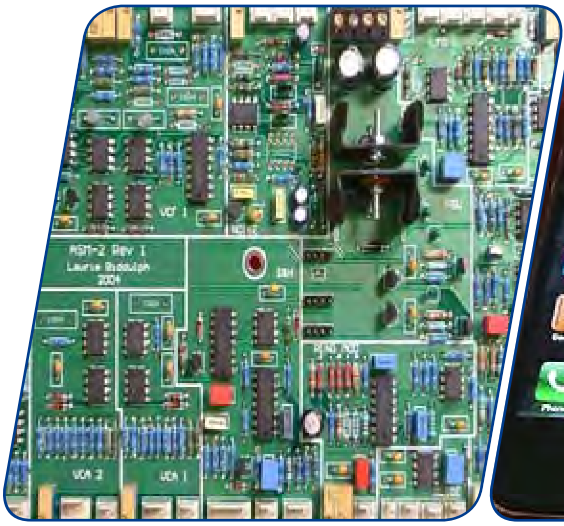
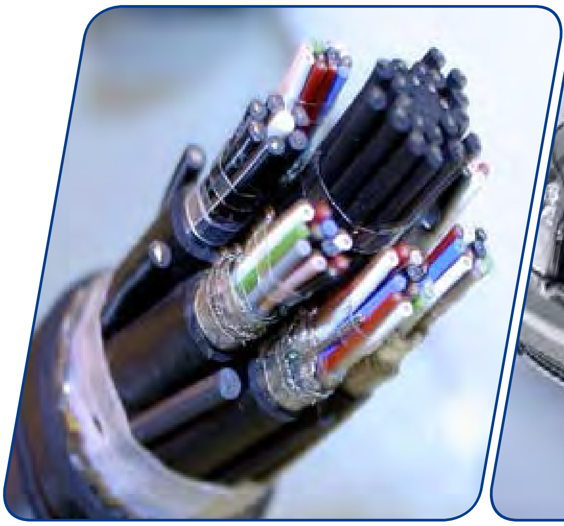
Market Study: Flame Retardants

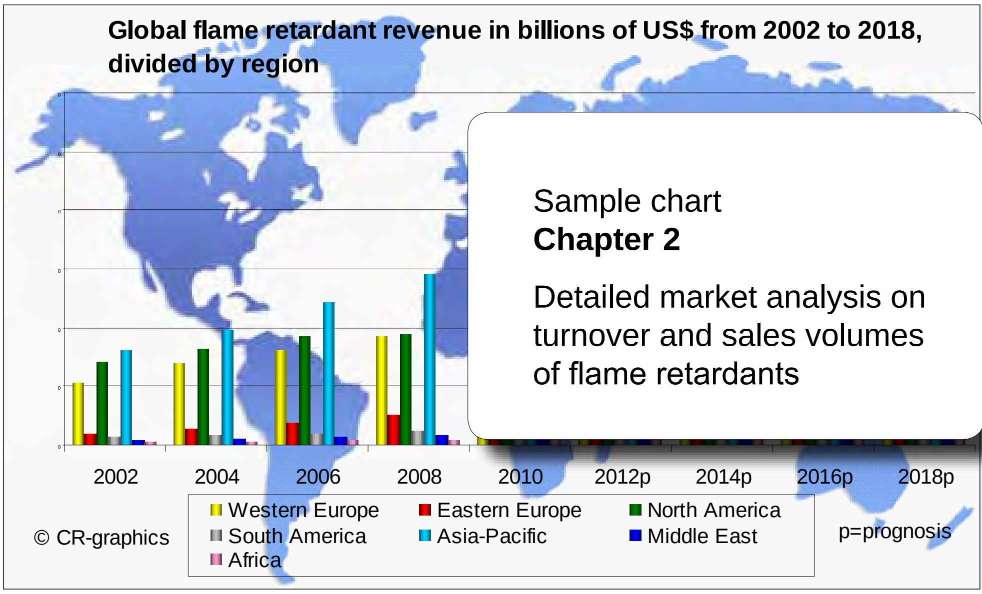







Ceresana Research

Market Study: Flame Retardants



Flame retardants inhibit or delay the burning of materials and are indispensable for protecting plastic products, electrical appliances, construction materials, and textiles. Due to rising safety standards worldwide and the increasing use of flammable materials, the flame retardant market is gaining more and more importance. The market research institute Ceresana forecasts that the global flame retardant market will generate revenues of US$5.8 billion in 2018. In 2010, the Asia-Pacific region was the largest market, accounting for approximately 41% of the global demand for flame retardants, followed by North America and Western Europe.

Future development of the flame retardant industry greatly depends on legal situations and industrial standards. Almost all countries are increasingly tightening fire safety regulations. In addition, state regulations on the protection of the environment and health will influence even more the choice of different flame retardants in future – above all in Western Europe and North America. This mainly applies to the use of halogenated flame retardants and the development of corresponding substitutes.

Flame retardants are tailored to specific applications. Organophosphates and different inorganic flame retardants are fast growing markets worldwide. As they register annual growth rates of 3.5% to 4.3%, the demand for these flame retardants is increasing significantly faster than for brominated or chlorinated flame retardants. However, the demand for the different types of flame retardants varies significantly between the individual regions. While the demand for brominated and chlorinated flame retardants in North America and Western Europe is declining, it is rising in all other regions. ATH is the most widely used flame retardant in terms of volume – and it is anticipated to continue to dominate the market in 2018.

Flame retardants are developed in close co-operation with manufacturers, processors, and users of end-products. Product innovations focus on more environmentally friendly products and new materials or compounds. Examples include nanotechnology, intumescent systems, and micro-encapsulation. As construction materials account for more than 30% of all demand for flame retardants, they are the largest market. Insulation materials, PVC construction materials, rubbers, adhesives as well as paints & varnishes are the most important fields of application. The dynamic growth markets of electrical & electronics and cables rank second. Ceresana expects that the Asia-Pacific area will see the greatest increases over the next years. Growth is spearheaded by sales markets in China, which are anticipated to record increases in demand of more than 7% per year by 2018.

The Study in Brief:

Vol. I / Chapter 1 summarizes the most important information on the different types of flame retardants, their classification, characteristics, raw materials, production, application areas, legal situation, and environmental and health aspects.

Chapter 2 provides a presentation and analysis of the flame retardant market – including forecasts up to 2018: Demand divided by product types as well as revenues and prices are explained. In addition, the study offers a comprehensive insight in the development of individual regions and global market dynamics.

In chapter 3, eight countries are analyzed in detail: Demand for flame retardants and revenues as well as their influencing factors. Moreover, this chapter offers essential market data related to the individual application areas.

Chapter 4 is an analysis of the demand for flame retardants worldwide and in the 7 regions of the world (Western Europe, Eastern Europe, North America, South America, Asia-Pacific, the Middle East, and Africa). Fields of application include: Construction materials, electrical & electronics, cables, transport industry, and others.

Vol. II is a useful list of producers, which includes 246 profiles of flame retardant manufacturers – clearly arranged according to contact data, turnover, profit, product range, production sites, profile summary, fields of application, and brand names.

Table of Contents (1/3)

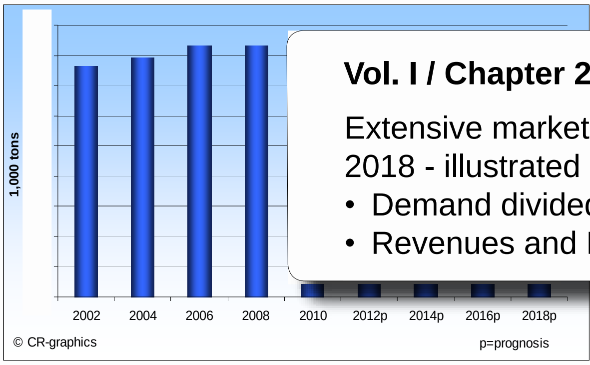
Volume I

2.2.1 Demand – Western Europe

The demand for flame retardants in Western Europe totaled approximately X tonnes in the year 2002 (Graph). This rose to X tonnes by 2007 and then fell to X tonnes during the following three years. We expect the demand in Western Europe will slightly increase by 2018. Demand is anticipated to rise by X% per year to approximately X tonnes by 2018. In 2010, the largest share of West European demand for flame retardants was accounted for by Germany with X%, followed by Italy and France (Table). We anticipate that Germany will see its share increase by X percentage points until 2018.

	2002	2010	2018p
Germany	X	X	X
Italy	X	X	X
France	X	X	X
United Kingdom	X	X	X
Other countries	X	X	X
Total	**100%**	**100%**	**100%**

Table: Various countries' shares in West European demand for flame retardants from 2002 to 2018



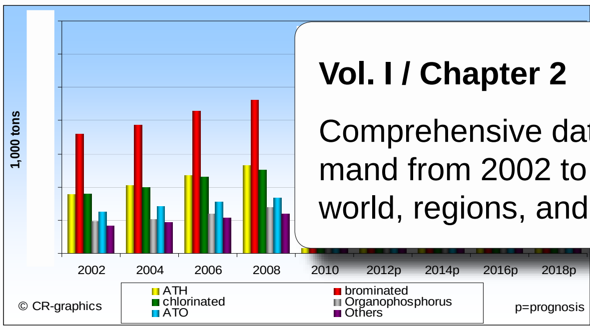
Vol. I / Chapter 2

Extensive market data from 2002 to 2018 - illustrated by graphs and tables:
- Demand divided by FR types
- Revenues and Prices

Graph: Demand for flame retardants in Western Europe from 2002 to 2018

2.6.3 Demand Divided by Types of Flame Retardants – Asia-Pacific

The demand for the different types of flame retardants varies significantly between some Asian-Pacific countries. While brominated flame retardants accounted for almost X% of all demand in China during 2010, they were responsible for X% of the demand for flame retardants in South Korea. Accordingly, brominated flame retardants accounted for approximately X% (about X tonnes) of all demand in the Asia-Pacific region during 2010 (Table). ATH has risen to become the second-most important type of flame retardant between 2002 and 2010. The demand for ATH increased at an average annual rate of X% to X tonnes, thereby surpassing the demand for chlorinated flame retardants, which was X tonnes (Graph).



Vol. I / Chapter 2

Comprehensive data and facts on demand from 2002 to 2018 - divided by world, regions, and countries

Graph: Demand for flame retardants in Asia-Pacific from 2002 to 2018, divided by types of flame retardants

	2002	2010	2018p
ATH	X	X	X
Brominated	X	X	X
Chlorinated	X	X	X
Organophosphorus	X	X	X
ATO	X	X	X
Others	X	X	X
Total	**100%**	**100%**	**100%**

Table: Shares in Asian-Pacific demand for flame retardants from 2002 to 2018, divided by types of flame retardants

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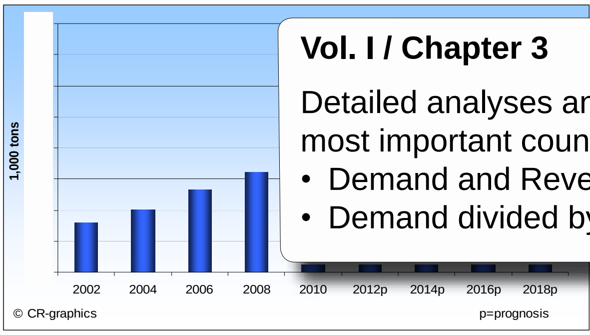
3.3.1 China

The demand for flame retardants in China was X tonnes in 2002 (Graph). Demand more than doubled to over X tonnes by 2010, translating to a X% average annual growth. Thus, China registered the greatest growth worldwide and could significantly expand its share of the global market. In 2010, China was responsible for more than half of all demand for flame retardants in Asia-Pacific and for about X% of worldwide demand. Our market analyses indicate that the Chinese economy will continue growing over the coming years. This can mainly be seen in the field of electrical & electronic devices, in which about X tonnes of flame retardants were used during 2010. Consequently, electrical & electronics were the largest market for flame retardants in 2010. We expect the demand in this field will increase by X% per year by 2018.



Graph: Demand for flame retardants in China from 2002 to 2018

Vol. I / Chapter 3

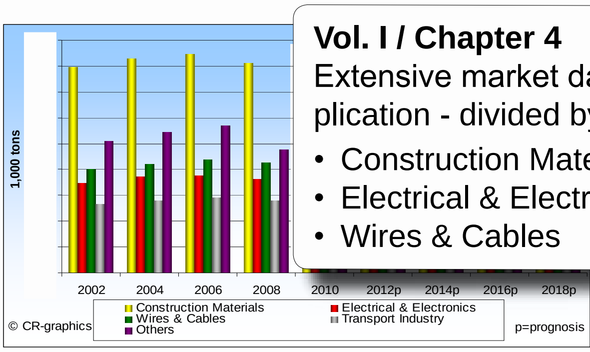
Detailed analyses and forecasts for the 8 most important countries:
- Demand and Revenue
- Demand divided by FR types

Company name	Bromine	Chlorine	Melamine	Phosphor	Ammonium	ATO	Boron	ATH	MDH	Others
XXX						x	x	x		Zinc borate
XXX			x		x					
XXX	x			x						
XXX	x			x						

Table: Chinese flame retardant manufacturers and their product basis

4.4 Market Data Applications – North America

The total demand for flame retardants in North America totaled X tonnes in 2010, whereof about X% were used to produce construction materials (Graph). This was followed by a considerable distance by cable producers who accounted for approximately X% of all demand. Use in electrical & electronic appliances (X%) was the third-largest sales market, followed by the transport industry (X%) and other applications (X%). The demand in North America will most likely see positive development again between 2010 and 2018. We expect the demand will increase by X% per year to approximately X tonnes of flame retardants in 2018.



Vol. I / Chapter 4

Extensive market data on the fields of application - divided by the 7 world regions:
- Construction Materials
- Electrical & Electronics
- Wires & Cables
- Transport Industry
- Others

Graph: Demand for flame retardants in North America from 2002 to 2018, divided by application

The demand for flame retardants used to produce construction materials totaled X tonnes in 2010. After an average annual decrease of X% since 2002, we forecast North American demand in this category will grow by X% per year to X tonnes until 2018. During past years, the U.S. has seen their demand and shares decline. In contrast, the demand in Canada and Mexico increased by X% annually. Accordingly, the two countries saw their combined share of the total market rise by X percentage points. We expect this trend will continue over the next eight years: While the demand by producers of construction materials in Canada and Mexico will grow by X% per year, the demand in the U.S. will only increase by X% annually.

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Volume II

Vol. II / Chapter 5

Extensive company profiles for 246 manufacturers, as for example Akzo Nobel Chemicals, Alcoa, Ashland, Chemtura, Clariant, DIC, DSM, ICL, Johnson Matthey, Lanxess, Occidental Chemical, Rio Tinto Group, Sinochem Group, Solvay and Tosoh.

Note: The profiles are assigned to the country in which the company or holding is headquartered. Company profiles also include JVs and subsidiaries.

Nabaltec AG			
Alustraße 50-52			
92421 Schwandorf			
Germany			
Tel.	49 9431 53 0		
Fax	49 9431 53 260		
Web	www.nabaltec.de		
E-Mail	info@nabaltec.de		
Financial Key Data			
(in million €)		2007	2008
Turnover		88.1	96.3
EBITDA		8.4	9.3
Divisions, Product Range	The company manufactures special "functional fillers" and "technical ce hydroxide, aluminum oxide, and fur includes: • Aluminum hydroxide • Boehmite • Magnesium hydroxide • Ca-Al hydroxy carbonate • Aluminum oxide • Ceramic bodies		
Production Sites	The company's production sites are located in: • Schwandorf, Germany • Kelheim, Germany • Corpus Christi, USA		
Profile Summary	Nabaltec was established in 1994 by the takeover of the Nabwerk (aluminum oxide production site) from the VAW Aluminium AG in Schwandorf, Germany. Together with the U.S. aluminum oxide manufacturer Sherwin Alumina, the company founded the joint venture		

Vol. II / Chapter 5

Clearly arranged data and facts on the most important producers:
- Contact details
- Turnover and Profit
- Product range
- Production sites
- Profile summary
- Fields of Application
- Types of Flame Retardants, Applications and Brand Names

Nashtec, located in Corpus Christi, USA, in 2005. Nabaltec develops, manufactures, and distributes specialized products in the business fields "functional fillers" and "technical ceramics" on the basis of aluminum hydroxide (ATH) and aluminum ox minerals. The company plans to improve i expanding its capacities, optimizing its proce extending its product portfolio in a targeted mar Nabaltec employed 372 people at the end of amounts to 70%. Divided by business division, in 2010 were generated by functional fillers a ceramics. Divided by region, 30.1% were g 45.6% in Europe (without Germany), 14.9% in the rest of the world. All production sites of the according to the quality management syste company's production sites in Germany additio 14001.

Flame Retardants		
Product Basis		
☐ Bromine	☐ Chlorine	☐ M
☐ Phosphorous	☐ Ammonium	☐ A
☐ Boron	☒ ATH	☒ M
☐ Others:	☐ Others:	☐ O
Fields of Application		
☒ PVC	☒ PP	☒ PE
☒ Elastomers	☒ Foams	☒ Paints & Varnishes
☒ Electrical & Electronics	☐ Timbers	☐ Textiles
☒ Cables	☒ Others: Adhesives	☐ Others:

Flame Retardants, Applications, Combination	Brand Name
Aluminum hydroxide FR for construction, electronics, paints, adhesives, transport, and wires & cables	Apyral

6 reasons to order now

1. Get the most extensive overview of the markets!
Detailed profiles offer you precise facts about producers, applications, characteristics, and demand of the most important products.

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Thanks to the newest information on innovations, technology trends, and market dynamics you can assess projects more quickly and recognize risks on time.

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About Ceresana

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, and construction materials.

Several 1,000 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:

- Manufacturers, traders, and processors of organic and inorganic flame retardants. brominated, chlorinated, melamine and phosphate compounds, aluminum trihydroxide, magnesium hydroxide, ammonium, antimony and boron compounds, graphite, zinc hydroxystannate
- Companies from the fields of plastics, rubber, foams, construction materials, electrical & electronics, paints and varnishes, textiles, wires & cables, wood, packaging and transport, adhesives and sealants.
- Investors and analysts
- Authorities and organizations
- Associations and institutes
- Business management
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- Strategic planning
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- Import / export

Up-to-date Studies

More Info: Click on Headlines!

Flame Retardants (new)
25 Products; 246 Producers; 774 Pages, 84 Graphs, 78 Tables; 07/11

Plasticizers (new)
19 Products; 213 Producers; 842 Pages, 188 Graphs, 134 Tables; 05/11

Adhesives
31 Countries, 199 Producers; 2 Vol., 870 P., 133 Graphs, 48 Tables; 03/11

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

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

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

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

Benzene
35 Countries, 143 Producers; 2 Vol., 700 P., 215 Graphs, 125 Tables; 07/11

Stabilizers
11 Products; 149 Producers; 538 Pages, 106 Graphs, 121 Tables; 05/11

Plastic Pipes
30 Countries, 135 Producers; 2 Vol., 590 P., 131 Graphs, 101 Tables; 03/11

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

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

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

Pigments (new)
403 Products; 303 Producers; 1.038 Pages, 122 Graphs, 164 Tables; 07/11

Paints and Varnishes
30 Countries, 138 Producers; 2 Vol., 575 P., 129 Graphs, 56 Tables; 04/11

Propylene
51 Countries, 137 Producers; 2 Vol., 760 P., 257 Graphs, 137 Tables; 01/11

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

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

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

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- ☐ Surfactants
- ☐ Urea

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