

===== *State of the* =====

U.S. FLEXIBLE PACKAGING

— *Industry Report, 2023* —

All data in this report relates to U.S. flexible packaging manufacturing/production, sales or other operational metrics, unless otherwise indicated.

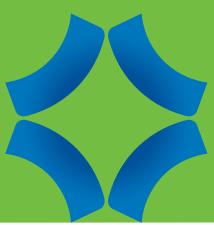


Prepared by the Business & Economic Research Division of the Flexible Packaging Association

.....

185 Admiral Cochrane Drive • Suite 105 • Annapolis, MD 21401

Phone: 410-694-0800 • Fax: 410-694-0900 • Email: fpa@flexpack.org • Website: www.flexpack.org



© 2023 by the Flexible Packaging Association. All rights reserved. No part of this publication may be reproduced in any form or by any means, electronic or mechanical, including photocopying, without permission in writing from the Flexible Packaging Association. Address all questions or inquiries to the Flexible Packaging Association, 185 Admiral Cochrane Drive, Suite 105, Annapolis, MD, 21401, (410) 694-0800, fpa@flexpack.org.



TABLE OF CONTENTS

INTRODUCTION	I
The U.S. Flexible Packaging Industry	I
Future Impacts & Considerations	II
 REPORT METHODOLOGY	 V
Definitions	V
Viewing the Industry Through the Materials It Processes	VI
Data Sources	VI
Survey Participants	VII
 EXECUTIVE SUMMARY.....	 1
U.S. Flexible Packaging Industry Performance	2
Materials & Processes	2
End-Uses	3
Industry Structure & Consolidation	3
Imports & Exports	4
Challenges & Vision	5
 ECONOMIC ANALYSIS OF THE FLEXIBLE PACKAGING INDUSTRY IN THE U.S.....	 7
Forecast of Economic Indicators.....	11
 U.S. FLEXIBLE PACKAGING INDUSTRY PERFORMANCE	 13
Industry Growth.....	15
Survey Respondents' Revenue/Volume Expectations	17
Converters' Inventory	20
Profitability	22
Sustainability Options	24
Material Percent	25
Capital Spending	26
U.S. Census Bureau NAICS	28
World Perspective	30
 MATERIALS & PROCESSES.....	 33
Materials & Processes	33
Printing.....	37
Expected Material Usages by Converters for the Next 3-5 Years	39
 END-USAGES	 43
Detailed End-Use Data	47
U.S. Census Bureau Retail Segments Data 2018-2021	49



TABLE OF CONTENTS



INDUSTRY STRUCTURE	51
U.S. Flexible Packaging Mergers & Acquisitions	52
New Entrants	54
Worldwide Mergers & Acquisitions.....	56
North America Mergers & Acquisitions.....	57
IMPORTS & EXPORTS.....	59
U.S. – Mexico – Canada Agreement (USMCA)	63
INDUSTRY CHALLENGES & VISION.....	67
Flexible Packaging Top Challenges	67
Converters' Industry Vision	70
Suppliers' Industry Vision.....	72
Converter Technologies with the Most Impact	74
Supplier Technologies with the Most Impact.....	75
Future Business	76
APPENDIX A: EUROMONITOR.....	79
APPENDIX B: PLANT LOCATIONS.....	85
APPENDIX C: INDUSTRY STRUCTURE	87
Flexible Packaging Converters: Summary of Mergers and Acquisitions Announced/Completed for 2015-2021	87
APPENDIX D: IMPORTS & EXPORTS	95
2022 U.S. Imports & Exports, Top 20 Countries	98
2022 U.S. Imports & Exports, Paper and Paperboard Articles	101
2022 U.S. Import & Export Data, Dollar Value	102



TABLE OF CONTENTS

EXHIBITS

ECONOMIC ANALYSIS OF THE FLEXIBLE PACKAGING INDUSTRY IN THE U.S.

Exhibit 1, Flexible Packaging Manufacturing Direct Impacts Summary.....	8
Exhibit 2, Economic Impact of the Flexible Packaging Industry	8
Exhibit 3, Output per Worker in U.S. Dollars	10
Exhibit 4, Flexible Packaging Industry Output	12

U.S. FLEXIBLE PACKAGING INDUSTRY PERFORMANCE

Exhibit 5, Total U.S. Packaging Market % Breakdown by Segment	13
Exhibit 6, U.S. Flexible Packaging Industry Overview	14
Exhibit 7, U.S. Flexible Packaging Industry Overview (Other Metrics)	14
Exhibit 8, Converter Sales \$ Revenue per Employee.....	15
Exhibit 9, Dollar Value of Flexible Packaging Product Shipments	15
Exhibit 10, Growth in the Flexible Packaging Industry.....	16
Exhibit 11, Flexible Packaging Industry Revenue Growth	16
Exhibit 12, Converters' Sales Revenue Performance.....	17
Exhibit 13, Converters' Volume Performance	17
Exhibit 14, Volume Change	18
Exhibit 15, Suppliers' Revenue Performance	18
Exhibit 16, Suppliers' Volume Performance.....	19
Exhibit 17, Converters' Days of Inventory (2022 compared to 2021)	20
Exhibit 18, Converters' Inventory in Days	21
Exhibit 19, Capacity Utilization for 2022	21
Exhibit 20, Profit Before Tax as a % of Net Sales.....	22
Exhibit 21, Flexible Packaging Business Costs/Expenses Breakdown	23
Exhibit 22, Flexible Packaging Business Costs/Expenses Comparison.....	24
Exhibit 23, Sustainable Substrate Options	24
Exhibit 24, Material Trends for Emerging Materials and Products.....	25
Exhibit 25, Converters Sustainable Materials	26
Exhibit 26, Converters' Capital Spending Performance.....	26
Exhibit 27, Converters' 2022 Capital Spending	27
Exhibit 28, Converters' Capital Spending Plans for 2023	27
Exhibit 29, Flexible Packaging Industry By NAICS.....	28
Exhibit 30, Estimated Packaging Industry Shipments, Recent Performance and Forecasts.....	29
Exhibit 31, Global Flexible Packaging Market by Region (2022).....	30
Exhibit 32, World Flexible Packaging Market (2022)	31

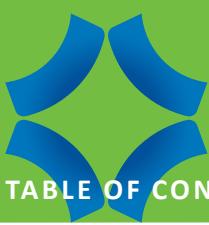


TABLE OF CONTENTS



MATERIALS & PROCESSES

Exhibit 33, Flexible Packaging Material Purchases for 2022.....	33
Exhibit 34, Percent Spend in 2022 for Materials Compared to 2021	33
Exhibit 35, Flexible Packaging Film and Resin Use	34
Exhibit 36, Converters' Net Scrap.....	34
Exhibit 37, Suppliers' Net Scrap	35
Exhibit 38, Flexible Packaging Industry By Major Processing Categories.....	35
Exhibit 39, Major Flexible Packaging Structures Sold By FPA Survey Participants for 2022	36
Exhibit 40, Major Flexible Packaging Structures Sold By FPA Survey Participants With Rollstock Allocated to Structure Type	36
Exhibit 41, Converters' Printing Comparison	37
Exhibit 42, Percent of Converters Investing in a Type of Print Technology.....	37
Exhibit 43, Converter Digital Printing Technology	38
Exhibit 44, Flexible Converters' Paper Use by Category	38
Exhibit 45, Converters' Expectations for Future Resin Use	39
Exhibit 46, Converters' Expectations for Future Film and Foil Use.....	40
Exhibit 47, Converters' Expectations for Future Paper Use.....	40
Exhibit 48, Converters' Expectations for Future Adhesive Use.....	41
Exhibit 49, Converters' Expectations for Future Ink Use	41
Exhibit 50, Converters' Expectations for Future Coating Use.....	42

END-USAGES

Exhibit 51, U.S. Flexible Packaging Industry Breakdown by End-Use Market (2022).....	43
Exhibit 52, Flexible Packaging Food Sales by Category for 2022	44
Exhibit 53, Converters' Market Involvement (2022).....	45
Exhibit 54, Converter and Supplier Expectations for Flexible Packaging Growth Markets.....	46

INDUSTRY STRUCTURE

Exhibit 55, U.S. Flexible Packaging Industry Structure by Revenue	51
Exhibit 56, U.S. Flexible Packaging Industry Structure by Company Size	51
Exhibit 57, U.S. Flexible Packaging Domestic Mergers & Acquisitions	52
Exhibit 58, Flexible Packaging Mergers and Acquisitions Completed in 2022	53
Exhibit 59, Converters' Planned Acquisition Activity	55
Exhibit 60, Suppliers' Planned Acquisition Activity.....	55
Exhibit 61, Worldwide M&A Activity	56
Exhibit 62, North America M&As.....	57



TABLE OF CONTENTS

IMPORTS AND EXPORTS

Exhibit 63, Dollar Value of U.S. Flexible Packaging	60
Exhibit 64, Top 5 Flexible Packaging Countries Importing into the U.S.....	61
Exhibit 65, Top 5 Flexible Packaging Countries Receiving U.S. Exports.....	62
Exhibit 66, All Commodity Trade with Key Partners.....	63
Exhibit 67, Flexible Packaging Trade with Canada, Mexico, China, and India.....	64
Exhibit 68, Flexible Packaging Imports & Exports by HS Code	65

INDUSTRY CHALLENGES & VISION

Exhibit 69, Flexible Packaging Top 2023 Challenges	67
Exhibit 70, Converters' Most Important 2023 Challenges.....	68
Exhibit 71, Suppliers' Most Important 2023 Challenges	68
Exhibit 72, Comparison of Top Converter and Supplier Challenges for 2023 by Company Size	69
Exhibit 73, Converters: Where is Flexible Packaging Going Over Next 5 Years	70
Exhibit 74, Suppliers: Where is Flexible Packaging Going Over Next 5 Years.....	72
Exhibit 75, Converters: Developing Technologies Impacting Flexible Packaging.....	74
Exhibit 76, Suppliers: Developing Technologies Impacting Flexible Packaging	75
Exhibit 77, Converters: "What keeps you up at night?"	77
Exhibit 78, Suppliers: "What keeps you up at night?"	77

APPENDIX A: EUROMONITOR INTERNATIONAL

Exhibit 79, Comparison of Euromonitor Data Flexible Packaging vs. Total Packaging	79
Exhibit 80, Comparison of Euromonitor Data Worldwide Packaging in Revenue vs. in "Pack Units"	80
Exhibit 81, Specific End-Use Comparison of FPA Survey Data vs. Euromonitor Data (U.S.)	81
Exhibit 82, U.S. Total and Flexible Packaging (Retail).....	82
Exhibit 83, Percent of Total U.S. Packaging and Flexible Packaging by End-Use	82
Exhibit 84, U.S. Flexible Packaging Unit Volume Growth Potential.....	83

APPENDIX B: PLANT LOCATIONS

Exhibit 85, Location of U.S. Flexible Packaging Converting Plants, 2022.....	85
--	----

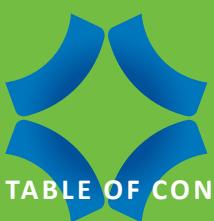


TABLE OF CONTENTS



APPENDIX D: IMPORTS & EXPORTS

Exhibit 86, 2022 U.S. Imports of Plastics & Articles Thereof	95
Exhibit 87, 2022 U.S. Imports of Aluminum & Articles Thereof.....	96
Exhibit 88, 2022 U.S. Exports of Plastics & Articles Thereof	96
Exhibit 89, 2022 U.S. Exports of Aluminum & Articles Thereof.....	97
Exhibit 90, 2022 Supplier Countries for U.S. Imports HS 39	98
Exhibit 91, 2022 Supplier Countries for U.S. Exports HS 39	98
Exhibit 92, 2022 Supplier Countries for U.S. Imports HS 76	99
Exhibit 93, 2022 Supplier Countries for U.S. Exports HS 76	99
Exhibit 94, 2022 U.S. Imports of Paper and Paperboard and Articles	100
Exhibit 95, 2022 U.S. Exports of Paper and Paperboard and Articles.....	100
Exhibit 96, 2022 Supplier Countries for U.S. Imports HS 48	101
Exhibit 97, 2022 Supplier Countries for U.S. Exports HS 48	101
Exhibit 98, U.S. Import Data (Dollar \$ Value of Imports) for 2012-2022	102
Exhibit 99, U.S. Export Data (Dollar \$ Value of Exports) for 2012-2022.....	102