

[CLICK TO VIEW](#)

[Table of Contents 2](#)

[List of Tables & Charts 3](#)

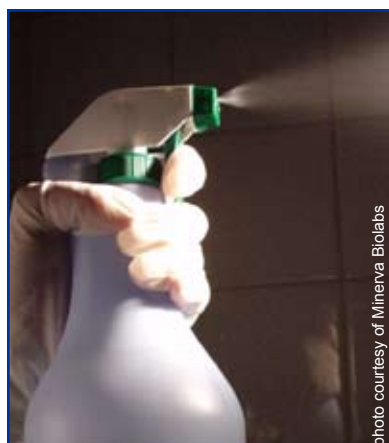
[Study Overview 4](#)

[Sample Text, Table
& Chart 5](#)

[Sample Profile, Table &
Forecast 6](#)

[Order Form 7](#)

[About Freedonia, Custom
Research, Related Studies,
Corporate Use License 8](#)



Disinfectant & Antimicrobial Chemicals

US Industry Study with Forecasts for **2013 & 2018**

Study #2474 | March 2009 | \$4600 | 172 pages

www.freedoniagroup.com



The Freedonia Group

767 Beta Drive

Cleveland, OH • 44143-2326 • USA

Toll Free US Tel: 800.927.5900 or +1 440.684.9600

Fax: +1 440.646.0484

E-mail: info@freedoniagroup.com

Table of Contents

EXECUTIVE SUMMARY

MARKET ENVIRONMENT

General	4
Macroeconomic Overview	5
Population & Demographics	9
Consumer Spending Trends	12
Manufacturing Overview	14
Cleaning Products Overview	17
Historical Trends	19
Pricing & Product Mix	21
Environmental & Regulatory Considerations	23
International Activity	26
Foreign Trade	28

MARKETS

General	30
Industrial	32
Paint & Coatings	35
Plastics	40
Food & Beverage Processing	46
Textiles	52
Other	56
Institutional & Commercial Markets	59
Medical & Health Care	62
Restaurants & Lodging	68
Other	73
Consumer	75

FUNCTIONS

General	80
Disinfectants & Sanitizers	83
Antimicrobial Additives	85

PRODUCTS

General	89
Phenolics	92
Iodophors	95
Nitrogen Compounds	98
Quaternary Ammonium Compounds	100
Amine-Based Compounds	103
Organometallics	105
Organosulfurs	107
Chloroisocyanurates	109
Aldehydes	111
Other	114

INDUSTRY STRUCTURE

General	118
Market Share	120
Industry Restructuring	123
Marketing & Distribution	126
Competitive Strategies	128
Cooperative Agreements	131

COMPANY PROFILES

Akcros Chemicals	134
Akzo Nobel NV	135
Albemarle Corporation	137
Arch Chemicals	138
Arkema SA	140
Ashland Incorporated	141
BASF SE	143
Chemtura Corporation	144
Ciba Specialty Chemicals	146
Clariant International	148
Dow Chemical	149
Ecolab Incorporated	152
Evonik Industries	155
Ferro Corporation	156

International Specialty Products	157
LANXESS AG	158
Lonza Group Limited	159
Microban International	161
Milliken & Company	163
Occidental Petroleum	164
Rhodia SA	165
Rohm and Haas	167
Stepan Company	168
Troy Corporation	170
Additional Companies Mentioned in Study	172

List of Charts

MARKETS

- 1 Disinfectant & Antimicrobial
 Chemical Markets, 2008
- 2 Industrial Markets for
 Disinfectant & Antimicrobial
 Chemicals, 2008
- 3 Institutional & Commercial
 Markets for Disinfectant
 & Antimicrobial
 Chemicals, 2008

PRODUCTS

- 1 Disinfectant & Antimicrobial
 Chemical Demand
 by Type, 2008

INDUSTRY STRUCTURE

- 1 Disinfectant &
 Antimicrobial Chemical
 Market Share, 2008

List of Tables

EXECUTIVE SUMMARY

1 Summary Table3

MARKET ENVIRONMENT

1 Macroeconomic Indicators9
2 Population & Households 12
3 Personal Consumption
Expenditures..... 14
4 Manufacturers' Shipments..... 17
5 Cleaning Product Shipments ... 19
6 Disinfectant & Antimicrobial
Chemical Market,
1998-2008 21
7 Selected Disinfectant
& Antimicrobial
Chemical Pricing..... 23

MARKETS

1 Disinfectant & Antimicrobial
Chemical Markets..... 31
2 Industrial Markets for
Disinfectant &
Antimicrobial Chemicals 34
3 Paint & Coatings Shipments.... 37
4 Paint & Coatings Market for
Antimicrobial Chemicals 40
5 Plastics Supply & Demand 43
6 Plastics Market for
Antimicrobial Chemicals 46
7 Food & Beverage Shipments ... 49
8 Food & Beverage Processing
Market for Disinfectant
Chemicals..... 51
9 Textile Mill Fiber
Consumption 54
10 Textile Market for
Antimicrobial Chemicals 56

11 Other Industrial Markets
for Disinfectant &
Antimicrobial Chemicals 59
12 Institutional & Commercial
Markets for Disinfectant
Chemicals..... 61
13 Health Care Facilities..... 64
14 Medical & Health Care Market
for Disinfectant Chemicals ... 67
15 Restaurant & Lodging
Indicators 70
16 Restaurant & Lodging Market
for Disinfectant Chemicals ... 73
17 Other Institutional &
Commercial Markets for
Disinfectant Chemicals 75
18 Consumer Market for
Disinfectant &
Antimicrobial Chemicals 79

FUNCTIONS

1 Disinfectant & Antimicrobial
Chemical Demand
by Function 82
2 Disinfectant & Sanitizer
Demand by Market 85
3 Antimicrobial Additive
Demand by Market 88

PRODUCTS

1 Disinfectant & Antimicrobial
Chemical Demand by Type.... 91
2 Phenolic Disinfectant &
Antimicrobial Chemical
Demand by Market 95
3 Iodophor Disinfectant &
Antimicrobial Chemical
Demand by Market 98

4 Nitrogen-Based Disinfectant
& Antimicrobial Chemical
Demand by Type 100
5 Quaternary Ammonium
Compound Disinfectant
& Antimicrobial Chemical
Demand by Market 103
6 Amine-Based Disinfectant &
Antimicrobial Chemical
Demand by Market 105
7 Organometallic Antimicrobial
Chemical Demand
by Market..... 107
8 Organosulfur Antimicrobial
Chemical Demand
by Market..... 109
9 Chloroisocyanurate
Disinfectant Demand
by Market..... 111
10 Aldehyde Disinfectant
Chemical Demand
by Market..... 114
11 Other Disinfectant &
Antimicrobial Chemical
Demand by Market 117

INDUSTRY STRUCTURE

1 US Disinfectant &
Antimicrobial Chemical
Sales by Company, 2008 119
2 Selected Acquisitions
& Divestitures..... 125
3 Selected Cooperative
Agreements 132

Growth in the production volume of disinfectant and antimicrobial chemicals will accelerate due to rebounding manufacturing activity in key industrial markets such as coatings and plastics.

US demand to grow 3.6% annually through 2013

Demand for disinfectant and antimicrobial chemicals is projected to increase 3.6 percent annually to \$1.2 billion in 2013. Although this represents a substantial deceleration in value gains from the 2003-2008 period, growth in volume will accelerate due to rebounding production levels in key industrial markets such as coatings and plastics. The strong value gains in the previous five-year period were due in large part to price runups from 2005 to 2008, when the price of crude oil and other raw materials soared.

Consumer segment to be fastest growing market

Despite considerable scientific disagreement about the necessity of using disinfectant chemicals in many of their current applications, demand for these chemicals in industrial, institutional and commercial, and consumer markets is expected to grow. In the large food and beverage processing market, users are implementing increasingly sophisticated disinfection routines to ensure workplace safety and to avoid liability issues from shipping tainted products. Gains in the consumer market -- the fastest-growing overall -- will be driven by fears of foodborne and other pathogens, as disinfectant active ingredients are being added to many traditional cleaning products which have not typically contained such ingredients. In the health care market, there is broad agreement



that aggressive infection control programs are necessary. As a result, it will remain one of the largest outlets for these products.

Organosulfurs to post fastest growth by product

Organosulfurs will be the fastest-growing product category, due mainly to developments in the paint and coatings industry, the largest user of these products. Not only is overall coatings production expected to rebound from a poor performance in 2008, but organosulfurs are likely to be the leading replacement for tributyl tin (TBT) in the marine antifoulant segment. Iodophors will also benefit from gains in coatings production, and will

remain a leading product in the large health care market. Overall, phenolic compounds will remain the largest product category. Phenolics are one of the few product categories that are used extensively as both disinfectant actives and antimicrobial additives. Although products do compete against each other in certain applications, they are generally not fully interchangeable, as their killing modes and effectiveness against particular organisms can vary widely. As a result, growth for particular product types is generally more reliant on growth in the applications in which they are used, rather than on the ability to expand into new applications or applications in which other products are more widely used.

Copyright 2009 The Freedonia Group, Inc.

[Click here to purchase online](#)

Sample Text, Table & Chart

FUNCTIONS

Disinfectants & Sanitizers

Demand for disinfectant active ingredients in formulated products and sanitizers is projected to grow by 1.5 percent per year to 1.7 billion in 2013. Demand will be driven by the fear of illness caused by bacteria and viruses, most recently by the salmonella outbreak in eggs. The outbreak of America's Blakely, Georgia, and the need to comply with the US Environmental Protection Agency (EPA), Occupational Safety and Health Administration (OSHA) and other agencies. Also, demand will be the continuation of promotional campaigns to convince consumers of the advantages of cleaning products containing antibacterial additives, despite a lack of consensus on the matter in the scientific community.

Institutional and commercial markets will continue to account for more than 45 percent of disinfectant and sanitizing chemical demand in value terms, despite registering slower growth than the industrial or consumer markets. This market position is due to the large number of nursing homes, correctional institutions, hospitals and other health care facilities, hotels and restaurants in the US. As average life spans continue to increase in the US and people continue to eat a sizable share of their meals outside the home, demand for disinfectant chemicals used in institutional and commercial cleaning products will continue to grow.

The consumer market offers the fastest growth opportunities for disinfectant actives, at least in part because food processing plants, health care facilities and foodservice outlets are fairly established markets for disinfectants. In contrast, although most households use disinfectant cleaning products to some extent, much of that has been in traditional niches for disinfectants, such as bathroom and kitchen hard surface

SAMPLE
TEXT

TABLE III-2

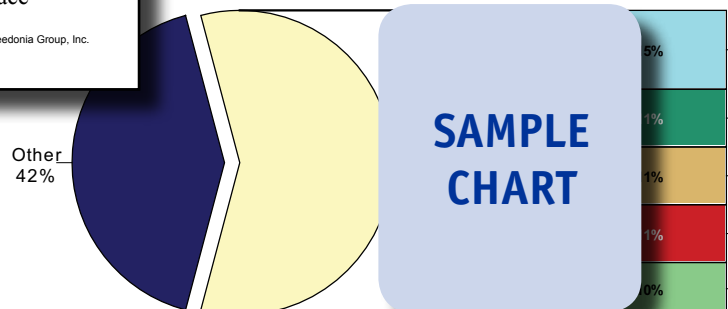
INDUSTRIAL MARKETS FOR DISINFECTANT & ANTIMICROBIAL CHEMICALS (million dollars)

Item	1998	2003	2008	2013	2018
Nondurable Goods Shpts (bil 2000\$)	1745	1685	1645	1600	1560
lb chemical/mil \$ nondurable					
Disinfectant & Antimicrobial (mil lb) \$/lb					
Industrial Markets					
Paint & Coatings					
Plastics					
Food & Beverage Processing					
Textiles					
Other					
% industrial					
Disinfectant & Antimicrobial Demand	577	700	1029	1229	1500

SAMPLE
TABLE

CHART VI-1

DISINFECTANT & ANTIMICROBIAL CHEMICAL MARKET SHARE, 2008 (\$1.0 billion)



SAMPLE
CHART

Sample Profile, Table & Forecast

TABLE V-1
DISINFECTANT & ANTIMICROBIAL CHEMICAL DEMAND BY TYPE
 (million dollars)

Item	1998	2003	2008	2013	2018
Resident Population (mil)	277	287	297	307	318
lb chem/capita	0	0	0	0	0
Disinfectants/Antimicrobials (mil lb)	2	2	2	2	2
\$/lb	2	2	2	2	2
Disinfectant & Antimicrobial Demand					
Phenolics					
Iodophors					
Nitrogen Compounds					
Organometallics					
Organosulfurs					
Chloroisocyanurates					
Aldehydes					
Other					



COMPANY PROFILES

Stepan Company
 Edens and Winnetka Road
 Northfield, IL 60093
 847-446-7500
<http://www.stepan.com>

Sales: \$
 Employe

Key Pro... quaternary ammonium chloride

Step... intermediate chemicals
 used in a... operates in three
 segments... products.

The Company is active in the US disinfectant and antimicrobial chemicals market via the Surfactants segment, which had sales of \$1.2 billion in 2008. Of the segment's total 2008 sales, \$811 million were to customers in North America. Through the Surfactants segment, the Company makes such products as SO/SAN 30M cationic blends, and STEPANQUAT and BTC quaternary ammonium chloride. These chemicals are typically used as germicidal quaternary compounds that inhibit the growth of mildew, mold and germs for industrial and consumer applications. Stepan's SO/SAN 30M cationic blends are liquid sanitizer/softener concentrates that are typically used in sanitizers and antimicrobial fabric softeners for the household, and industrial and institutional cleaning markets. Stepan produces a wide range of STEPANQUAT quaternary ammonium chloride chemicals, including formulations for hard surface cleaning and other industrial end uses. The Company's BTC quaternary ammonium chloride chemicals encompass certain formulations suitable for use as active ingredients in hard surface disinfectants and sanitizers, in addition to other applications.

168 Copyright 2009 The Freedonia Group, Inc.



"Demand for organosulfur compounds used as antimicrobials is projected to increase 5.5 percent per year to \$120 million in 2013, above the overall average. The coatings market is by far the largest outlet for organosulfurs, and is expected to register growth comparable to the overall average for organosulfurs. In most uses, organosulfurs are expected to benefit from changes in the product mix favoring their use, rather than from gains derived from robust growth in the markets which use them."
 --Section V, pg. 107

OTHER STUDIES

Flavors & Fragrances

US flavor and fragrance demand will grow 3.7% annually through 2012. Gains will be driven by consumer interest in costlier natural and value-added ingredients, especially in cosmetics and toiletries. Growth in the addition of active ingredients with unpleasant tastes and aromas will also support the use of flavors and fragrances to mask them. This study analyzes the \$4.4 billion US flavor and fragrance industry, with forecasts for 2012 and 2017 by market and product. It also evaluates company market share and profiles major players.

#2461 01/2009..... \$4700

Industrial & Institutional Cleaning Chemicals

US demand for I&I cleaning chemicals will grow 3.4% yearly through 2012. Food safety concerns will boost demand in key food-related markets. Products which are effective, easy to use and safer for the environment have the best prospects. Formulations using biodegradable components will do well yet remain a smaller segment. This study analyzes the \$8.6 billion US I&I chemical industry, with forecasts for 2012 and 2017 by market, product and raw material. It also evaluates market share and profiles industry players.

#2396 08/2008..... \$4700

Cosmetic & Toiletry Chemicals

US demand for cosmetic and toiletry chemicals will rise 5.8% yearly through 2012, aided in part by consumer preferences for organic and natural products. Chemicals used as active ingredients will benefit from continued gains in cosmeceutical skin care products and high value nanoscale additives. This study analyzes the \$6.6 billion US cosmetic and toiletry chemicals industry, with forecasts for 2012 and 2017 by product, function and market. It also evaluates market share and profiles industry players.

#2369 07/2008..... \$4700

Solvents

Demand for solvents in the US will reach 11.8 billion pounds in 2012. Esters and alcohols will exhibit the best growth within the conventional solvents product group, though green solvents such as hydrogen peroxide and supercritical fluids will post more rapid gains. This study analyzes the \$5.5 billion US solvents industry, with forecasts for 2012 and 2017 by solvent product, market and function. It also considers market environment factors, evaluates company market share and profiles industry players.

#2357 06/2008..... \$4600

Enzymes

US demand for enzymes will grow 6% annually through 2012. Advances will be led by continued rapid expansion in the fuel ethanol segment of the starch processing enzyme market, as well as strong growth in the large pharmaceutical and smaller biocatalyst and pulp and paper markets. Animal feed will also contribute to gains. This study analyzes the \$1.9 billion US enzyme industry, with forecasts for 2012 and 2017 by market and product. It also evaluates market share and profiles industry competitors.

#2351 06/2008..... \$4600

About The Freedonia Group

The Freedonia Group, Inc., is a leading international industry market research company that provides its clients with information and analysis needed to make informed strategic decisions for their businesses. Studies help clients identify business opportunities, develop strategies, make investment decisions and evaluate opportunities and threats. Freedonia research is designed to deliver unbiased views and reliable outlooks to assist clients in making the right decisions. Freedonia capitalizes on the resources of its proprietary in-house research team of experienced economists, professional analysts, industry researchers and editorial groups. Freedonia covers a diverse group of industries throughout the United States, the emerging China market, and other world markets. Industries analyzed by Freedonia include:

- Chemicals • Plastics • Life Sciences • Packaging • Building Materials • Security & Electronics • Industrial Components & Equipment • Automotive & Transportation Equipment • Household Goods • Energy/Power Equipment

[Click here to learn more about Freedonia](#)

Freedonia Custom Research

Freedonia Custom Research delivers the same high quality, thorough and unbiased assessment of an industry or market as an industry study. Since the research initiative is based upon a company's specific needs, companies harness Freedonia's research capabilities and resources to answer unique questions. When you leverage the results of a Freedonia Custom Research engagement, you are able to obtain important answers to specific questions and issues associated with: mergers and acquisitions, new product launches/development, geographic expansion, entry into new markets, strategic business planning, and investment and funding decisions.

Freedonia Custom Research is ideal for companies seeking to make a strategic difference in the status quo and focus on future business growth. Working side by side with clients, Freedonia's team is able to define a research project that is custom-tailored to answer specific questions and provide the basis from which a company can make informed business decisions.

[Click here to learn more about Custom Research](#)



[Click here for complete title list](#)



[Click here to visit freedoniagroup.com](http://www.freedoniagroup.com)