

Vinyl Market - Global Outlook and Forecast 2022-2028

https://marketpublishers.com/r/VCB80B9ADEA1EN.html

Date: March 2022

Pages: 70

Price: US\$ 3,250.00 (Single User License)

ID: VCB80B9ADEA1EN

Abstracts

This report contains market size and forecasts of Dye Fixing Agents in global, including the following market information:

Global Dye Fixing Agents Market Revenue, 2017-2022, 2023-2028, (\$ millions)

Global Dye Fixing Agents Market Sales, 2017-2022, 2023-2028, (K MT)

Global top five Dye Fixing Agents companies in 2021 (%)

The global Dye Fixing Agents market was valued at million in 2021 and is projected to reach US\$ million by 2028, at a CAGR of % during the forecast period.

The U.S. Market is Estimated at \$ Million in 2021, While China is Forecast to Reach \$ Million by 2028.

Cationic Polymer Dye Fixing Agents Segment to Reach \$ Million by 2028, with a % CAGR in next six years.

The global key manufacturers of Dye Fixing Agents include Matex Bangladesh Limited, ASUTEX, Piedmont Chemical Industries, Achitex Minerva, PROTEX, D. K. CORPORATION, NICCA Chemical, Avocet Dye & Chemical and Viswaat Chemicals Limited, etc. In 2021, the global top five players have a share approximately % in terms of revenue.

MARKET MONITOR GLOBAL, INC (MMG) has surveyed the Dye Fixing Agents manufacturers, suppliers, distributors and industry experts on this industry, involving the sales, revenue, demand, price change, product type, recent development and plan, industry trends, drivers, challenges, obstacles, and potential risks.



Total Market by Segment: Global Dye Fixing Agents Market, by Type, 2017-2022, 2023-2028 (\$ Millions) & (K MT) Global Dye Fixing Agents Market Segment Percentages, by Type, 2021 (%) Cationic Polymer Dye Fixing Agents Resin Type Dye Fixing Agents Crosslinking Dye Fixing Agents Global Dye Fixing Agents Market, by Application, 2017-2022, 2023-2028 (\$ Millions) & (K MT) Global Dye Fixing Agents Market Segment Percentages, by Application, 2021 (%) Nylon Leather Cotton Fabric Global Dye Fixing Agents Market, By Region and Country, 2017-2022, 2023-2028 (\$ Millions) & (K MT) Global Dye Fixing Agents Market Segment Percentages, By Region and Country, 2021 (%) North America

Canada

US



	Mexico
Europe	Э
	Germany
	France
	U.K.
	Italy
	Russia
	Nordic Countries
	Benelux
	Rest of Europe
Asia	
	China
	Japan
	South Korea
	Southeast Asia
	India
	Rest of Asia
South	America
	D

Brazil



Argentina		
Rest of South America		
Middle East & Africa		
Turkey		
Israel		
Saudi Arabia		
UAE		
Rest of Middle East & Africa		
Competitor Analysis		
The report also provides analysis of leading market participants including:		
Key companies Dye Fixing Agents revenues in global market, 2017-2022 (Estimated) (\$ millions)		
Key companies Dye Fixing Agents revenues share in global market, 2021 (%)		
Key companies Dye Fixing Agents sales in global market, 2017-2022 (Estimated), (K MT)		
Key companies Dye Fixing Agents sales share in global market, 2021 (%)		
Further, the report presents profiles of competitors in the market, key players include:		
Matex Bangladesh Limited		
ASUTEX		

Piedmont Chemical Industries



Achitex Minerva
PROTEX
D. K. CORPORATION
NICCA Chemical
Avocet Dye & Chemical
Viswaat Chemicals Limited
S D International
Jain Chem
Vertellus Holdings
Weltro International Group
Centro Chino
Jacquard Products
Watson Chemical
Jihua Group
Runhe Chemical Industry
WEILONGJINDA



Contents

1 INTRODUCTION TO RESEARCH & ANALYSIS REPORTS

- 1.1 Vinyl Market Definition
- 1.2 Market Segments
 - 1.2.1 Market by Type
 - 1.2.2 Market by Application
- 1.3 Global Vinyl Market Overview
- 1.4 Features & Benefits of This Report
- 1.5 Methodology & Sources of Information
 - 1.5.1 Research Methodology
 - 1.5.2 Research Process
 - 1.5.3 Base Year
 - 1.5.4 Report Assumptions & Caveats

2 GLOBAL VINYL OVERALL MARKET SIZE

- 2.1 Global Vinyl Market Size: 2021 VS 2028
- 2.2 Global Vinyl Revenue, Prospects & Forecasts: 2017-2028
- 2.3 Global Vinyl Sales: 2017-2028

3 COMPANY LANDSCAPE

- 3.1 Top Vinyl Players in Global Market
- 3.2 Top Global Vinyl Companies Ranked by Revenue
- 3.3 Global Vinyl Revenue by Companies
- 3.4 Global Vinyl Sales by Companies
- 3.5 Global Vinyl Price by Manufacturer (2017-2022)
- 3.6 Top 3 and Top 5 Vinyl Companies in Global Market, by Revenue in 2021
- 3.7 Global Manufacturers Vinyl Product Type
- 3.8 Tier 1, Tier 2 and Tier 3 Vinyl Players in Global Market
- 3.8.1 List of Global Tier 1 Vinyl Companies
- 3.8.2 List of Global Tier 2 and Tier 3 Vinyl Companies

4 SIGHTS BY PRODUCT

- 4.1 Overview
- 4.1.1 By Type Global Vinyl Market Size Markets, 2021 & 2028



- 4.1.2 Vinyl Acetate
- 4.1.3 Vinyl Alcohol
- 4.1.4 Vinyl Chloride
- 4.1.5 Others
- 4.2 By Type Global Vinyl Revenue & Forecasts
 - 4.2.1 By Type Global Vinyl Revenue, 2017-2022
 - 4.2.2 By Type Global Vinyl Revenue, 2023-2028
- 4.2.3 By Type Global Vinyl Revenue Market Share, 2017-2028
- 4.3 By Type Global Vinyl Sales & Forecasts
 - 4.3.1 By Type Global Vinyl Sales, 2017-2022
 - 4.3.2 By Type Global Vinyl Sales, 2023-2028
- 4.3.3 By Type Global Vinyl Sales Market Share, 2017-2028
- 4.4 By Type Global Vinyl Price (Manufacturers Selling Prices), 2017-2028

5 SIGHTS BY APPLICATION

- 5.1 Overview
 - 5.1.1 By Application Global Vinyl Market Size, 2021 & 2028
 - 5.1.2 Automotive
 - 5.1.3 Construction
 - 5.1.4 Electrical
 - 5.1.5 Healthcare
 - 5.1.6 Others
- 5.2 By Application Global Vinyl Revenue & Forecasts
 - 5.2.1 By Application Global Vinyl Revenue, 2017-2022
 - 5.2.2 By Application Global Vinyl Revenue, 2023-2028
 - 5.2.3 By Application Global Vinyl Revenue Market Share, 2017-2028
- 5.3 By Application Global Vinyl Sales & Forecasts
 - 5.3.1 By Application Global Vinyl Sales, 2017-2022
 - 5.3.2 By Application Global Vinyl Sales, 2023-2028
 - 5.3.3 By Application Global Vinyl Sales Market Share, 2017-2028
- 5.4 By Application Global Vinyl Price (Manufacturers Selling Prices), 2017-2028

6 SIGHTS BY REGION

- 6.1 By Region Global Vinyl Market Size, 2021 & 2028
- 6.2 By Region Global Vinyl Revenue & Forecasts
 - 6.2.1 By Region Global Vinyl Revenue, 2017-2022
 - 6.2.2 By Region Global Vinyl Revenue, 2023-2028



- 6.2.3 By Region Global Vinyl Revenue Market Share, 2017-2028
- 6.3 By Region Global Vinyl Sales & Forecasts
 - 6.3.1 By Region Global Vinyl Sales, 2017-2022
 - 6.3.2 By Region Global Vinyl Sales, 2023-2028
 - 6.3.3 By Region Global Vinyl Sales Market Share, 2017-2028
- 6.4 North America
 - 6.4.1 By Country North America Vinyl Revenue, 2017-2028
 - 6.4.2 By Country North America Vinyl Sales, 2017-2028
 - 6.4.3 US Vinyl Market Size, 2017-2028
 - 6.4.4 Canada Vinyl Market Size, 2017-2028
 - 6.4.5 Mexico Vinyl Market Size, 2017-2028

6.5 Europe

- 6.5.1 By Country Europe Vinyl Revenue, 2017-2028
- 6.5.2 By Country Europe Vinyl Sales, 2017-2028
- 6.5.3 Germany Vinyl Market Size, 2017-2028
- 6.5.4 France Vinyl Market Size, 2017-2028
- 6.5.5 U.K. Vinyl Market Size, 2017-2028
- 6.5.6 Italy Vinyl Market Size, 2017-2028
- 6.5.7 Russia Vinyl Market Size, 2017-2028
- 6.5.8 Nordic Countries Vinyl Market Size, 2017-2028
- 6.5.9 Benelux Vinyl Market Size, 2017-2028

6.6 Asia

- 6.6.1 By Region Asia Vinyl Revenue, 2017-2028
- 6.6.2 By Region Asia Vinyl Sales, 2017-2028
- 6.6.3 China Vinyl Market Size, 2017-2028
- 6.6.4 Japan Vinyl Market Size, 2017-2028
- 6.6.5 South Korea Vinyl Market Size, 2017-2028
- 6.6.6 Southeast Asia Vinyl Market Size, 2017-2028
- 6.6.7 India Vinyl Market Size, 2017-2028

6.7 South America

- 6.7.1 By Country South America Vinyl Revenue, 2017-2028
- 6.7.2 By Country South America Vinyl Sales, 2017-2028
- 6.7.3 Brazil Vinyl Market Size, 2017-2028
- 6.7.4 Argentina Vinyl Market Size, 2017-2028

6.8 Middle East & Africa

- 6.8.1 By Country Middle East & Africa Vinyl Revenue, 2017-2028
- 6.8.2 By Country Middle East & Africa Vinyl Sales, 2017-2028
- 6.8.3 Turkey Vinyl Market Size, 2017-2028
- 6.8.4 Israel Vinyl Market Size, 2017-2028



- 6.8.5 Saudi Arabia Vinyl Market Size, 2017-2028
- 6.8.6 UAE Vinyl Market Size, 2017-2028

7 MANUFACTURERS & BRANDS PROFILES

- 7.1 The Dow Chemical Company
 - 7.1.1 The Dow Chemical Company Corporate Summary
 - 7.1.2 The Dow Chemical Company Business Overview
 - 7.1.3 The Dow Chemical Company Vinyl Major Product Offerings
 - 7.1.4 The Dow Chemical Company Vinyl Sales and Revenue in Global (2017-2022)
 - 7.1.5 The Dow Chemical Company Key News
- 7.2 LyondellBasell Industries
 - 7.2.1 LyondellBasell Industries Corporate Summary
 - 7.2.2 LyondellBasell Industries Business Overview
 - 7.2.3 LyondellBasell Industries Vinyl Major Product Offerings
 - 7.2.4 LyondellBasell Industries Vinyl Sales and Revenue in Global (2017-2022)
- 7.2.5 LyondellBasell Industries Key News
- 7.3 Wacker Chemie
 - 7.3.1 Wacker Chemie Corporate Summary
 - 7.3.2 Wacker Chemie Business Overview
 - 7.3.3 Wacker Chemie Vinyl Major Product Offerings
 - 7.3.4 Wacker Chemie Vinyl Sales and Revenue in Global (2017-2022)
 - 7.3.5 Wacker Chemie Key News
- **7.4 BASF**
 - 7.4.1 BASF Corporate Summary
 - 7.4.2 BASF Business Overview
 - 7.4.3 BASF Vinyl Major Product Offerings
 - 7.4.4 BASF Vinyl Sales and Revenue in Global (2017-2022)
 - 7.4.5 BASF Key News
- 7.5 Celanese
 - 7.5.1 Celanese Corporate Summary
 - 7.5.2 Celanese Business Overview
 - 7.5.3 Celanese Vinyl Major Product Offerings
 - 7.5.4 Celanese Vinyl Sales and Revenue in Global (2017-2022)
 - 7.5.5 Celanese Key News
- 7.6 KURARAY
 - 7.6.1 KURARAY Corporate Summary
 - 7.6.2 KURARAY Business Overview
- 7.6.3 KURARAY Vinyl Major Product Offerings



7.6.4 KURARAY Vinyl Sales and Revenue in Global (2017-2022) 7.6.5 KURARAY Key News

8 GLOBAL VINYL PRODUCTION CAPACITY, ANALYSIS

- 8.1 Global Vinyl Production Capacity, 2017-2028
- 8.2 Vinyl Production Capacity of Key Manufacturers in Global Market
- 8.3 Global Vinyl Production by Region

9 KEY MARKET TRENDS, OPPORTUNITY, DRIVERS AND RESTRAINTS

- 9.1 Market Opportunities & Trends
- 9.2 Market Drivers
- 9.3 Market Restraints

10 VINYL SUPPLY CHAIN ANALYSIS

- 10.1 Vinyl Industry Value Chain
- 10.2 Vinyl Upstream Market
- 10.3 Vinyl Downstream and Clients
- 10.4 Marketing Channels Analysis
 - 10.4.1 Marketing Channels
 - 10.4.2 Vinyl Distributors and Sales Agents in Global

11 CONCLUSION

12 APPENDIX

- 12.1 Note
- 12.2 Examples of Clients
- 12.3 Disclaimer



List Of Tables

LIST OF TABLES

- Table 1. Key Players of Vinyl in Global Market
- Table 2. Top Vinyl Players in Global Market, Ranking by Revenue (2021)
- Table 3. Global Vinyl Revenue by Companies, (US\$, Mn), 2017-2022
- Table 4. Global Vinyl Revenue Share by Companies, 2017-2022
- Table 5. Global Vinyl Sales by Companies, (K MT), 2017-2022
- Table 6. Global Vinyl Sales Share by Companies, 2017-2022
- Table 7. Key Manufacturers Vinyl Price (2017-2022) & (USD/MT)
- Table 8. Global Manufacturers Vinyl Product Type
- Table 9. List of Global Tier 1 Vinyl Companies, Revenue (US\$, Mn) in 2021 and Market Share
- Table 10. List of Global Tier 2 and Tier 3 Vinyl Companies, Revenue (US\$, Mn) in 2021 and Market Share
- Table 11. By Type Global Vinyl Revenue, (US\$, Mn), 2021 & 2028
- Table 12. By Type Global Vinyl Revenue (US\$, Mn), 2017-2022
- Table 13. By Type Global Vinyl Revenue (US\$, Mn), 2023-2028
- Table 14. By Type Global Vinyl Sales (K MT), 2017-2022
- Table 15. By Type Global Vinyl Sales (K MT), 2023-2028
- Table 16. By Application Global Vinyl Revenue, (US\$, Mn), 2021 & 2028
- Table 17. By Application Global Vinyl Revenue (US\$, Mn), 2017-2022
- Table 18. By Application Global Vinyl Revenue (US\$, Mn), 2023-2028
- Table 19. By Application Global Vinyl Sales (K MT), 2017-2022
- Table 20. By Application Global Vinyl Sales (K MT), 2023-2028
- Table 21. By Region Global Vinyl Revenue, (US\$, Mn), 2021 VS 2028
- Table 22. By Region Global Vinyl Revenue (US\$, Mn), 2017-2022
- Table 23. By Region Global Vinyl Revenue (US\$, Mn), 2023-2028
- Table 24. By Region Global Vinyl Sales (K MT), 2017-2022
- Table 25. By Region Global Vinyl Sales (K MT), 2023-2028
- Table 26. By Country North America Vinyl Revenue, (US\$, Mn), 2017-2022
- Table 27. By Country North America Vinyl Revenue, (US\$, Mn), 2023-2028
- Table 28. By Country North America Vinyl Sales, (K MT), 2017-2022
- Table 29. By Country North America Vinyl Sales, (K MT), 2023-2028
- Table 30. By Country Europe Vinyl Revenue, (US\$, Mn), 2017-2022
- Table 31. By Country Europe Vinyl Revenue, (US\$, Mn), 2023-2028
- Table 32. By Country Europe Vinyl Sales, (K MT), 2017-2022
- Table 33. By Country Europe Vinyl Sales, (K MT), 2023-2028



- Table 34. By Region Asia Vinyl Revenue, (US\$, Mn), 2017-2022
- Table 35. By Region Asia Vinyl Revenue, (US\$, Mn), 2023-2028
- Table 36. By Region Asia Vinyl Sales, (K MT), 2017-2022
- Table 37. By Region Asia Vinyl Sales, (K MT), 2023-2028
- Table 38. By Country South America Vinyl Revenue, (US\$, Mn), 2017-2022
- Table 39. By Country South America Vinyl Revenue, (US\$, Mn), 2023-2028
- Table 40. By Country South America Vinyl Sales, (K MT), 2017-2022
- Table 41. By Country South America Vinyl Sales, (K MT), 2023-2028
- Table 42. By Country Middle East & Africa Vinyl Revenue, (US\$, Mn), 2017-2022
- Table 43. By Country Middle East & Africa Vinyl Revenue, (US\$, Mn), 2023-2028
- Table 44. By Country Middle East & Africa Vinyl Sales, (K MT), 2017-2022
- Table 45. By Country Middle East & Africa Vinyl Sales, (K MT), 2023-2028
- Table 46. The Dow Chemical Company Corporate Summary
- Table 47. The Dow Chemical Company Vinyl Product Offerings
- Table 48. The Dow Chemical Company Vinyl Sales (K MT), Revenue (US\$, Mn) and Average Price (USD/MT) (2017-2022)
- Table 49. LyondellBasell Industries Corporate Summary
- Table 50. LyondellBasell Industries Vinyl Product Offerings
- Table 51. LyondellBasell Industries Vinyl Sales (K MT), Revenue (US\$, Mn) and
- Average Price (USD/MT) (2017-2022)
- Table 52. Wacker Chemie Corporate Summary
- Table 53. Wacker Chemie Vinyl Product Offerings
- Table 54. Wacker Chemie Vinyl Sales (K MT), Revenue (US\$, Mn) and Average Price (USD/MT) (2017-2022)
- Table 55. BASF Corporate Summary
- Table 56. BASF Vinyl Product Offerings
- Table 57. BASF Vinyl Sales (K MT), Revenue (US\$, Mn) and Average Price (USD/MT) (2017-2022)
- Table 58. Celanese Corporate Summary
- Table 59. Celanese Vinyl Product Offerings
- Table 60. Celanese Vinyl Sales (K MT), Revenue (US\$, Mn) and Average Price (USD/MT) (2017-2022)
- Table 61. KURARAY Corporate Summary
- Table 62. KURARAY Vinyl Product Offerings
- Table 63. KURARAY Vinyl Sales (K MT), Revenue (US\$, Mn) and Average Price (USD/MT) (2017-2022)
- Table 64. Vinyl Production Capacity (K MT) of Key Manufacturers in Global Market, 2020-2022 (K MT)
- Table 65. Global Vinyl Capacity Market Share of Key Manufacturers, 2020-2022



- Table 66. Global Vinyl Production by Region, 2017-2022 (K MT)
- Table 67. Global Vinyl Production by Region, 2023-2028 (K MT)
- Table 68. Vinyl Market Opportunities & Trends in Global Market
- Table 69. Vinyl Market Drivers in Global Market
- Table 70. Vinyl Market Restraints in Global Market
- Table 71. Vinyl Raw Materials
- Table 72. Vinyl Raw Materials Suppliers in Global Market
- Table 73. Typical Vinyl Downstream
- Table 74. Vinyl Downstream Clients in Global Market
- Table 75. Vinyl Distributors and Sales Agents in Global Market



List Of Figures

LIST OF FIGURES

- Figure 1. Vinyl Segment by Type
- Figure 2. Vinyl Segment by Application
- Figure 3. Global Vinyl Market Overview: 2021
- Figure 4. Key Caveats
- Figure 5. Global Vinyl Market Size: 2021 VS 2028 (US\$, Mn)
- Figure 6. Global Vinyl Revenue, 2017-2028 (US\$, Mn)
- Figure 7. Vinyl Sales in Global Market: 2017-2028 (K MT)
- Figure 8. The Top 3 and 5 Players Market Share by Vinyl Revenue in 2021
- Figure 9. By Type Global Vinyl Sales Market Share, 2017-2028
- Figure 10. By Type Global Vinyl Revenue Market Share, 2017-2028
- Figure 11. By Type Global Vinyl Price (USD/MT), 2017-2028
- Figure 12. By Application Global Vinyl Sales Market Share, 2017-2028
- Figure 13. By Application Global Vinyl Revenue Market Share, 2017-2028
- Figure 14. By Application Global Vinyl Price (USD/MT), 2017-2028
- Figure 15. By Region Global Vinyl Sales Market Share, 2017-2028
- Figure 16. By Region Global Vinyl Revenue Market Share, 2017-2028
- Figure 17. By Country North America Vinyl Revenue Market Share, 2017-2028
- Figure 18. By Country North America Vinyl Sales Market Share, 2017-2028
- Figure 19. US Vinyl Revenue, (US\$, Mn), 2017-2028
- Figure 20. Canada Vinyl Revenue, (US\$, Mn), 2017-2028
- Figure 21. Mexico Vinyl Revenue, (US\$, Mn), 2017-2028
- Figure 22. By Country Europe Vinyl Revenue Market Share, 2017-2028
- Figure 23. By Country Europe Vinyl Sales Market Share, 2017-2028
- Figure 24. Germany Vinyl Revenue, (US\$, Mn), 2017-2028
- Figure 25. France Vinyl Revenue, (US\$, Mn), 2017-2028
- Figure 26. U.K. Vinyl Revenue, (US\$, Mn), 2017-2028
- Figure 27. Italy Vinyl Revenue, (US\$, Mn), 2017-2028
- Figure 28. Russia Vinyl Revenue, (US\$, Mn), 2017-2028
- Figure 29. Nordic Countries Vinyl Revenue, (US\$, Mn), 2017-2028
- Figure 30. Benelux Vinyl Revenue, (US\$, Mn), 2017-2028
- Figure 31. By Region Asia Vinyl Revenue Market Share, 2017-2028
- Figure 32. By Region Asia Vinyl Sales Market Share, 2017-2028
- Figure 33. China Vinyl Revenue, (US\$, Mn), 2017-2028
- Figure 34. Japan Vinyl Revenue, (US\$, Mn), 2017-2028
- Figure 35. South Korea Vinyl Revenue, (US\$, Mn), 2017-2028



- Figure 36. Southeast Asia Vinyl Revenue, (US\$, Mn), 2017-2028
- Figure 37. India Vinyl Revenue, (US\$, Mn), 2017-2028
- Figure 38. By Country South America Vinyl Revenue Market Share, 2017-2028
- Figure 39. By Country South America Vinyl Sales Market Share, 2017-2028
- Figure 40. Brazil Vinyl Revenue, (US\$, Mn), 2017-2028
- Figure 41. Argentina Vinyl Revenue, (US\$, Mn), 2017-2028
- Figure 42. By Country Middle East & Africa Vinyl Revenue Market Share, 2017-2028
- Figure 43. By Country Middle East & Africa Vinyl Sales Market Share, 2017-2028
- Figure 44. Turkey Vinyl Revenue, (US\$, Mn), 2017-2028
- Figure 45. Israel Vinyl Revenue, (US\$, Mn), 2017-2028
- Figure 46. Saudi Arabia Vinyl Revenue, (US\$, Mn), 2017-2028
- Figure 47. UAE Vinyl Revenue, (US\$, Mn), 2017-2028
- Figure 48. Global Vinyl Production Capacity (K MT), 2017-2028
- Figure 49. The Percentage of Production Vinyl by Region, 2021 VS 2028
- Figure 50. Vinyl Industry Value Chain
- Figure 51. Marketing Channels



I would like to order

Product name: Vinyl Market - Global Outlook and Forecast 2022-2028

Product link: https://marketpublishers.com/r/VCB80B9ADEA1EN.html

Price: US\$ 3,250.00 (Single User License / Electronic Delivery)

If you want to order Corporate License or Hard Copy, please, contact our Customer

Service:

info@marketpublishers.com

Payment

To pay by Credit Card (Visa, MasterCard, American Express, PayPal), please, click button on product page https://marketpublishers.com/r/VCB80B9ADEA1EN.html

To pay by Wire Transfer, please, fill in your contact details in the form below:

First name:		
Last name:		
Email:		
Company:		
Address:		
City:		
Zip code:		
Country:		
Tel:		
Fax:		
Your message:		
	**All fields are required	
	Custumer signature	

Please, note that by ordering from marketpublishers.com you are agreeing to our Terms & Conditions at https://marketpublishers.com/docs/terms.html

To place an order via fax simply print this form, fill in the information below and fax the completed form to +44 20 7900 3970