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**



Insulation

US Industry Study with Forecasts for 2014 & 2019

Study #2628 | June 2010 | \$4900 | 308 pages



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

www.freedoniagroup.com

Study #2628 Insulation June 2010 \$4900 308 Pages

US Industry Study with Forecasts for 2014 & 2019

Table of Contents

EXECUTIVE SUMMARY

MARKET ENVIRONMENT

General 4
Macroeconomic Outlook 5
Demographic Trends 9
Consumer Spending Trends12
Consumer Financing Trends14
Building Construction Trends18
Residential Building21
Housing Starts23
Housing Stock27
Improvements & Repairs31
Nonresidential Building32
New Construction33
Improvements & Repairs35
Manufacturing Outlook
Pricing
Historical Market Trends42
Foreign Trade45
World Insulation Overview47

OVERVIEW

General	49
R-Values	50
Material Variations in Thermal Resistance	51
Environmental & Regulatory Issues	53
Energy Efficiency Considerations	54
Green Building Considerations	56
Climate Change Issues	57
Indoor Air Quality Issues	59
Renewable Resources &	
Recycling Considerations	60
Materials-Based Considerations	63
Insulation Demand	66

PRODUCTS

General	68
Fiberglass	70
Materials	71
Product Forms	73
Markets	77
Residential Construction	78
Nonresidential Construction	79
Industrial & HVAC Equipment	80
Other Markets	81
Foamed Plastics	82
Materials	83
Product Forms	84

Markets	85
Resins	87
Rigid Urethane	87
Products	88
Markets	90
Polystyrene	92
Products	93
Markets	94
Other Foamed Plastics	97
Cellulose	99
Product Forms	101
Markets	103
Mineral Wool	104
Product Forms	107
Markets	109
Reflective Insulation & Radiant Barriers .	111
Product Forms	113
Markets	114
Other Insulation Materials	116
Materials	117
Perlite	118
Vermiculite	120
All Other Materials	121
Product Forms	123
Markets	125

MARKETS

General 1	.28
Demand by Market Value1	.29
Demand by Insulation Value 1	.31
Residential Construction1	.33
Materials 1	.34
Applications1	.37
New Housing1	.41
Attic Reinsulation1	.43
Residential Improvement & Repair 1	.46
Nonresidential Construction 1	.48
Materials 1	.49
Applications1	52
Institutional1	.54
Commercial1	.55
Office 1	.56
Industrial1	56
Other Nonresidential 1	56
Industrial & HVAC Equipment 1	.57
Materials 1	.58
Applications1	59
Industrial Equipment1	.60
HVAC Equipment1	61
Suppliers1	61
Other Insulation Markets 1	.62
Materials 1	.62
Applications1	.64
Applications1	.64

Appliances	165
Transportation Equipment	166
All Other Applications	166

Freedonia

REGIONS

General	.168
Regional Demographic & Economic Activity	.169
Population Patterns	.170
Economic Outlook	.172
Construction Activity	
Housing Trends	
Regional Insulation Demand	.177
Northeast	
New England	
Middle Atlantic	
Midwest	
East North Central	
West North Central	
South	
South Atlantic	
East South Central	
West South Central	
West	
Mountain	
Pacific	. 198

INDUSTRY STRUCTURE

General	200
Industry Composition	201
Market Share	206
Manufacturing & Product Development	210
Competitive Strategies	212
Marketing & Distribution	216
Acquisitions & Divestitures	218
Cooperative Agreements	219

COMPANY PROFILES

Armacell International	222
BASF SE	
Bayer AG	
Berkshire Hathaway	
5	
Bridgestone Corporation	
Carlisle Companies	239
Carpenter Company	243
Covertech Fabricating	245
Dow Chemical	247
Dyplast Products	252
Evonik Industries	254
Fi-Foil Company	256
Grace (WR) & Company	258
(continued on following page)	

Click here to purchase online

Study #2628 June 2010 \$4900 308 Pages

Insulation

US Industry Study with Forecasts for 2014 & 2019

Freedonia

Table of Contents

(continued from previous page)

Guardian Industries Homasote Company Hood Companies	261
Innovative Energy	
Innovative Insulation	
Insulation Solutions	
Knauf Gips	
Louisiana-Pacific Corporation	
Materis Holding	
Owens Corning	
Pactiv Corporation	282
Polyair Inter Pack	
PPG Industries	286
Pregis Corporation	287
Rmax Incorporated	288
Rockwool International	
RPM International	
Saint-Gobain	
Sealed Air	
Sto AG	
Tegrant Corporation	
Thermafiber Incorporated	
Walter Energy	
	305
Additional Companies Mentioned	
in the Study	306

List of Tables/Charts

EXECUTIVE SUMMARY

1 Summary Table..... 3

MARKET ENVIRONMENT

	Macroeconomic Indicators
	•
	Personal Consumption Expenditures14
4	Consumer Financing Environment,
	1999-200918
5	Building Construction Expenditures21
6	Residential Building Construction
	Expenditures23
7	Private Housing Starts27
8	Housing Stock by Type
Cht	Year of Construction of
	Housing Stock, 2009
9	Residential Improvement &
	Repair Expenditures32

10	Nonresidential Building Construction	
	Expenditures	35
11	Nonresidential Building Improvement	
	& Repair Expenditures	36
12	Manufacturers' Shipments	39
13	Average Insulation Prices	41
14	Insulation Market, 1999-2009	44

- Cht Insulation Market, 2000-200945
- 15 Insulation Foreign Trade......47

OVERVIEW

1	Insulation	R-Values	by Material	53
2	Inculation	Domand	hu Valua	67

2 Insulation Demand by Value.....67

PRODUCTS

	Insulation Demand by Material69
	Insulation Demand by Material, 200970
2	Fiberglass Insulation Demand
	by Product Form77
3	Fiberglass Insulation Demand by Market78
4	Foamed Plastic Insulation
	Demand by Market86
5	Foamed Plastic Insulation
	Demand by Resin87
6	Rigid Urethane Foam Insulation
	Demand by Product90
7	Rigid Urethane Foam Insulation
	Demand by Market92
8	Polystyrene Foam Insulation
	Demand by Product94
9	Polystyrene Foam Insulation
	Demand by Market97
10	Other Foamed Plastic Insulation
	Demand by Market99
11	Cellulose Insulation Demand
	by Product Form103
12	Cellulose Insulation Demand by Market 104
13	Mineral Wool Insulation
	Demand by Material107
14	Mineral Wool Insulation Demand
	by Product Form108
15	Mineral Wool Insulation
	Demand by Market110
16	Reflective Insulation & Radiant Barrier
	Demand by Type 113
17	Reflective Insulation & Radiant Barrier
	Demand by Market116
18	Other Insulation Materials
	Demand by Material118
19	Other Insulation Materials
	Demand by Product Form
20	Other Insulation Materials

20 Other Insulation Materials Demand by Market127

MARKETS

1	Insulation Markets by Dollar Value 130
Cht	Insulation Markets by Dollar Value, 2009 130
2	Insulation Markets by Insulation Value 132
Cht	Insulation Markets by
	Insulation Value, 2009133
3	Residential Construction Market
	for Insulation by Material137
4	Residential Construction Market
	for Insulation by Application140
5	New Housing Applications for
	Insulation by Material143
6	Residential Attic Reinsulation
	Applications for Insulation
	by Material146
7	Residential Improvement &
	Replacement Applications
	for Insulation by Material148
8	Nonresidential Construction Market
	for Insulation by Material152
9	Nonresidential Construction Market for
	Insulation by Application & Type 154
10	Industrial & HVAC Equipment Markets
	for Insulation by Material 159
11	
	for Insulation by Application 160
	Other Insulation Markets by Material 164
13	Other Insulation Markets by Application 165
RE	GIONS
1	Population by Region171
	Gross Domestic Product by Region 173

2	GIOSS DOILIESLIC PIOUUCL DY REGIOI 175
3	Construction Expenditures by Region 175
4	Regional Housing Indicators 177
5	Insulation Demand by Region179
Cht	Insulation Demand by Region, 2009179
6	Northeast Insulation Demand
	by Subregion & Market182
7	Midwest Insulation Demand
	by Subregion & Market187
8	South Insulation Demand by
	Subregion & Market191
9	West Insulation Demand by
	Subregion & Market197

INDUSTRY STRUCTURE

1	Insulation Revenues for Selected	
	Manufacturers, 2009	204
Cht	Insulation Market Share	
	by Company, 2009	207
2	Selected Cooperative Agreements	220

Insulation US Industry Study with Forecasts for **2014 & 2019**

The principal driver of demand will be the recovery of residential construction from weak 2009 levels, and from expanded production of major appliances and transportation equipment.

US demand to rise 7.4% annually through 2014

Study #2628

June 2010 \$4900

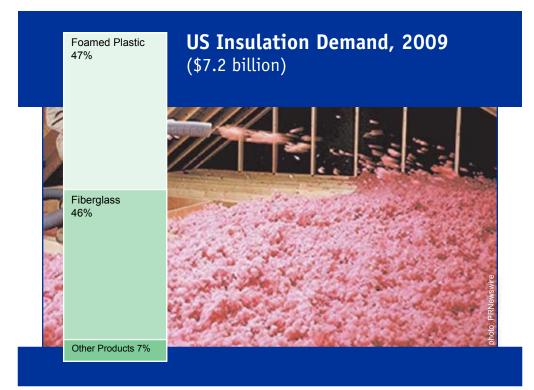
308 Pages

Demand for insulation materials in the US is projected to increase 7.4 percent annually from a weak 2009 base to \$10.2 billion in 2014. The principal driver of demand will be the recovery of residential construction from weak 2009 levels. Consumption of insulation will also benefit from expanded production of major appliances and transportation equipment, as these markets also rebound.

Fiberglass, cellulose types among best opportunities

Demand in the key fiberglass insulation segment is projected to increase 9.1 percent annually through 2014. The steep decline in new housing activity between 2006 and 2009 led to a significant drop-off in demand for fiberglass insulation, which is heavily dependent on the residential market. As new housing construction rebounds through 2014, demand for fiberglass insulation will once again become the leading insulation material in use in value terms, after briefly falling behind foamed plastic in 2009.

Consumption of foamed plastic insulation materials is forecast to expand 5.3 percent annually through 2014. While gains in demand were slight in the 2004-2009 time frame, foamed plastic insulation did not register the same sharp decline as fiberglass, reflecting the fact



that foamed plastic insulation is less heavily concentrated in residential markets. Through 2014, foamed plastic insulation will benefit from the recovery in new housing construction, even though nonresidential markets will remain the major contributor to demand. Foamed plastic demand will also benefit from the increasing production of major appliances and transportation equipment.

While small in value terms, cellulose insulation will post the fastest growth in demand through 2014, advancing more than 14 percent annually. The environmental and performance advantages of cellulose insulation will benefit demand, although the primary demand driver will be the strong rebound in new housing construction.

Reflective/radiant insulation to outpace fiberglass

Freedonia

Consumption of reflective insulation and radiant barrier materials is expected to increase almost ten percent annually through 2014. Demand will benefit from growing market acceptance and the recovery in new housing construction activity. Nonresidential markets are the primary outlet for reflective and radiant barrier materials. These materials are complementary to other insulation materials, rather than being a replacement for them. Thus, continued education of builders and homeowners as to the advantages of reflective and radiant insulation will benefit demand.

Copyright 2010 The Freedonia Group, Inc.

Insulation

US Industry Study with Forecasts for 2014 & 2019

Item

Sample Text, Table & Chart

Study #2628

June 2010 \$4900

308 Pages

PRODUCTS

Reflective Insulation & Radiant Barriers

Demand for reflective insulation and radiant barriers is

to increase 9.7 percent annua of these comparatively new recovery of the new housing gains across all market segn tion. Reflective insulation is and other nonresidential stru



e

Reflective insulation and radiant barriers will continue their presence in US insulation markets, particularly in the S Ease of installation, fiber-free composition, lightweight design barrier qualities give reflective insulation and radiant barriers

advantages over competing insulation materials, particularly in construc tion applications. In addition, reflective insulation and radiant barriers can be used in combination with other types of insulation to enhance the total R-value for the application. Rising energy costs will help fuel the use of reflective insulation and radiant barriers in residential applications.

Nevertheless, demand for reflective insulation and radiant barriers will continue to account for a very small share of the market. Lack of consumer knowledge and negative perceptions among builders regarding these products will need to be overcome to drive demand in the long term. In addition, the familiarity of fiberglass and cellulose insulation in construction markets gives those materials an advantage in terms of user acceptance. In colder climates, radiant barriers can be d to structures as they act as a vapor barrier, potentially causin time condensation. Also, if radiant barriers are used in conju reflective roofing systems, the barrier may not add any benef day and could potentially trap heat in the structure at night, be a disadvantage in the summer months.

111

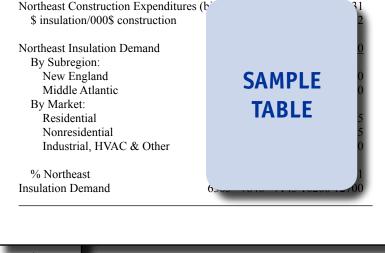
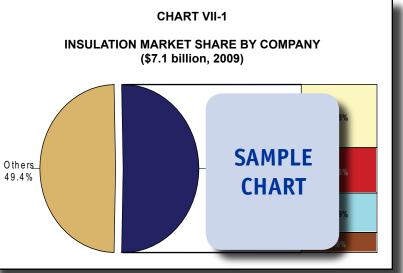


TABLE VI-6

NORTHEAST INSULATION DEMAND **BY SUBREGION & MARKET** (million dollars)

Freedonia

1999 2004 2009 2014 2019



Click here to purchase online

Copyright 2010

Study #2628 June 2010 \$4900 308 Pages

US Industry Study with Forecasts for 2014 & 2019

Insulation

Sample Profile, Table & Forecast

TABLE V-3 **RESIDENTIAL CONSTRUCTION MARKET** FOR INSULATION BY MATERIAL (million dollars) 1999 2004 2009 2014 2019 Item Residential Building Construction (bil \$) \$ insulation/000\$ construction Residential Insulation Demand Fiberglass SAMPLE Foamed Plastics: Rigid Urethane Other Foamed Plastics TABLE Cellulose Mineral Wool Reflective/Radiant Other % residential construction Insulation Demand

COMPANY PROFILES

Homasote Company 932 Lower Ferry Road West Trenton, NJ 08628 609-883-3300 http://www.homasote.com

Annual S Employr

Key Proo lays

ous cons

held com

Hor

and packing pr

SAMPLE PROFILE

oards, and under-

oducts used in varinong the privately puilding materials

Homasote competes in the US insulation industry via the manufacture of composite insulation boards, which include THERMASOTE types and NCFR THERMASOTE roof insulation. THERMASOTE is a nailable composite of asbestos-free weather-resistant 440 HOMASOTE insulation and polyisocyanurate (ISO) foam with a bottom facer of fibrous glass. This product is designed for use with the Company's HOMASOTE roof decking, wood or other structural decking, and can also be used as roof insulation. NCFR THERMASOTE insulation from the Company features fire-resistant NCFR HOMASOTE board and ISO foam with a fibrous glass bottom facer.

Among the additional insulating products from Homasote is 440 SOUNDBARRIER, a structural board that is made of 100-percent cellulose fiber. This product is resistant to termites, rot, fungal growth and

261

Copyright 2010 The Freedonia Group, Inc.

"Consumption of insulation in new housing applications is projected to advance nearly 26 percent annually from a very weak 2009 base to 114 billion square feet of R-1 value in 2014. The expected rebound in new housing construction -- particularly for single-family homes, which are the leading consumers of insulation materials -- will drive gains in insulation demand. In addition to rapidly rising housing starts, demand will also benefit from increasing insulation usage per home."

Freedonia

--Section V, pg. 138

ORDER **I**NFORMATION

Five Convenient Ways to Order

INDUSTRY MARKET RESEARCH FOR BUSINESS LEADERS, STRATEGISTS, DECISION MAKERS

Freedonia

ONLINE: www.freedoniagroup.com

MAIL: Print out and complete the order form and send to The Freedonia Group (see address at the bottom of this form)

PHONE: Call toll free, 800.927.5900 (US) or +1 440.684.9600

FAX: +1 440.646.0484 (US)

EMAIL: info@freedoniagroup.com

Free Handling & Shipping

There is NO charge for handling or UPS shipping in the US. Expect delivery in 3 to 5 business days. Outside the US, Freedonia provides free airmail service. Express delivery is available at cost.

Orders Outside of the US

Checks must be made payable in US funds, drawn against a US bank and mailed directly to The Freedonia Group. For wire transfers please contact our customer service department at info@ freedoniagroup.com. Credit cards accepted.

Credit Card Orders

For convenience, Freedonia accepts American Express, MasterCard or Visa. Credit card purchases must include account number, expiration date and authorized signature.

Save 15%

If you order three (3) different titles at the same time, you can receive a 15% discount. If your order is accompanied by a check or wire transfer, you may take a 5% cash discount (discounts do not apply to Corporate Use Licenses).

Corporate Use License

Now every decision maker in your organization can act on the key intelligence found in all Freedonia studies. For an additional \$2600, companies receive unlimited use of an electronic version (PDF) of the study. Place it on your intranet, e-mail it to coworkers around the world, or print it as many times as you like,

Click here to learn more about the Corporate Use License

ORDER FORM F-WEB.2628	Name
CREEK TORM	
Insulation\$4900	Title
Corporate Use License (add to study price) * + \$2600	Company
Additional Print Copies @ \$600 each *	
Total (including selected option) \$	Division
Enclosed is my check (5% discount) drawn on a US bank and payable to The Freedonia Group, Inc., in US funds (Ohio residents add 7.75% sales tax)	Street(No PO Box please)
·····	(No PO Box please)
🔲 Bill my company 🔄 American Express 📄 MasterCard 📄 Visa	City/State/Zip
	Country
Credit Card # Expiration	Phone Fax
Signature	Email

* Please check appropriate option and sign below to order an electronic version of the study.

Corporate Use License Agreement

The above captioned study may be stored on the company's intranet or shared directory, available to company employees. Copies of the study may be made, but the undersigned represents that distribution of the study will be limited to employees of the company.

Signature _

Individual Use License Agreement

The undersigned hereby represents that the above captioned study will be used by only _____ individual(s) who are employees of the company and that the study will not be loaded on a network for multiple users. In the event that usage of the study changes, the Company will promptly notify Freedonia of such change and will pay to Freedonia the appropriate fee based on Freedonia's standard fee schedule then in effect. Note: Entire company corporate use license, add \$2600; one additional user, add \$600; two additional users, add \$1200; three additional users, add \$1800.

Signature ____

The Freedonia Group, Inc. 767 Beta Drive • Cleveland, OH • 44143-2326 • USA • Web site: www.freedoniagroup.com Tel US: 800.927.5900 or +1 440.684.9600 • Fax: +1 440.646.0484 • e-mail: info@freedoniagroup.com

Freedonia

OTHER STUDIES

World Insulation

This study analyzes the global insulation industry. It presents historical demand data for the years 1999, 2004 and 2009 and forecasts for 2014 and 2019 by insulation material (e.g., foamed plastic, fiberglass, mineral wool), market (construction; industrial, HVAC and OEM), world region and major national market. The study considers market environment factors, details industry structure, evaluates company market share and profiles industry players.

#2707 February 2011 \$6100

World Drywall & Building Plasters

Global demand for drywall is forecast to advance 8.4% annually to 2014. Over four-fifths of new demand will be attributable to the US and the Asia/ Pacific region. The residential market will outpace nonresidential demand. Global building plaster demand will advance 5.3% annually to 2014. This study analyzes the world drywall and building plaster industry, with forecasts by product, world region and for 17 countries. It also evaluates company market share and profiles industry participants.

#2643 June 2010 \$5800

Siding

Demand for siding in the US is forecast to grow 6.5% annually through 2014, driven by a rebound in housing completions from depressed levels in 2009. Fiber cement, stucco and brick siding will see the most rapid advances. Vinyl siding will remain the largest segment and will continue to supplant wood. This study analyzes the 74 million square US siding industry, with forecasts for 2014 and 2019 by material, market and US region. It also evaluates company market share and profiles industry players.

Foamed Plastics

US foamed plastics demand will reach 8.4 billion pounds in 2013 as key construction and motor vehicle markets recover. Foamed urethane will remain the largest segment while foamed LDPE grows the fastest. Construction will provide the best opportunities based on growth in insulation and carpet underlay applications. This study analyzes the \$22.5 billion US foamed plastics industry, with forecasts for 2013 and 2018 by market and product. It also evaluates company market share and profiles industry players.

Glass Fibers

US glass fiber demand will grow 3.3% yearly through 2013. Glass wool fiber will lead gains based on a rebound in new home building and more intensive use of fiberglass insulation per new housing unit. Textile glass fiber will be driven mainly by use in reinforced plastics, but will be restrained by maturing markets and lower-cost imported fibers. This study analyzes the 6.1 billion pound US glass fiber industry, with forecasts for 2013 and 2018 by type and market. It also details market share and profiles industry players.

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 customtailored to answer specific questions and provide the basis from which a company can make informed business decisions.

Freedonia Industry Studies	Freedonia
New York (Red Annual) Income Records - Such Reserve (p. 7) Incomes (Incomes Theory Second -), 7) Incomes (Incomes Theory Second -), 7)	January 2010
The Dimension theory $r_{0}+1$ theory to the Dimension $r_{0}>0$ that the Dimension $r_{0}>0$ the Dimensi	Reflatio industry much at research and existion-critical cashon research for business looders, strategists and electrion makers
Meri (Halinger – y. 6 Meri (Halinge – y. 7 Meri (Haling – y. 7) Meri (Haling (H. K. – y. 7) Meri (Haling (Hengment (Henister – y. 7)	Pa Pastera (rosp. in. mos factora papar) it is to factor a solar solar and solar a solar solar and solar a solar

Click here to learn more about Custom Research

	Wanted Names and	Name Inter
Anna an		

The Freedonia Group, Inc. 767 Beta Drive • Cleveland, OH • 44143-2326 • USA • Web site: www.freedoniagroup.com Tel US: 800.927.5900 or + 1 440.684.9600 • Fax: + 1 440.646.0484 • e-mail: info@freedoniagroup.com