

Global and Regional Monochloroacetic Acid Market Research Report 2017

https://marketpublishers.com/r/GEB63E948F0EN.html

Date: October 2017

Pages: 169

Price: US\$ 3,500.00 (Single User License)

ID: GEB63E948F0EN

Abstracts

Summary

Monochloroacetic Acid (MCA), also called chloroacetic acid, is a bi-functional molecule-structured acid. At room temperature, pure MCA is a colorless, deliquescent crystalline mass. It is very soluble in water, freely soluble in methanol, ethanol, isopropanol, diethyl ether and acetone. It is extensively used as a chemical intermediate for the production of numerous industrially and commercially important chemicals, including glycine, CMC, TGA, and cyanoacetic acid. It is also used in the production of betaine-type surfactants, synthetic caffeine, and vitamins, and the production of 2, 4-D and methanoates for using in herbicides. MCA is commercially produced through the chlorination of acetic acid during the production of acetic anhydride as a catalyst.MCA is marketed in various forms: as a solid (powder or flakes), in molten form (kept at a temperature 80°C) or as 80% dilution in water. For these forms of packaging, exposure estimates are made.

Market Segment as follows:

By Region

Asia-Pacific

North America

Europe

South America



Middle East & Africa

By Type		
	Solid MCA	
	MCA Solution	
	Molten MCA	
By Application		
	Carboxymethyl Cellulose (CMC)	
	Agrochemical	
	Surfactants	
	Thioglycolic acid (TGA)	
	Others	
By Company		
	AkzoNobel	
	CABB	
	Denak	
	Dow Chemicals	
	Daicel Chemical Industries	
	Niacet	



Meridian Chem-Bond Ltd

Shri Chlochem

China Pingmei Shenma Group

Jiangsu New Century Salt Chemistry

Shijiazhuang Banglong Chemical

Shijiazhuang Bide Huagong

Shandong Huayang Technology

Chongqing Seayo Chemical Industry

Jiangsu Tongtai Chemical

Luzhou Hepu Chemical

Xuchang Dongfang Chemical

Shandong MinJi Chemical

Hangzhou Chuanggao Industry

Jiangmen Guangyue Electrochemical

Puyang Tiancheng Chemical

Tiande Chemical

The main contents of the report including:

Section 1: Product definition, type and application, global and regional market overview;

Section 2: Global and regional Market competition by company;

Section 3: Global and regional sales revenue, volume and price by type;

Section 4: Global and regional sales revenue, volume and price by application;



Section 5: Regional export and import;

Section 6: Company information, business overview, sales data and product specifications;

Section 7: Industry chain and raw materials;

Section 8: SWOT and Porter's Five Forces;

Section 9: Conclusion.



Contents

1 MARKET OVERVIEW

- 1.1 Market Segment Overview
 - 1.1.1 Product Definition
 - 1.1.2 Market by Type
 - 1.1.2.1 Solid MCA
 - 1.1.2.2 MCA Solution
 - 1.1.2.3 Molten MCA
 - 1.1.3 Market by Application
 - 1.1.3.1 Carboxymethyl Cellulose (CMC)
 - 1.1.3.2 Agrochemical
 - 1.1.3.3 Surfactants
 - 1.1.3.4 Thioglycolic acid (TGA)
 - 1.1.3.5 Others
- 1.2 Global and Regional Market Size
 - 1.2.1 Global Overview
 - 1.2.2 Market by Region
 - 1.2.2.1 Asia-Pacific
 - 1.2.2.2 North America
 - 1.2.2.3 Europe
 - 1.2.2.4 South America
 - 1.2.2.5 Middle East & Africa

2 GLOBAL AND REGIONAL MARKET BY COMPANY

- 2.1 Global
 - 2.1.1 Global Sales by Company
 - 2.1.2 Global Price by Company
- 2.2 Asia-Pacific
 - 2.2.1 Asia-Pacific Sales by Company
 - 2.2.2 Asia-Pacific Price by Company
- 2.3 North America
 - 2.3.1 North America Sales by Company
 - 2.3.2 North America Price by Company
- 2.4 Europe
 - 2.4.1 Europe Market Sales by Company
 - 2.4.2 Europe Price by Company



2.5 South America

- 2.5.1 South America Sales by Company
- 2.5.2 South America Price by Company
- 2.6 Middle East & Africa
 - 2.6.1 Middle East & Africa Sales by Company
 - 2.6.2 Middle East & Africa Price by Company

3 GLOBAL AND REGIONAL MARKET BY TYPE

- 3.1 Global
 - 3.1.1 Global Sales by Type
 - 3.1.2 Global Price by Type
- 3.2 Asia-Pacific
 - 3.2.1 Asia-Pacific Sales by Type
 - 3.2.2 Asia-Pacific Price by Type
- 3.3 North America
 - 3.3.1 North America Sales by Type
 - 3.3.2 North America Price by Type
- 3.4 Europe
 - 3.4.1 Europe Market Sales by Type
 - 3.4.2 Europe Price by Type
- 3.5 South America
 - 3.5.1 South America Sales by Type
 - 3.5.2 South America Price by Type
- 3.6 Middle East & Africa
 - 3.6.1 Middle East & Africa Sales by Type
 - 3.6.2 Middle East & Africa Price by Type

4 GLOBAL AND REGIONAL MARKET BY APPLICATION

- 4.1 Global
 - 4.1.1 Global Sales by Application
 - 4.1.2 Global Price by Application
- 4.2 Asia-Pacific
 - 4.2.1 Asia-Pacific Sales by Application
 - 4.2.2 Asia-Pacific Price by Application
- 4.3 North America
- 4.3.1 North America Sales by Application
- 4.3.2 North America Price by Application



- 4.4 Europe
- 4.4.1 Europe Market Sales by Application
- 4.4.2 Europe Price by Application
- 4.5 South America
- 4.5.1 South America Sales by Application
- 4.5.2 South America Price by Application
- 4.6 Middle East & Africa
 - 4.6.1 Middle East & Africa Sales by Application
- 4.6.2 Middle East & Africa Price by Application

5 REGIONAL TRADE

- 5.1 Export
- 5.2 Import

6 KEY MANUFACTURERS

- 6.1 AkzoNobel
 - 6.1.2 Company Information
 - 6.1.2 Product Specifications
 - 6.1.3 Business Data (Capacity, Sales Revenue, Volume, Price, Cost and Margin)
- 6.2 CABB
 - 6.2.1 Company Information
 - 6.2.2 Product Specifications
- 6.2.3 Business Data (Capacity, Sales Revenue, Volume, Price, Cost and Margin)
- 6.3 Denak
 - 6.3.1 Company Information
 - 6.3.2 Product Specifications
 - 6.3.3 Business Data (Capacity, Sales Revenue, Volume, Price, Cost and Margin)
- 6.4 Dow Chemicals
 - 6.4.1 Company Information
 - 6.4.2 Product Specifications
- 6.4.3 Business Data (Capacity, Sales Revenue, Volume, Price, Cost and Margin)
- 6.5 Daicel Chemical Industries
 - 6.5.1 Company Information
 - 6.5.2 Product Specifications
 - 6.5.3 Business Data (Capacity, Sales Revenue, Volume, Price, Cost and Margin)
- 6.6 Niacet
- 6.6.1 Company Information



- 6.6.2 Product Specifications
- 6.6.3 Business Data (Capacity, Sales Revenue, Volume, Price, Cost and Margin)
- 6.7 Meridian Chem-Bond Ltd
 - 6.7.1 Company Information
 - 6.7.2 Product Specifications
 - 6.7.3 Business Data (Capacity, Sales Revenue, Volume, Price, Cost and Margin)
- 6.8 Shri Chlochem
 - 6.8.1 Company Information
 - 6.8.2 Product Specifications
 - 6.8.3 Business Data (Capacity, Sales Revenue, Volume, Price, Cost and Margin)
- 6.9 China Pingmei Shenma Group
 - 6.9.1 Company Information
 - 6.9.2 Product Specifications
 - 6.9.3 Business Data (Capacity, Sales Revenue, Volume, Price, Cost and Margin)
- 6.10 Jiangsu New Century Salt Chemistry
 - 6.10.1 Company Information
 - 6.10.2 Product Specifications
 - 6.10.3 Business Data (Capacity, Sales Revenue, Volume, Price, Cost and Margin)
- 6.11 Shijiazhuang Banglong Chemical
- 6.12 Shijiazhuang Bide Huagong
- 6.13 Shandong Huayang Technology
- 6.14 Chongqing Seayo Chemical Industry
- 6.15 Jiangsu Tongtai Chemical
- 6.16 Luzhou Hepu Chemical
- 6.17 Xuchang Dongfang Chemical
- 6.18 Shandong MinJi Chemical
- 6.19 Hangzhou Chuanggao Industry
- 6.20 Jiangmen Guangyue Electrochemical
- 6.21 Puyang Tiancheng Chemical
- 6.22 Tiande Chemical

7 INDUSTRY UPSTREAM

- 7.1 Industry Chain
- 7.2 Raw Materials

8 MARKET ENVIRONMENT

8.1 SWOT



8.2 Porter's Five Forces

9 CONCLUSION



List Of Tables

LIST OF TABLES

Table GLOBAL MARKET SALES REVENUE BY COMPANY 2011-2017

Table Global Market Sales Revenue Share by Company 2011-2017

Table Global Market Sales Volume by Company 2011-2017

Table Global Market Sales Volume Share by Company 2011-2017

Table Global Price by Company 2011-2017

Table Asia-Pacific Market Sales Revenue by Company 2011-2017

Table Asia-Pacific Market Sales Revenue Share by Company 2011-2017

Table Asia-Pacific Market Sales Volume by Company 2011-2017

Table Asia-Pacific Market Sales Volume Share by Company 2011-2017

Table Asia-Pacific Price by Company 2011-2017

Table North America Market Sales Revenue by Company 2011-2017

Table North America Market Sales Revenue Share by Company 2011-2017

Table North America Market Sales Volume by Company 2011-2017

Table North America Market Sales Volume Share by Company 2011-2017

Table North America Price by Company 2011-2017

Table Europe Market Sales Revenue by Company 2011-2017

Table Europe Market Sales Revenue Share by Company 2011-2017

Table Europe Market Sales Volume by Company 2011-2017

Table Europe Market Sales Volume Share by Company 2011-2017

Table Europe Price by Company 2011-2017

Table South America Market Sales Revenue by Company 2011-2017

Table South America Market Sales Revenue Share by Company 2011-2017

Table South America Market Sales Volume by Company 2011-2017

Table South America Market Sales Volume Share by Company 2011-2017

Table South America Price by Company 2011-2017

Table Middle East & Africa Market Sales Revenue by Company 2011-2017

Table Middle East & Africa Market Sales Revenue Share by Company 2011-2017

Table Middle East & Africa Market Sales Volume by Company 2011-2017

Table Middle East & Africa Market Sales Volume Share by Company 2011-2017

Table Middle East & Africa Price by Company 2011-2017

Table Global Market Sales Revenue by Type 2011-2017

Table Global Market Sales Revenue Share by Type 2011-2017

Table Global Market Sales Volume by Type 2011-2017

Table Global Market Sales Volume Share by Type 2011-2017

Table Global Price by Type 2011-2017



Table Asia-Pacific Market Sales Revenue by Type 2011-2017

Table Asia-Pacific Market Sales Revenue Share by Type 2011-2017

Table Asia-Pacific Market Sales Volume by Type 2011-2017

Table Asia-Pacific Market Sales Volume Share by Type 2011-2017

Table Asia-Pacific Price by Type 2011-2017

Table North America Market Sales Revenue by Type 2011-2017

Table North America Market Sales Revenue Share by Type 2011-2017

Table North America Market Sales Volume by Type 2011-2017

Table North America Market Sales Volume Share by Type 2011-2017

Table North America Price by Type 2011-2017

Table Europe Market Sales Revenue by Type 2011-2017

Table Europe Market Sales Revenue Share by Type 2011-2017

Table Europe Market Sales Volume by Type 2011-2017

Table Europe Market Sales Volume Share by Type 2011-2017

Table Europe Price by Type 2011-2017

Table South America Market Sales Revenue by Type 2011-2017

Table South America Market Sales Revenue Share by Type 2011-2017

Table South America Market Sales Volume by Type 2011-2017

Table South America Market Sales Volume Share by Type 2011-2017

Table South America Price by Type 2011-2017

Table Middle East & Africa Market Sales Revenue by Type 2011-2017

Table Middle East & Africa Market Sales Revenue Share by Type 2011-2017

Table Middle East & Africa Market Sales Volume by Type 2011-2017

Table Middle East & Africa Market Sales Volume Share by Type 2011-2017

Table Middle East & Africa Price by Type 2011-2017

Table Global Market Sales Revenue by Application 2011-2017

Table Global Market Sales Revenue Share by Application 2011-2017

Table Global Market Sales Volume by Application 2011-2017

Table Global Market Sales Volume Share by Application 2011-2017

Table Global Price by Application 2011-2017

Table Asia-Pacific Market Sales Revenue by Application 2011-2017

Table Asia-Pacific Market Sales Revenue Share by Application 2011-2017

Table Asia-Pacific Market Sales Volume by Application 2011-2017

Table Asia-Pacific Market Sales Volume Share by Application 2011-2017

Table Asia-Pacific Price by Application 2011-2017

Table North America Market Sales Revenue by Application 2011-2017

Table North America Market Sales Revenue Share by Application 2011-2017

Table North America Market Sales Volume by Application 2011-2017

Table North America Market Sales Volume Share by Application 2011-2017



Table North America Price by Application 2011-2017

Table Europe Market Sales Revenue by Application 2011-2017

Table Europe Market Sales Revenue Share by Application 2011-2017

Table Europe Market Sales Volume by Application 2011-2017

Table Europe Market Sales Volume Share by Application 2011-2017

Table Europe Price by Application 2011-2017

Table South America Market Sales Revenue by Application 2011-2017

Table South America Market Sales Revenue Share by Application 2011-2017

Table South America Market Sales Volume by Application 2011-2017

Table South America Market Sales Volume Share by Application 2011-2017

Table South America Price by Application 2011-2017

Table Middle East & Africa Market Sales Revenue by Application 2011-2017

Table Middle East & Africa Market Sales Revenue Share by Application 2011-2017

Table Middle East & Africa Market Sales Volume by Application 2011-2017

Table Middle East & Africa Market Sales Volume Share by Application 2011-2017

Table Middle East & Africa Price by Application 2011-2017

Table Regional Export 2011-2017 (Value)

Table Regional Export 2011-2017 (Volume)

Table Regional Import 2011-2017 (Value)

Table Regional Import 2011-2017 (Volume)

Table Sales Revenue, Volume, Price, Cost and Margin of AkzoNobel

Table Sales Revenue, Volume, Price, Cost and Margin of CABB

Table Sales Revenue, Volume, Price, Cost and Margin of Denak

Table Sales Revenue, Volume, Price, Cost and Margin of Dow Chemicals

Table Sales Revenue, Volume, Price, Cost and Margin of Daicel Chemical Industries

Table Sales Revenue, Volume, Price, Cost and Margin of Niacet

Table Sales Revenue, Volume, Price, Cost and Margin of Meridian Chem-Bond Ltd

Table Sales Revenue, Volume, Price, Cost and Margin of Shri Chlochem

Table Sales Revenue, Volume, Price, Cost and Margin of China Pingmei Shenma Group

Table Sales Revenue, Volume, Price, Cost and Margin of Jiangsu New Century Salt Chemistry

Table Sales Revenue, Volume, Price, Cost and Margin of Shijiazhuang Banglong Chemical

Table Sales Revenue, Volume, Price, Cost and Margin of Shijiazhuang Bide Huagong

Table Sales Revenue, Volume, Price, Cost and Margin of Shandong Huayang

Technology

Table Sales Revenue, Volume, Price, Cost and Margin of Chongqing Seayo Chemical Industry



Table Sales Revenue, Volume, Price, Cost and Margin of Jiangsu Tongtai Chemical Table Sales Revenue, Volume, Price, Cost and Margin of Luzhou Hepu Chemical Table Sales Revenue, Volume, Price, Cost and Margin of Xuchang Dongfang Chemical Table Sales Revenue, Volume, Price, Cost and Margin of Shandong MinJi Chemical Table Sales Revenue, Volume, Price, Cost and Margin of Hangzhou Chuanggao Industry

Table Sales Revenue, Volume, Price, Cost and Margin of Jiangmen Guangyue Electrochemical

Table Sales Revenue, Volume, Price, Cost and Margin of Puyang Tiancheng Chemical Table Sales Revenue, Volume, Price, Cost and Margin of Tiande Chemical



List Of Figures

LIST OF FIGURES

Figure Solid MCA Market Size and CAGR 2011-2017 (Value)

Figure Solid MCA Market Size and CAGR 2011-2017 (Volume)

Figure Solid MCA Market Forecast and CAGR 2018-2025 (Value)

Figure Solid MCA Market Forecast and CAGR 2018-2025 (Volume)

Figure MCA Solution Market Size and CAGR 2011-2017 (Value)

Figure MCA Solution Market Size and CAGR 2011-2017 (Volume)

Figure MCA Solution Market Forecast and CAGR 2018-2025 (Value)

Figure MCA Solution Market Forecast and CAGR 2018-2025 (Volume)

Figure Molten MCA Market Size and CAGR 2011-2017 (Value)

Figure Molten MCA Market Size and CAGR 2011-2017 (Volume)

Figure Molten MCA Market Forecast and CAGR 2018-2025 (Value)

Figure Molten MCA Market Forecast and CAGR 2018-2025 (Volume)

Figure Carboxymethyl Cellulose (CMC) Market Size and CAGR 2011-2017 (Value)

Figure Carboxymethyl Cellulose (CMC) Market Size and CAGR 2011-2017 (Volume)

Figure Carboxymethyl Cellulose (CMC) Market Forecast and CAGR 2018-2025 (Value)

Figure Carboxymethyl Cellulose (CMC) Market Forecast and CAGR 2018-2025 (Volume)

Figure Agrochemical Market Size and CAGR 2011-2017 (Value)

Figure Agrochemical Market Size and CAGR 2011-2017 (Volume)

Figure Agrochemical Market Forecast and CAGR 2018-2025 (Value)

Figure Agrochemical Market Forecast and CAGR 2018-2025 (Volume)

Figure Surfactants Market Size and CAGR 2011-2017 (Value)

Figure Surfactants Market Size and CAGR 2011-2017 (Volume)

Figure Surfactants Market Forecast and CAGR 2018-2025 (Value)

Figure Surfactants Market Forecast and CAGR 2018-2025 (Volume)

Figure Thioglycolic acid (TGA) Market Size and CAGR 2011-2017 (Value)

Figure Thioglycolic acid (TGA) Market Size and CAGR 2011-2017 (Volume)

Figure Thioglycolic acid (TGA) Market Forecast and CAGR 2018-2025 (Value)

Figure Thioglycolic acid (TGA) Market Forecast and CAGR 2018-2025 (Volume)

Figure Others Market Size and CAGR 2011-2017 (Value)

Figure Others Market Size and CAGR 2011-2017 (Volume)

Figure Others Market Forecast and CAGR 2018-2025 (Value)

Figure Others Market Forecast and CAGR 2018-2025 (Volume)

Figure Global Monochloroacetic Acid Market Size and CAGR 2011-2017 (Value)

Figure Global Monochloroacetic Acid Market Size and CAGR 2011-2017 (Volume)



(Value)

Figure Global Monochloroacetic Acid Market Forecast and CAGR 2018-2025 (Value)
Figure Global Monochloroacetic Acid Market Forecast and CAGR 2018-2025 (Volume)
Figure Asia-Pacific Monochloroacetic Acid Market Size and CAGR 2011-2017 (Volume)
Figure Asia-Pacific Monochloroacetic Acid Market Size and CAGR 2011-2017 (Volume)
Figure Asia-Pacific Monochloroacetic Acid Market Forecast and CAGR 2018-2025

Figure Asia-Pacific Monochloroacetic Acid Market Forecast and CAGR 2018-2025 (Volume)

Figure North America Monochloroacetic Acid Market Size and CAGR 2011-2017 (Value)

Figure North America Monochloroacetic Acid Market Size and CAGR 2011-2017 (Volume)

Figure North America Monochloroacetic Acid Market Forecast and CAGR 2018-2025 (Value)

Figure North America Monochloroacetic Acid Market Forecast and CAGR 2018-2025 (Volume)

Figure Europe Monochloroacetic Acid Market Size and CAGR 2011-2017 (Value)

Figure Europe Monochloroacetic Acid Market Size and CAGR 2011-2017 (Volume)

Figure Europe Monochloroacetic Acid Market Forecast and CAGR 2018-2025 (Value)

Figure Europe Monochloroacetic Acid Market Forecast and CAGR 2018-2025 (Volume)

Figure South America Monochloroacetic Acid Market Size and CAGR 2011-2017 (Value)

Figure South America Monochloroacetic Acid Market Size and CAGR 2011-2017 (Volume)

Figure South America Monochloroacetic Acid Market Forecast and CAGR 2018-2025 (Value)

Figure South America Monochloroacetic Acid Market Forecast and CAGR 2018-2025 (Volume)

Figure Middle East & Africa Monochloroacetic Acid Market Size and CAGR 2011-2017 (Value)

Figure Middle East & Africa Monochloroacetic Acid Market Size and CAGR 2011-2017 (Volume)

Figure Middle East & Africa Monochloroacetic Acid Market Forecast and CAGR 2018-2025 (Value)

Figure Middle East & Africa Monochloroacetic Acid Market Forecast and CAGR 2018-2025 (Volume)

Figure Global Market Sales Revenue Share by Company in 2017

Figure Global Market Sales Volume Share by Company in 2017

Figure Asia-Pacific Market Sales Revenue Share by Company in 2017



Figure Asia-Pacific Market Sales Volume Share by Company in 2017

Figure North America Market Sales Revenue Share by Company in 2017

Figure North America Market Sales Volume Share by Company in 2017

Figure Europe Market Sales Revenue Share by Company in 2017

Figure Europe Market Sales Volume Share by Company in 2017

Figure South America Market Sales Revenue Share by Company in 2017

Figure South America Market Sales Volume Share by Company in 2017

Figure Middle East & Africa Market Sales Revenue Share by Company in 2017

Figure Middle East & Africa Market Sales Volume Share by Company in 2017

Figure Global Market Sales Revenue Share by Type in 2017

Figure Global Market Sales Volume Share by Type in 2017

Figure Asia-Pacific Market Sales Revenue Share by Type in 2017

Figure Asia-Pacific Market Sales Volume Share by Type in 2017

Figure North America Market Sales Revenue Share by Type in 2017

Figure North America Market Sales Volume Share by Type in 2017

Figure Europe Market Sales Revenue Share by Type in 2017

Figure Europe Market Sales Volume Share by Type in 2017

Figure South America Market Sales Revenue Share by Type in 2017

Figure South America Market Sales Volume Share by Type in 2017

Figure Middle East & Africa Market Sales Revenue Share by Type in 2017

Figure Middle East & Africa Market Sales Volume Share by Type in 2017

Figure Global Market Sales Revenue Share by Application in 2017

Figure Global Market Sales Volume Share by Application in 2017

Figure Asia-Pacific Market Sales Revenue Share by Application in 2017

Figure Asia-Pacific Market Sales Volume Share by Application in 2017

Figure North America Market Sales Revenue Share by Application in 2017

Figure North America Market Sales Volume Share by Application in 2017

Figure Europe Market Sales Revenue Share by Application in 2017

Figure Europe Market Sales Volume Share by Application in 2017

Figure South America Market Sales Revenue Share by Application in 2017

Figure South America Market Sales Volume Share by Application in 2017

Figure Middle East & Africa Market Sales Revenue Share by Application in 2017

Figure Middle East & Africa Market Sales Volume Share by Application in 2017

Figure Industry Chain Overview

Figure Monochloroacetic Acid SWOT List

Figure Chemicals & Materials Porter's Five Forces



I would like to order

Product name: Global and Regional Monochloroacetic Acid Market Research Report 2017

Product link: https://marketpublishers.com/r/GEB63E948F0EN.html

Price: US\$ 3,500.00 (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/GEB63E948F0EN.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