigments

300 Products; 250 Producers; 2 Vol., 1,154 P., 53 Graphs, 56 Tables; 12/07



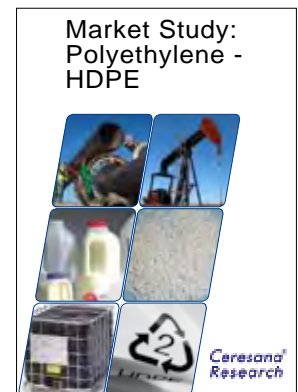
Antioxidants

90 Products; 68 Producers; 505 Pages, 53 Graphs, 3 Tables; 04/08



Polypropylene

64 Countries; 101 Producers; 2 Vol., 1,030 P., 313 Graphs, 118 Tables; 06/08



Polyethylene - HDPE

65 Countries, 100 Producers; 2 Vol., 994 P., 285 Graphs, 99 Tables; 09/08

About Ceresana Research

We are one of the world's leading market research institutions.

In addition to multi-client studies, we also offer commissioned studies according to an individual client's specifications. Our core competencies include:

- chemicals
- plastics
- additives
- commodities
- industrial components
- packaging
- construction materials

Companies, institutions, and associations from more than 45 countries have already profited from our global market data and prognoses.

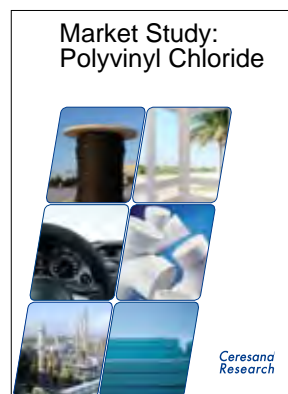
This study is especially useful for:

- Producers and traders of ethylene and its pre-products
- Processors of ethylene, as for example producers of polyethylene, ethylene oxide, EDC and ethylbenzene, as well as their clients
- Plant and mechanical engineers
- Investors and analysts
- Administrative bodies and organizations
- Associations and institutes
- Management
- Technology / production
- Strategy planning
- Research and development
- Market research and marketing
- Sales
- Purchasing
- Import / export

Client references

- "The study is very useful for us, because this is the first one which gives comprehensive data and facts about the industry."
- "Very detailed study about each country."
- "Charts and graphs were clear and pertinent."
- "The market study covers all application segments."
- "A comprehensive work with easy to find manufacturers and suppliers."
- "Clear and easy to understand."
- "A very useful study!"
- "Very well arranged."
- "Very informative and comprehensive, I'm very satisfied."
- "Everything at a glance."
- "Contents were/ are extremely useful."

Up-to-date Market Studies from Ceresana Research



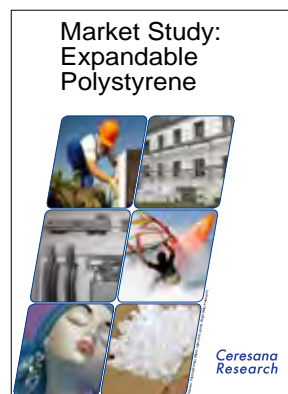
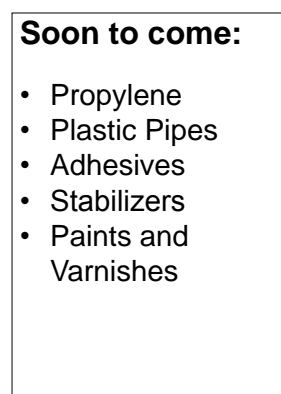
Polyvinyl Chloride
61 Countries, 122 Producers; 2 Vol., 977 P., 364 Graphs, 108 Tables; 11/08



Bioplastics
7 Countries; 12 Products, 77 Producers; 400 P., 80 Graphs, 32 Tables; 06/09



Polyethylene - LLDPE
67 Countries, 80 Producers; 2 Vol., 830 P., 305 Graphs, 100 Tables; 03/10



Expandable Polystyrene
64 Countries, 63 Producers; 2 Vol., 690 P., 287 Graphs, 87 Tables; 03/10



Polyethylene - LDPE
67 Countries, 87 Producers; 2 Vol., 850 P., 300 Graphs, 100 Tables; 04/10



Plastic Caps
31 Countries, 379 Producers; 2 Vol., 1,100 P., 139 Graphs, 72 Tables; 09/10



Ethylene
55 Countries, 117 Producers; 2 Vol., 801 P., 288 Graphs, 191 Tables; 12/10

Order today!

1) Choose Market Studies

- | | | |
|---|--|---|
| <input type="checkbox"/> Adhesives – Europe | <input type="checkbox"/> Expandable Polystyrene | <input type="checkbox"/> Polyethylene – LDPE |
| <input type="checkbox"/> Adhesives – World | <input type="checkbox"/> Fertilizers | <input type="checkbox"/> Polyethylene – LLDPE |
| <input type="checkbox"/> Ammonia | <input type="checkbox"/> Fillers (2 nd ed.) | <input type="checkbox"/> Polypropylene (2 nd ed.) |
| <input type="checkbox"/> Antioxidants | <input type="checkbox"/> Flame Retardants (2 nd ed.) | <input type="checkbox"/> Polyvinyl Chloride (2 nd ed.) |
| <input type="checkbox"/> Benzene | <input type="checkbox"/> Flavors and Fragrances | <input type="checkbox"/> Propylene |
| <input type="checkbox"/> Biocides | <input type="checkbox"/> Paints and Varnishes | <input type="checkbox"/> Stabilizers |
| <input type="checkbox"/> Bioplastics (2 nd ed.) | <input type="checkbox"/> Pigments (2 nd ed.) | <input type="checkbox"/> Solvents (2 nd ed.) |
| <input type="checkbox"/> Chelating Agents (2 nd ed.) | <input type="checkbox"/> Plastic Caps | <input type="checkbox"/> Surfactants |
| <input type="checkbox"/> Crop Protection | <input type="checkbox"/> Plastic Pipes | <input type="checkbox"/> Urea |
| <input type="checkbox"/> Enzymes | <input type="checkbox"/> Plasticizers (2 nd ed.) | |
| <input type="checkbox"/> Ethylene | <input type="checkbox"/> Polyethylene - HDPE (2 nd ed.) | |

2) Language German English

3) Edition (Content is identical)

Prices

<input type="checkbox"/> Corporate: PDF-file for <u>all</u> sites	€3,900
<input type="checkbox"/> Premium: PDF-file and printed version for <u>one</u> site	€3,100
<input type="checkbox"/> Basic: Printed version for <u>one</u> site	€2,100
<input type="checkbox"/> Additional printout	€300

When ordering
2 studies: 10% discount
3 studies: 20% discount

Promotion code:

Please send us **free reading samples** first

Please inform us about a tailor-made **single-client report** without obligation

Prices include shipping. Customers from Germany: plus 19% VAT. Upon receiving your order we will send the invoice. The study will be promptly delivered upon receipt of payment. Our GTC come into effect.

4) Contact Details

Title/ Name _____

Company _____

Department _____

Address _____

E-mail _____

Tel./ Fax _____

If paying by **credit card**, please fill out the following:



Card Number: _____

Expiry date: _____

5) Order from us

Tel +49 7531 94293 0

Fax +49 7531 94293 27

E-mail order@ceresana.com

Web www.ceresana.com

Address Ceresana, 78462 Konstanz, Germany