

North American Nonwovens Industry Outlook 2013-2018

Absorbent Hygiene

A Review and Forecast of the North American Nonwovens
Supply and Demand for 2008, 2013 and 2018



P.O. Box 1288, Cary, North Carolina 27512-1288, U.S.A.

1100 Crescent Green, Suite 115, Cary, North Carolina 27518, U.S.A.

Tel: (919) 233-1210 Fax: (919) 233-1282

Web: www.inda.org

Copyright© 2014 INDA, Association of the Nonwoven Fabrics Industry.

All rights reserved. This material may not be reproduced, in whole or in part,
in any medium whatsoever, without the express written permission of INDA,
Association of the Nonwoven Fabrics Industry.

INDA is a registered trademark of INDA, Association of the Nonwoven Fabrics Industry.

TABLE OF CONTENTS

I. Executive Summary.....	I
II. Macro-Drivers and Industry Assumptions.....	4
A. North American Economic Growth	5
1. United States	7
Personal Consumption Expenditures	8
Manufacturing Production Growth.....	9
2. Canada	10
3. Mexico	12
4. Country Comparison	13
B. North American Population.....	15
1. Age Cohorts	16
Babies and Toddlers (Age 0–4 Years).....	17
Females Age 13–51	19
The Elderly (65+)	20
2. Population Pyramids	22
C. Global Economic Outlook and Exchange Rates	24
1. Advanced Economies.....	24
2. Emerging Market and Developing Economies	25
3. Exchange Rates.....	25
4. Downside Risks.....	27
D. Energy and the Manufacturing Environment.....	28
1. Crude Oil	28
2. Natural Gas	31
3. The Manufacturing Environment.....	33

III. North American Nonwoven Demand	35
A. Disposable Applications	42
1. Absorbent Hygiene	50
Consumer	53
Baby Diapers and Training Pants	55
Incontinence Products	61
Feminine Hygiene	70
Institutional	74
IV. North American Nonwoven Supply	80
A. Capacity	80
B. Production.....	84
C. Trade Flows	87
1. North American Trade	88
Exports	88
Imports	90
2. Overseas Trade	91
Exports	91
Imports	95
D. North American Supply.....	99
V. Final Thoughts.....	100
VI. Appendix.....	101
A. Methodology	101
1. Demand Model.....	101
2. Supply Model	103
B. Nonwoven Material Definitions.....	104
C. Nonwoven End Use Classifications and Definitions	107

LIST OF FIGURES

II. Macro-Drivers and Industry Assumptions

II-1	Relative Sizes of North American Economies	5
II-2	Relative Sizes of North American Economies Globally	6
II-3	Annual Growth of Real GDP in the United States	8
II-4	Annual Growth of Real Personal Consumption Expenditures (PCE) in the United States	9
II-5	Annual Growth of Manufacturing Production in the United States	10
II-6	Annual Growth of Real GDP in Canada	11
II-7	Annual Growth of Real GDP in Mexico	13
II-8	Annual Growth of Real GDP in North America by Country	14
II-9	Relative Sizes of North American Populations	15
II-10	North American Population by Country	16
II-11	Total Number of Babies and Toddlers (0– 4 Years) by Country	18
II-12	Total Number Females (13– 51 Years) by Country	19
II-13	Total Population and Elderly (65+ Years) by Country	21
II-14	U.S./Canada Population, 2008	22
II-15	Mexico Population, 2008	22
II-16	U.S./Canada Population, 2013	23
II-17	Mexico Population, 2013	23
II-18	U.S./Canada Population, 2018f	23
II-19	Mexico Population, 2018f	23
II-20	Canadian Dollar to U.S. Dollar Exchange Rate	26
II-21	Annual Production of North American Crude Oil by Country	29
II-22	Crude Oil Prices	30
II-23	Natural Gas Prices, Historical View	32
II-24	Natural Gas Prices, U.S. Domestic Market	33

III. North American Nonwoven Demand

III-1	North American Nonwovens Market, Dollar Sales	36
III-2	North American Nonwovens Market, Tonnage	36
III-3	North American Nonwovens Market, Square Meters	36
III-4	North American Nonwoven Material Consumption, 2013.....	37
III-5	North American Nonwoven Material Consumption, CAGR	38
III-6	North American Nonwovens Square Meters Usage Market Sizes and Growth.....	40
III-7	North American Nonwovens Tonnage Usage Market Sizes and Growth	41
III-8	North American Disposable Nonwovens Market.....	42
III-9	North American Disposable Nonwovens Dollar Sales to End Users Market Sizes and Growth	44
III-10	Disposable Nonwoven Material Consumption, 2013	45
III-11	Disposable Nonwoven Material Consumption, CAGR.....	47
III-12	North American Disposable Nonwovens Square Meter Usage Market Sizes and Growth	48
III-13	North American Disposable Nonwovens Tonnage Usage Market Sizes and Growth.....	49
III-14	North American Disposable Absorbent Hygiene Market	52
III-15	North American Disposable Consumer Absorbent Hygiene Market-CAGR	54
III-16	Consumer Absorbent Hygiene Nonwoven Material Consumption, 2013	55
III-17	Total Number of U.S. Births	56
III-18	Total Potential Children in Diapers, United States and Canada	57
III-19	Total Potential Children in Diapers, Mexico	57
III-20	Disposable Baby Diaper and Training Pants Demand.....	58
III-21	Baby Diapers and Training Pants Nonwoven Material Consumption.....	61
III-22	Adult Population (18–64 years and Non-Institutionalized 65+years) Total Population and Population Impacted by Incontinent Issues.....	64

III-23	Adult Population (18–64 years and Non-Institutionalized 65+ years) Impacted by Incontinent Issues and Product Usage	65
III-24	North American Disposable Consumer Incontinence Market	67
III-25	Consumer Incontinence Product Material Consumption.....	69
III-26	Female Population (13-51 years) Total Population and Disposable Feminine Hygiene Product Usage.....	70
III-27	Disposable Feminine Hygiene Product Demand.....	71
III-28	Consumer Feminine Hygiene Product Material Consumption	73
III-29	Institutionalized Adult Population (65+ years) Total Population and Population Impacted by Incontinence Issues	75
III-30	North American Disposable Institutional Incontinence Market	76
III-31	Institutional Absorbent Hygiene Product Material Consumption	79

IV. North American Nonwoven Supply

IV-1	Capacity by Process.....	80
IV-2	Capacity by Region.....	80
IV-3	North American Capacity	81
IV-4	Capacity by Detailed Process.....	83
IV-5	North American Capacity by Detailed Process	84
IV-6	North American Capacity, Production and Operating Rate 2008 and 2013.....	85
IV-7	North American Capacity, Production and Operating Rate 2008, 2013, 2018.....	86
IV-8	U.S. Nonwoven Roll Goods Imports and Exports 1989–201	87
IV-9	U.S. Nonwoven Roll Goods Exports by Destination 2003–2013	88
IV-10	U.S. Nonwoven Roll Goods Exports to Mexico by Weight 2003–2013	89
IV-11	U.S. Nonwoven Roll Goods Exports to Canada by Weight 2003–2013.....	89
IV-12	U.S. Nonwoven Roll Goods Imports by Origin 2003–2013.....	90
IV-13	U.S. Nonwoven Roll Goods Imports from Mexico by Weight 2003–2013.....	91
IV-14	U.S. Nonwoven Roll Goods Imports from Canada by Weight 2003–2013.....	91

IV-15	U.S. Nonwoven Roll Goods Exports by Region Destination 2003–2013	92
IV-16	U.S. Nonwoven Roll Goods Exports by Overseas Country Destination	94
IV-17	U.S. Nonwoven Roll Goods Imports by Region of Origin 2003–2013.....	95
IV-18	U.S. Nonwoven Roll Goods Imports by Overseas Country of Origin.....	97
IV-19	U.S. Nonwoven Roll Goods Imports from China by Weight 2003–2013	98
IV-20	2013 United States Nonwoven Rolled Goods Trade Flow.....	99

LIST OF TABLES

II. Macro-Drivers and Industry Assumptions

II-1	Annual Growth of Real GDP in North America by Country	14
------	---	----

III. North American Nonwoven Demand

III-1	North American Nonwoven Market	39
III-2	North American Disposable Nonwoven Markets Sales/Units	43
III-3	North American Disposable Nonwoven Markets SQM/Tonnage	46
III-4	North American Absorbent Hygiene Market Sales/Units.....	53
III-5	Diaper Changes per Day by Age.....	58
III-6	North American Disposable Diaper and Training Pant Market Profile Annual Growth Rates	59
III-7	Absorbent Hygiene Diaper and Training Pant Market Sales/Units.....	59
III-8	Absorbent Hygiene Consumer Incontinence Market.....	68
III-9	Absorbent Hygiene Consumer Feminine Hygiene Market Sales/Units	72
III-10	Institutional Absorbent Hygiene Market Sales/Units.....	77

IV. North American Nonwoven Supply

IV-1	North American Capacity CAGR by Process.....	82
IV-2	North American Capacity, Production, and U.S. GDP	85
IV-3	Top 10 Overseas Importing Countries Comparison 2003 to 2013	86