

Metal Matrix Composite Market by Matrix Type (Aluminum MMC, Magnesium MMC, Copper MMC, Super Alloys MMC), Reinforcement Type, Production Technology, Reinforcement Material, End-Use Industry, and Region - Global Forecast to 2025

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Abstracts

The global carbon capture, utilization, and storage market size is expected to grow from USD 467 million in 2020 to USD 787 million by 2025, at a CAGR of 11.0% during the forecast period. Metal matrix composite is extensively used in automotive & transportation, electrical & electronics, aerospace & defense, industrial, and various other sectors. Increasing usage of metal matrix composite to manufacture lightweight vehicle components in the automotive & transportation industry is laying a key role behind the growth of MMC market.

“Powder metallurgy production technology to dominate the market in terms of value.”

The powder metallurgy segment holds the majority of the share in the MMC market. The powder metallurgy technology is widely used for MMC production as it gives products having superior properties and modest cost, and the process is commercially available. Compatibility with various materials and the increasing demand for powder metallurgically produced MMC products from industries such as aerospace and ground transportations are expected to drive the global MMC market in powder metallurgy production technology

“Super Alloys is the fastest-growing matrix type in the market in terms of value.”

Super alloys MMC is the fastest-growing segment in the market in terms of matrix type. Super alloy metals provide resistance against heat and wear. They have a melting point

above 3,632°F and possess high strength. These MMCs possess properties such as high strength at elevated temperature, high resistance to thermal shock, and good electrical and heat-conducting properties. Owing to their hardness at elevated temperatures and wear resistance, refractory MMCs are used in various industrial tools.

“Discontinuous reinforcement held the major market in terms of value.”

Discontinuous reinforcements holds the major share in the global MMC market owing to increased usage of short fibers and whiskers. The discontinuous reinforcement MMC offers benefits such as a higher production rate than continuous MMC. Discontinuous MMCs can be produced by various production techniques such as powder metallurgy, low-pressure infiltration, squeeze casting, and spray depositions.

“Silicon Carbide is the largest segment in the global metal matrix composite market in the reinforcement material segment.”

Silicon Carbide is the most widely used type of reinforcement material in the global MMC market owing to high demand from the electrical & electronics, automotive, and others sectors. SiC reinforcement increases the tensile strength, hardness, density, and wear resistance of MMC. The particle distribution plays a vital role in the properties of the Al MMC and is improved by intensive shearing. SiC is the most preferred reinforcement material in MMC as it is used with various matrix systems such as aluminum, magnesium, and copper.

“North America is the fastest-growing metal matrix composite, in terms of volume.”

North America is the largest MMC market due to its rising demand from aircraft manufacturers and space component manufacturers in the US and Canada. The growing need to produce lightweight vehicles by using metal matrix composites in order to enhance fuel efficiency is further contributing to the growth of the market. Moreover, the company has the presence of major MMC manufacturers, including Materion Corporation, 3M, and CPS Technologies Corporation, to name a few.

This study has been validated through primaries conducted with various industry experts globally. These primary sources have been divided into the following three categories:

By Company Type- Tier 1- 40%, Tier 2- 33%, and Tier 3- 27%

By Designation- C Level- 50%, Director Level- 20%, and Others- 30%

By Region- North America- 20%, Europe- 50%, APAC- 15%, Latin America-5%, MEA-10%,

The report provides a comprehensive analysis of company profiles listed below:

Materion Corporation (US)

CPS Technologies Corporation (US)

GKN Sinter Metals (US)

3M (US)

Deutsche Edelstahlwerke GmbH (Germany)

Metal Matrix Cast Composites, LLC (US)

Plansee SE (Austria)

CeramTec (Germany)

Sandvik AB (Sweden)

Ferrotec Corporation (US)

Research Coverage

This report covers the global metal matrix composite and forecasts the market size until 2024. The report includes the market segmentation – by Matrix Type (Aluminum MMC, Magnesium MMC, Copper MMC, Super Alloys MMC), Reinforcement Type (Continuous, Discontinuous, and Particles), Production Technology (Liquid Metal Infiltration, Powder Metallurgy, Casting, and Deposition Techniques), Reinforcement Material (Silicon Carbide, Carbon Fiber, Alumina, and Others), End-Use Industry (Automotive & Transportation, Electrical & Electronics, Aerospace & Defense, Industrial, and Others), and Region (Europe, North America, APAC, Latin America, and MEA).

Metal Matrix Composite Market by Matrix Type (Aluminum MMC, Magnesium MMC, Copper MMC, Super Alloys MMC), Rein...

Porter's Five Forces analysis, along with the drivers, restraints, opportunities, and challenges, are discussed in the report. It also provides company profiles and competitive strategies adopted by the major players in the global metal matrix composite

Key benefits of buying the report:

The report will help market leaders/new entrants in this market in the following ways:

1. This report segments the global metal matrix composite market comprehensively and provides the closest approximations of the revenues for the overall market and the sub-segments across different verticals and regions.
2. The report helps stakeholders understand the pulse of the metal matrix composite and provides them with information on key market drivers, restraints, challenges, and opportunities.
3. This report will help stakeholders to understand competitors better and gain more insights to better their position in their businesses. The competitive landscape section includes the competitor ecosystem and expansion.

Reasons to buy the report:

The report will help market leaders/new entrants in this market by providing them with the closest approximations of the revenues for the overall metal matrix composite and the sub-segments. This report will help stakeholders to understand the competitive landscape and gain more insights and position their businesses and market strategies in a better way. The report will also help stakeholders understand the pulse of the market and provide them with information on key market drivers, restraints, challenges, and opportunities.

Contents

1 INTRODUCTION

1.1 OBJECTIVES OF THE STUDY

1.2 MARKET DEFINITION

1.3 MARKET SCOPE

1.3.1 METAL MATRIX COMPOSITE MARKET SEGMENTATION

1.3.2 METAL MATRIX COMPOSITE MARKET, REGIONAL SCOPE

1.3.3 YEARS CONSIDERED FOR THE STUDY

1.4 CURRENCY

1.5 UNIT CONSIDERED

1.6 STAKEHOLDERS

1.7 SUMMARY OF CHANGES

2 RESEARCH METHODOLOGY

2.1 RESEARCH DATA

FIGURE 1 METAL MATRIX COMPOSITE MARKET: RESEARCH DESIGN

2.1.1 SECONDARY DATA

2.1.1.1 Key data from secondary sources

2.1.2 PRIMARY DATA

2.1.2.1 Key data from primary sources

2.1.2.2 Breakdown of primaries

2.2 MARKET SIZE ESTIMATION

FIGURE 2 METAL MATRIX COMPOSITE MARKET: SUPPLY-SIDE ESTIMATION METHOD

FIGURE 3 METAL MATRIX COMPOSITE MARKET: DEMAND-SIDE ESTIMATION METHOD

2.3 DATA TRIANGULATION

FIGURE 4 METAL MATRIX COMPOSITE MARKET: DATA TRIANGULATION

2.4 ASSUMPTIONS

3 EXECUTIVE SUMMARY

FIGURE 5 ALUMINUM METAL MATRIX COMPOSITE TYPE DOMINATED THE MARKET IN 2019

FIGURE 6 DISCONTINUOUS SEGMENT DOMINATED THE MARKET IN 2019

FIGURE 7 AUTOMOTIVE & TRANSPORTATION IS THE KEY END-USE INDUSTRY

IN

THE METAL MATRIX COMPOSITE MARKET

FIGURE 8 POWDER METALLURGY DOMINATES THE PRODUCTION
TECHNOLOGY SEGMENT

FIGURE 9 THE US LED THE METAL MATRIX COMPOSITE MARKET IN 2019

FIGURE 10 NORTH AMERICA ACCOUNTED FOR THE LARGEST MARKET SHARE
IN 2019

4 PREMIUM INSIGHTS

4.1 ATTRACTIVE OPPORTUNITIES IN THE METAL MATRIX COMPOSITE MARKET

FIGURE 11 HIGH DEMAND FROM AUTOMOTIVE & TRANSPORTATION END-USE
INDUSTRY TO DRIVE THE MARKET

4.2 METAL MATRIX COMPOSITE MARKET, BY PRODUCTION TECHNOLOGY AND
MATRIX TYPE, 2019

FIGURE 12 ALUMINUM METAL MATRIX COMPOSITE ACCOUNTED FOR THE
LARGEST SHARE OF THE GLOBAL MARKET

4.3 METAL MATRIX COMPOSITE MARKET, BY REINFORCEMENT TYPE

FIGURE 13 DISCONTINUOUS REINFORCEMENT LEADS THE DEMAND

4.4 METAL MATRIX COMPOSITE MARKET, BY END-USE INDUSTRY

FIGURE 14 AUTOMOTIVE & TRANSPORTATION DOMINATES THE OVERALL
MARKET

4.5 METAL MATRIX COMPOSITE MARKET, BY KEY COUNTRIES

FIGURE 15 CHINA TO REGISTER THE HIGHEST CAGR

5 MARKET OVERVIEW

5.1 INTRODUCTION

5.2 MARKET DYNAMICS

FIGURE 16 DRIVERS, RESTRAINTS, OPPORTUNITIES, AND CHALLENGES IN THE
METAL MATRIX COMPOSITE MARKET

5.2.1 DRIVERS

5.2.1.1 Increase in the use of MMCs for manufacturing structural aerospace
composite parts

5.2.1.2 Increasing demand for lightweight and strong MMC from the aerospace &
defense industry

5.2.2 RESTRAINTS

5.2.2.1 Complicated manufacturing process

5.2.2.2 Concerns about reparability and recyclability

5.2.2.3 Disruption in supply chain and lower demand due to COVID-19 pandemic

5.2.3 OPPORTUNITIES

5.2.3.1 Potential opportunities in new applications, such as robots, high-speed machinery, and high-speed rotating shafts

5.2.4 CHALLENGES

5.2.4.1 To develop a low-cost, highly reliable manufacturing process

5.2.4.2 To develop low-cost fiber reinforcement and highly reliable coating for reinforcement-matrix interface

5.2.4.3 Maintaining an uninterrupted supply chain and operating at full capacity

5.3 PORTER'S FIVE FORCES ANALYSIS

FIGURE 17 PORTER'S FIVE FORCES ANALYSIS

5.3.1 THREAT OF NEW ENTRANTS

5.3.2 THREAT OF SUBSTITUTES

5.3.3 BARGAINING POWER OF SUPPLIERS

5.3.4 BARGAINING POWER OF BUYERS

5.3.5 INTENSITY OF COMPETITIVE RIVALRY

5.4 VALUE CHAIN ANALYSIS

FIGURE 18 VALUE CHAIN ANALYSIS: MAXIMUM VALUE IS ADDED DURING METAL MATRIX COMPOSITE DESIGN & PROCESSING PHASE

5.5 PRICING ANALYSIS

5.6 MANUFACTURING PROCESS ANALYSIS

5.7 PATENT ANALYSIS

5.7.1 METHODOLOGY

5.7.2 DOCUMENT TYPE

FIGURE 19 PUBLICATION TRENDS – FROM 2011 TO 2019

5.7.3 INSIGHTS

FIGURE 20 JURISDICTION ANALYSIS

5.7.4 TOP APPLICANTS OF METAL MATRIX COMPOSITE

FIGURE 21 TOP APPLICANTS OF METAL MATRIX COMPOSITE

5.8 METAL MATRIX COMPOSITE MARKET ECOSYSTEM

5.9 CASE STUDY

6 MACROECONOMIC OVERVIEW AND KEY TRENDS

6.1 INTRODUCTION

6.2 TRENDS AND FORECAST OF GDP

TABLE 1 ANNUAL PERCENTAGE CHANGE OF GDP, BY REGION, APRIL 2020

6.3 IMPACT OF COVID-19 ON AEROSPACE INDUSTRY

TABLE 2 NUMBER OF AIRPLANE DELIVERIES, BY MANUFACTURERS, 2019

6.3.1 SHORT-TERM STRATEGIES TO MANAGE COST STRUCTURE AND SUPPLY CHAINS

6.3.2 NEW OPPORTUNITIES

6.4 IMPACT OF COVID-19 ON AUTOMOTIVE INDUSTRY

6.4.1 SHORT-TERM STRATEGIES TO MANAGE COST STRUCTURE AND SUPPLY CHAINS

6.4.2 NEW OPPORTUNITIES

7 METAL MATRIX COMPOSITE MARKET, BY MATRIX TYPE

7.1 INTRODUCTION

FIGURE 22 ALUMINUM METAL MATRIX COMPOSITE TO DOMINATE THE METAL MATRIX COMPOSITE MARKET DURING THE FORECAST PERIOD

TABLE 3 METAL MATRIX COMPOSITE MARKET SIZE, BY MATRIX TYPE, 2018–2025 (USD MILLION)

TABLE 4 METAL MATRIX COMPOSITE MARKET SIZE, BY MATRIX TYPE, 2018–2025 (TON)

7.2 ALUMINUM METAL MATRIX COMPOSITE

7.2.1 THE SEGMENT HOLDS MAJORITY OF THE MARKET SHARE

FIGURE 23 NORTH AMERICA TO BE THE LARGEST METAL MATRIX COMPOSITE MARKET

TABLE 5 ALUMINUM METAL MATRIX COMPOSITE MARKET SIZE, BY REGION, 2018–2025 (USD MILLION)

TABLE 6 ALUMINUM METAL MATRIX COMPOSITE MARKET SIZE, BY REGION, 2018–2025 (TON)

7.3 MAGNESIUM METAL MATRIX COMPOSITE

7.3.1 LOW-DENSITY AND CORROSION RESISTANCE PROPERTIES TO DRIVE THE DEMAND

TABLE 7 MAGNESIUM METAL MATRIX COMPOSITE MARKET SIZE, BY REGION, 2018–2025 (USD MILLION)

TABLE 8 MAGNESIUM METAL MATRIX COMPOSITE MARKET SIZE, BY REGION, 2018–2025 (TON)

7.4 SUPER ALLOYS METAL MATRIX COMPOSITE

7.4.1 FASTEST-GROWING SEGMENT OWING TO HIGH DEMAND FROM THE AUTOMOTIVE SECTOR

TABLE 9 SUPER ALLOYS METAL MATRIX COMPOSITE MARKET SIZE, BY REGION, 2018–2025 (USD MILLION)

TABLE 10 SUPER ALLOYS METAL MATRIX COMPOSITE MARKET SIZE, BY REGION, 2018–2025 (TON)

7.5 COPPER METAL MATRIX COMPOSITE

7.5.1 HIGH DEMAND FROM EUROPE AND NORTH AMERICA

TABLE 11 COPPER METAL MATRIX COMPOSITE MARKET SIZE, BY REGION, 2018–2025 (USD MILLION)

TABLE 12 COPPER METAL MATRIX COMPOSITE MARKET SIZE, BY REGION, 2018–2025 (TON)

7.6 OTHER METAL MATRIX COMPOSITES

TABLE 13 OTHER METAL MATRIX COMPOSITE MARKET SIZE, BY REGION, 2018–2025 (USD MILLION)

TABLE 14 OTHER METAL MATRIX COMPOSITE MARKET SIZE, BY REGION, 2018–2025 (TON)

8 METAL MATRIX COMPOSITE MARKET, BY PRODUCTION TECHNOLOGY

8.1 INTRODUCTION

FIGURE 24 POWDER METALLURGY SEGMENT LEADS THE DEMAND IN THE METAL MATRIX COMPOSITE MARKET

TABLE 15 METAL MATRIX COMPOSITE MARKET SIZE, BY PRODUCTION TECHNOLOGY, 2018–2025 (USD MILLION)

TABLE 16 METAL MATRIX COMPOSITE MARKET SIZE, BY PRODUCTION TECHNOLOGY, 2018–2025 (TON)

8.2 LIQUID METAL INFILTRATION

8.2.1 INCREASING USAGE IN EUROPEAN COUNTRIES

TABLE 17 LIQUID METAL INFILTRATION: METAL MATRIX COMPOSITE MARKET SIZE, BY REGION, 2018–2025 (USD MILLION)

TABLE 18 LIQUID METAL INFILTRATION: METAL MATRIX COMPOSITE MARKET SIZE, BY REGION, 2018–2025 (TON)

8.2.1.1 Gas pressure infiltration

8.2.1.2 Squeeze casting infiltration method

8.2.1.3 Others

8.3 POWDER METALLURGY

8.3.1 MOST WIDELY USED TECHNOLOGY IN THE MMC MARKET

FIGURE 25 NORTH AMERICA LEADS THE DEMAND IN POWDER METALLURGY METAL MATRIX COMPOSITE MARKET

TABLE 19 POWDER METALLURGY: METAL MATRIX COMPOSITE MARKET SIZE, BY REGION, 2018–2025 (USD MILLION)

TABLE 20 POWDER METALLURGY: METAL MATRIX COMPOSITE MARKET SIZE,

BY REGION, 2018–2025 (TON)

8.3.1.1 Hot pressing

8.3.1.2 Ball mill mixing

8.3.1.3 Extrusion/rolling

8.3.1.4 Vacuum pressing

8.4 CASTING

8.4.1 GROWING USAGE IN PROCESS ALUMINUM MMC

TABLE 21 CASTING: METAL MATRIX COMPOSITE MARKET SIZE, BY REGION, 2018–2025 (USD MILLION)

TABLE 22 CASTING: METAL MATRIX COMPOSITE MARKET SIZE, BY REGION, 2018–2025 (TON)

8.4.1.1 Stir casting

8.4.1.2 Gravity casting

8.4.1.3 Low-pressure casting

8.4.1.4 Compo-casting

8.5 DEPOSITION TECHNIQUES

8.5.1 CHEMICAL VAPOR DEPOSITION, SPRAY DEPOSITION, AND PHYSICAL VAPOR DEPOSITION ARE THE MOST WIDELY USED DEPOSITION TECHNIQUES

TABLE 23 DEPOSITION TECHNIQUES: METAL MATRIX COMPOSITE MARKET SIZE, BY REGION, 2018–2025 (USD MILLION)

TABLE 24 DEPOSITION TECHNIQUES: METAL MATRIX COMPOSITE MARKET SIZE, BY REGION, 2018–2025 (TON)

8.5.1.1 Electroplating

8.5.1.2 Spray foaming

8.5.1.3 Chemical vapor deposition

9 METAL MATRIX COMPOSITE MARKET, BY REINFORCEMENT TYPE

9.1 INTRODUCTION

FIGURE 26 DISCONTINUOUS REINFORCED TYPE TO DOMINATE THE METAL MATRIX COMPOSITE MARKET DURING THE FORECAST PERIOD

TABLE 25 METAL MATRIX COMPOSITE MARKET SIZE, BY REINFORCEMENT TYPE, 2018–2025 (USD MILLION)

TABLE 26 METAL MATRIX COMPOSITE MARKET SIZE, BY REINFORCEMENT TYPE, 2018–2025 (TON)

9.2 CONTINUOUS REINFORCEMENT

9.2.1 CONTINUOUS REINFORCEMENT PROVIDES HIGH STRENGTH TO MMC

TABLE 27 CONTINUOUS REINFORCED METAL MATRIX COMPOSITE MARKET SIZE, BY REGION, 2018–2025 (USD MILLION)

TABLE 28 CONTINUOUS REINFORCED METAL MATRIX COMPOSITE MARKET SIZE, BY REGION, 2018–2025 (TON)

9.3 DISCONTINUOUS REINFORCEMENT

9.3.1 GROWING USAGE OF SHORT FIBERS AND WHISKERS IS FUELING THE DEMAND

FIGURE 27 NORTH AMERICA TO LEAD THE DISCONTINUOUS REINFORCED METAL MATRIX COMPOSITE MARKET DURING THE FORECAST PERIOD

TABLE 29 DISCONTINUOUS REINFORCED METAL MATRIX COMPOSITE MARKET SIZE, BY REGION, 2018–2025 (USD MILLION)

TABLE 30 DISCONTINUOUS REINFORCED METAL MATRIX COMPOSITE MARKET SIZE, BY REGION, 2018–2025 (TON)

9.3.1.1 Whiskers

9.3.1.2 Short fibers

9.4 PARTICLES

9.4.1 MOST WIDELY USED PARTICLES ARE ALUMINA, SILICON CARBIDE, BORON CARBIDE, TITANIUM CARBIDE, AND TUNGSTEN CARBIDE

TABLE 31 PARTICLE REINFORCED METAL MATRIX COMPOSITE MARKET SIZE, BY REGION, 2018–2025 (USD MILLION)

TABLE 32 PARTICLE REINFORCED METAL MATRIX COMPOSITE MARKET SIZE, BY REGION, 2018–2025 (TON)

10 METAL MATRIX COMPOSITE MARKET, BY REINFORCEMENT MATERIAL

10.1 INTRODUCTION

FIGURE 28 SILICON CARBIDE SEGMENT LEADS THE DEMAND IN THE GLOBAL MARKET

TABLE 33 METAL MATRIX COMPOSITE MARKET SIZE, BY REINFORCEMENT MATERIAL, 2018–2025 (USD MILLION)

TABLE 34 METAL MATRIX COMPOSITE MARKET SIZE, BY REINFORCEMENT MATERIAL, 2018–2025 (TON)

10.2 SILICON CARBIDE

10.2.1 MOST-WIDELY USED REINFORCEMENT MATERIAL

FIGURE 29 NORTH AMERICA LEADS THE DEMAND IN SIC REINFORCED METAL MATRIX COMPOSITE MARKET

TABLE 35 SILICON CARBIDE REINFORCED METAL MATRIX COMPOSITE MARKET SIZE, BY REGION, 2018–2025 (USD MILLION)

TABLE 36 SILICON CARBIDE REINFORCED METAL MATRIX COMPOSITE MARKET SIZE, BY REGION, 2018–2025 (TON)

10.3 ALUMINA

10.3.1 ALUMINA OFFERS SUPERIOR STABILITY AND EXHIBITS BETTER CORROSION & HIGH TEMPERATURE RESISTANCE

TABLE 37 ALUMINA REINFORCED METAL MATRIX COMPOSITE MARKET SIZE, BY REGION, 2018–2025 (USD MILLION)

TABLE 38 ALUMINA REINFORCED METAL MATRIX COMPOSITE MARKET SIZE, BY REGION, 2018–2025 (TON)

10.4 CARBON FIBER

10.4.1 INCREASING PENETRATION OF CONTINUOUS REINFORCEMENT TYPE IS DRIVING THE DEMAND

TABLE 39 CARBON FIBER REINFORCED METAL MATRIX COMPOSITE MARKET SIZE, BY REGION, 2018–2025 (USD MILLION)

TABLE 40 CARBON FIBER REINFORCED METAL MATRIX COMPOSITE MARKET SIZE, BY REGION, 2018–2025 (TON)

10.4.1.1 Graphite

10.4.1.2 Nanotubes

10.4.1.3 Other carbon fibers

10.5 OTHER REINFORCEMENTS

TABLE 41 OTHER REINFORCEMENT METAL MATRIX COMPOSITE MARKET SIZE, BY REGION, 2018–2025 (USD MILLION)

TABLE 42 OTHER REINFORCEMENT METAL MATRIX COMPOSITE MARKET SIZE, BY REGION, 2018–2025 (TON)

11 METAL MATRIX COMPOSITE MARKET, BY END-USE INDUSTRY

11.1 INTRODUCTION

FIGURE 30 AUTOMOTIVE & TRANSPORTATION TO BE THE LARGEST END-USE INDUSTRY OF METAL MATRIX COMPOSITE

TABLE 43 METAL MATRIX COMPOSITE MARKET SIZE, BY END-USE INDUSTRY, 2018–2025 (USD MILLION)

TABLE 44 METAL MATRIX COMPOSITE MARKET SIZE, BY END-USE INDUSTRY, 2018–2025 (TON)

11.2 AUTOMOTIVE & TRANSPORTATION

11.2.1 THE INDUSTRY HOLDS THE LARGEST SHARE IN THE MMC MARKET

FIGURE 31 NORTH AMERICA TO BE THE LEADING METAL MATRIX COMPOSITE MARKET IN AUTOMOTIVE & TRANSPORTATION

TABLE 45 METAL MATRIX COMPOSITE MARKET SIZE IN AUTOMOTIVE & TRANSPORTATION, BY REGION, 2018–2025 (USD MILLION)

TABLE 46 METAL MATRIX COMPOSITE MARKET SIZE IN AUTOMOTIVE & TRANSPORTATION, BY REGION, 2018–2025 (TON)

11.3 ELECTRICAL & ELECTRONICS

11.3.1 GROWING USAGE IN PRINTED CIRCUIT BOARDS TO DRIVE THE DEMAND

TABLE 47 METAL MATRIX COMPOSITE MARKET SIZE IN ELECTRICAL & ELECTRONICS, BY REGION, 2018–2025 (USD MILLION)

TABLE 48 METAL MATRIX COMPOSITE MARKET SIZE IN ELECTRICAL & ELECTRONICS, BY REGION, 2018–2025 (TON)

11.4 AEROSPACE & DEFENSE

11.4.1 GROWING DEMAND FROM EUROPEAN COUNTRIES TO DRIVE THE MARKET

TABLE 49 DEMAND FOR AIRPLANES, BY REGION, 2015 TO 2034

TABLE 50 METAL MATRIX COMPOSITE MARKET SIZE IN AEROSPACE & DEFENSE, BY REGION, 2018–2025 (USD MILLION)

TABLE 51 METAL MATRIX COMPOSITE MARKET SIZE IN AEROSPACE & DEFENSE, BY REGION, 2018–2025 (TON)

11.5 INDUSTRIAL

11.5.1 GROWING PENETRATION OF MMC IN ELECTROPLATED AND IMPREGNATED DIAMOND TOOLS

TABLE 52 METAL MATRIX COMPOSITE MARKET SIZE IN INDUSTRIAL, BY REGION, 2018–2025 (USD MILLION)

TABLE 53 METAL MATRIX COMPOSITE MARKET SIZE IN INDUSTRIAL, BY REGION, 2018–2025 (TON)

11.6 OTHER END-USE INDUSTRIES

TABLE 54 METAL MATRIX COMPOSITE MARKET SIZE IN OTHER INDUSTRIES, BY REGION, 2018–2025 (USD MILLION)

TABLE 55 METAL MATRIX COMPOSITE MARKET SIZE IN OTHER INDUSTRIES, BY REGION, 2018–2025 (TON)

12 METAL MATRIX COMPOSITE MARKET, BY REGION

12.1 INTRODUCTION

FIGURE 32 CHINA TO REGISTER THE HIGHEST CAGR DURING THE FORECAST PERIOD

TABLE 56 METAL MATRIX COMPOSITE MARKET SIZE, BY REGION, 2018–2025 (USD MILLION)

TABLE 57 METAL MATRIX COMPOSITE MARKET SIZE, BY REGION, 2018–2025 (TON)

12.2 NORTH AMERICA

FIGURE 33 NORTH AMERICA: METAL MATRIX COMPOSITE MARKET SNAPSHOT

TABLE 58 NORTH AMERICA: METAL MATRIX COMPOSITE MARKET SIZE, BY COUNTRY, 2018–2025 (USD MILLION)

TABLE 59 NORTH AMERICA: METAL MATRIX COMPOSITE MARKET SIZE, BY COUNTRY, 2018–2025 (TON)

TABLE 60 NORTH AMERICA: METAL MATRIX COMPOSITE MARKET SIZE, BY END-USE INDUSTRY, 2018–2025 (USD MILLION)

TABLE 61 NORTH AMERICA: METAL MATRIX COMPOSITE MARKET SIZE, BY END-USE INDUSTRY, 2018–2025 (TON)

TABLE 62 NORTH AMERICA: METAL MATRIX COMPOSITE MARKET SIZE, BY MATRIX TYPE, 2018–2025 (USD MILLION)

TABLE 63 NORTH AMERICA: METAL MATRIX COMPOSITE MARKET SIZE, BY MATRIX TYPE, 2018–2025 (TON)

TABLE 64 NORTH AMERICA: METAL MATRIX COMPOSITE MARKET SIZE, BY PRODUCTION TECHNOLOGY, 2018–2025 (USD MILLION)

TABLE 65 NORTH AMERICA: METAL MATRIX COMPOSITE MARKET SIZE, BY PRODUCTION TECHNOLOGY, 2018–2025 (TON)

TABLE 66 NORTH AMERICA: METAL MATRIX COMPOSITE MARKET SIZE, BY REINFORCEMENT TYPE, 2018–2025 (USD MILLION)

TABLE 67 NORTH AMERICA: METAL MATRIX COMPOSITE MARKET SIZE, BY REINFORCEMENT TYPE, 2018–2025 (TON)

TABLE 68 NORTH AMERICA: METAL MATRIX COMPOSITE MARKET SIZE, BY REINFORCEMENT MATERIAL, 2018–2025 (USD MILLION)

TABLE 69 NORTH AMERICA: METAL MATRIX COMPOSITE MARKET SIZE, BY REINFORCEMENT MATERIAL, 2018–2025 (TON)

12.2.1 CANADA

12.2.1.1 Aerospace & defense industry to drive the market

TABLE 70 CANADA: METAL MATRIX COMPOSITE MARKET SIZE, BY END-USE INDUSTRY, 2018–2025 (USD MILLION)

TABLE 71 CANADA: METAL MATRIX COMPOSITE MARKET SIZE, BY END-USE INDUSTRY, 2018–2025 (TON)

12.2.2 US

12.2.2.1 Largest MMC market in the world

TABLE 72 US: METAL MATRIX COMPOSITE MARKET SIZE, BY END-USE INDUSTRY, 2018–2025 (USD MILLION)

TABLE 73 US: METAL MATRIX COMPOSITE MARKET SIZE, BY END-USE INDUSTRY, 2018–2025 (TON)

12.3 EUROPE

FIGURE 34 EUROPE: METAL MATRIX COMPOSITE MARKET SNAPSHOT

TABLE 74 EUROPE: METAL MATRIX COMPOSITE MARKET SIZE, BY COUNTRY,

2018–2025 (USD MILLION)

TABLE 75 EUROPE: METAL MATRIX COMPOSITE MARKET SIZE, BY COUNTRY, 2018–2025 (TON)

TABLE 76 EUROPE: METAL MATRIX COMPOSITE MARKET SIZE, BY END-USE INDUSTRY, 2018–2025 (USD MILLION)

TABLE 77 EUROPE: METAL MATRIX COMPOSITE MARKET SIZE, BY END-USE INDUSTRY, 2018–2025 (TON)

TABLE 78 EUROPE: METAL MATRIX COMPOSITE MARKET SIZE, BY MATRIX TYPE, 2018–2025 (USD MILLION)

TABLE 79 EUROPE: METAL MATRIX COMPOSITE MARKET SIZE, BY MATRIX TYPE, 2018–2025 (TON)

TABLE 80 EUROPE: METAL MATRIX COMPOSITE MARKET SIZE, BY PRODUCTION TECHNOLOGY, 2018–2025 (USD MILLION)

TABLE 81 EUROPE: METAL MATRIX COMPOSITE MARKET SIZE, BY PRODUCTION TECHNOLOGY, 2018–2025 (TON)

TABLE 82 EUROPE: METAL MATRIX COMPOSITE MARKET SIZE, BY REINFORCEMENT TYPE, 2018–2025 (USD MILLION)

TABLE 83 EUROPE: METAL MATRIX COMPOSITE MARKET SIZE, BY REINFORCEMENT TYPE, 2018–2025 (TON)

TABLE 84 EUROPE: METAL MATRIX COMPOSITE MARKET SIZE, BY REINFORCEMENT MATERIAL, 2018–2025 (USD MILLION)

TABLE 85 EUROPE: METAL MATRIX COMPOSITE MARKET SIZE, BY REINFORCEMENT MATERIAL, 2018–2025 (TON)

12.3.1 GERMANY

12.3.1.1 Automotive & transportation industry to fuel the growth

TABLE 86 GERMANY: METAL MATRIX COMPOSITE MARKET SIZE, BY END-USE INDUSTRY, 2018–2025 (USD MILLION)

TABLE 87 GERMANY: METAL MATRIX COMPOSITE MARKET SIZE, BY END-USE INDUSTRY, 2018–2025 (TON)

12.3.2 FRANCE

12.3.2.1 Presence of leading aircraft manufacturers

TABLE 88 FRANCE: METAL MATRIX COMPOSITE MARKET SIZE, BY END-USE INDUSTRY, 2018–2025 (USD MILLION)

TABLE 89 FRANCE: METAL MATRIX COMPOSITE MARKET SIZE, BY END-USE INDUSTRY, 2018–2025 (TON)

12.3.3 UK

12.3.3.1 Stringent government regulations are boosting the consumption of MMC

TABLE 90 UK: METAL MATRIX COMPOSITE MARKET SIZE, BY END-USE

INDUSTRY, 2018–2025 (USD MILLION)

TABLE 91 UK: METAL MATRIX COMPOSITE MARKET SIZE, BY END-USE
INDUSTRY, 2018–2025 (TON)

12.3.4 REST OF EUROPE

TABLE 92 REST OF EUROPE: METAL MATRIX COMPOSITE MARKET SIZE, BY
END-USE INDUSTRY, 2018–2025 (USD MILLION)

TABLE 93 REST OF EUROPE: METAL MATRIX COMPOSITE MARKET SIZE, BY
END-USE INDUSTRY, 2018–2025 (TON)

12.4 APAC

FIGURE 35 APAC: METAL MATRIX COMPOSITE MARKET SNAPSHOT

TABLE 94 APAC: METAL MATRIX COMPOSITE MARKET SIZE, BY COUNTRY,
2018–2025 (USD MILLION)

TABLE 95 APAC: METAL MATRIX COMPOSITE MARKET SIZE, BY COUNTRY,
2018–2025 (TON)

TABLE 96 APAC: METAL MATRIX COMPOSITE MARKET SIZE, BY END-USE
INDUSTRY, 2018–2025 (USD MILLION)

TABLE 97 APAC: METAL MATRIX COMPOSITE MARKET SIZE, BY END-USE
INDUSTRY, 2018–2025 (TON)

TABLE 98 APAC: METAL MATRIX COMPOSITE MARKET SIZE, BY MATRIX TYPE,
2018–2025 (USD MILLION)

TABLE 99 APAC: METAL MATRIX COMPOSITE MARKET SIZE, BY MATRIX TYPE,
2018–2025 (TON)

TABLE 100 APAC: METAL MATRIX COMPOSITE MARKET SIZE, BY PRODUCTION
TECHNOLOGY, 2018–2025 (USD MILLION)

TABLE 101 APAC: METAL MATRIX COMPOSITE MARKET SIZE, BY PRODUCTION
TECHNOLOGY, 2018–2025 (TON)

TABLE 102 APAC: METAL MATRIX COMPOSITE MARKET SIZE, BY
REINFORCEMENT TYPE, 2018–2025 (USD MILLION)

TABLE 103 APAC: METAL MATRIX COMPOSITE MARKET SIZE, BY
REINFORCEMENT TYPE, 2018–2025 (TON)

TABLE 104 APAC: METAL MATRIX COMPOSITE MARKET SIZE, BY
REINFORCEMENT MATERIAL, 2018–2025 (USD MILLION)

TABLE 105 APAC: METAL MATRIX COMPOSITE MARKET SIZE, BY
REINFORCEMENT MATERIAL, 2018–2025 (TON)

12.4.1 CHINA

12.4.1.1 Fast-growing automotive sector in the country to fuel the growth

TABLE 106 CHINA: METAL MATRIX COMPOSITE MARKET SIZE, BY END-USE
INDUSTRY, 2018–2025 (USD MILLION)

TABLE 107 CHINA: METAL MATRIX COMPOSITE MARKET SIZE, BY END-USE

INDUSTRY, 2018–2025 (TON)**12.4.2 JAPAN**

12.4.2.1 Growing penetration of aluminum MMC in the country

TABLE 108 JAPAN: METAL MATRIX COMPOSITE MARKET SIZE, BY END-USE INDUSTRY, 2018–2025 (USD MILLION)**TABLE 109 JAPAN: METAL MATRIX COMPOSITE MARKET SIZE, BY END-USE INDUSTRY, 2018–2025 (TON)****12.4.3 SOUTH KOREA**

12.4.3.1 Growing implementation in automotive components

TABLE 110 SOUTH KOREA: METAL MATRIX COMPOSITE MARKET SIZE, BY END-USE INDUSTRY, 2018–2025 (USD MILLION)**TABLE 111 SOUTH KOREA: METAL MATRIX COMPOSITE MARKET SIZE, BY END-USE INDUSTRY, 2018–2025 (TON)****12.4.4 INDIA**

12.4.4.1 One of the fastest-growing economies in the world

TABLE 112 INDIA: METAL MATRIX COMPOSITE MARKET SIZE, BY END-USE INDUSTRY, 2018–2025 (USD MILLION)**TABLE 113 INDIA: METAL MATRIX COMPOSITE MARKET SIZE, BY END-USE INDUSTRY, 2018–2025 (TON)****12.4.5 REST OF APAC****TABLE 114 REST OF APAC: METAL MATRIX COMPOSITE MARKET SIZE, BY END-USE INDUSTRY, 2018–2025 (USD MILLION)****TABLE 115 REST OF APAC: METAL MATRIX COMPOSITE MARKET SIZE, BY END-USE INDUSTRY, 2018–2025 (TON)****12.5 LATIN AMERICA****TABLE 116 LATIN AMERICA: METAL MATRIX COMPOSITE MARKET SIZE, BY COUNTRY, 2018–2025 (USD MILLION)****TABLE 117 LATIN AMERICA: METAL MATRIX COMPOSITE MARKET SIZE, BY COUNTRY, 2018–2025 (TON)****TABLE 118 LATIN AMERICA: METAL MATRIX COMPOSITE MARKET SIZE, BY END-USE INDUSTRY, 2018–2025 (USD MILLION)****TABLE 119 LATIN AMERICA: METAL MATRIX COMPOSITE MARKET SIZE, BY END-USE INDUSTRY, 2018–2025 (TON)****TABLE 120 LATIN AMERICA: METAL MATRIX COMPOSITE MARKET SIZE, BY MATRIX TYPE, 2018–2025 (USD MILLION)****TABLE 121 LATIN AMERICA: METAL MATRIX COMPOSITE MARKET SIZE, BY MATRIX TYPE, 2018–2025 (TON)****TABLE 122 LATIN AMERICA: METAL MATRIX COMPOSITE MARKET SIZE, BY PRODUCTION TECHNOLOGY, 2018–2025 (USD MILLION)**

TABLE 123 LATIN AMERICA: METAL MATRIX COMPOSITE MARKET SIZE, BY PRODUCTION TECHNOLOGY, 2018–2025 (TON)

TABLE 124 LATIN AMERICA: METAL MATRIX COMPOSITE MARKET SIZE, BY REINFORCEMENT TYPE, 2018–2025 (USD MILLION)

TABLE 125 LATIN AMERICA: METAL MATRIX COMPOSITE MARKET SIZE, BY REINFORCEMENT TYPE, 2018–2025 (TON)

TABLE 126 LATIN AMERICA: METAL MATRIX COMPOSITE MARKET SIZE, BY REINFORCEMENT MATERIAL, 2018–2025 (USD MILLION)

TABLE 127 LATIN AMERICA: METAL MATRIX COMPOSITE MARKET SIZE, BY REINFORCEMENT MATERIAL, 2018–2025 (TON)

12.5.1 BRAZIL

12.5.1.1 Growing investment in the automotive sector in the country to replace traditional materials

TABLE 128 BRAZIL: METAL MATRIX COMPOSITE MARKET SIZE, BY END-USE INDUSTRY, 2018–2025 (USD MILLION)

TABLE 129 BRAZIL: METAL MATRIX COMPOSITE MARKET SIZE, BY END-USE INDUSTRY, 2018–2025 (TON)

12.5.2 MEXICO

12.5.2.1 Second-largest MMC market in Latin America

TABLE 130 MEXICO: METAL MATRIX COMPOSITE MARKET SIZE, BY END-USE INDUSTRY, 2018–2025 (USD MILLION)

TABLE 131 MEXICO: METAL MATRIX COMPOSITE MARKET SIZE, BY END-USE INDUSTRY, 2018–2025 (TON)

12.5.3 REST OF LATIN AMERICA

TABLE 132 REST OF LATIN AMERICA: METAL MATRIX COMPOSITE MARKET SIZE, BY END-USE INDUSTRY, 2018–2025 (USD MILLION)

TABLE 133 REST OF LATIN AMERICA: METAL MATRIX COMPOSITE MARKET SIZE, BY END-USE INDUSTRY, 2018–2025 (TON)

12.6 MIDDLE EAST & AFRICA

TABLE 134 MEA: METAL MATRIX COMPOSITE MARKET SIZE, BY COUNTRY, 2018–2025 (TON)

TABLE 135 MEA: METAL MATRIX COMPOSITE MARKET SIZE, BY COUNTRY, 2018–2025 (USD MILLION)

TABLE 136 MEA: METAL MATRIX COMPOSITE MARKET SIZE, BY END-USE INDUSTRY, 2018–2025 (USD MILLION)

TABLE 137 MEA: METAL MATRIX COMPOSITE MARKET SIZE, BY END-USE INDUSTRY, 2018–2025 (TON)

TABLE 138 MEA: METAL MATRIX COMPOSITE MARKET SIZE, BY MATRIX TYPE, 2018–2025 (USD MILLION)

TABLE 139 MEA: METAL MATRIX COMPOSITE MARKET SIZE, BY MATRIX TYPE, 2018–2025 (TON)

TABLE 140 MEA: METAL MATRIX COMPOSITE MARKET SIZE, BY PRODUCTION TECHNOLOGY, 2018–2025 (USD MILLION)

TABLE 141 MEA: METAL MATRIX COMPOSITE MARKET SIZE, BY PRODUCTION TECHNOLOGY, 2018–2025 (TON)

TABLE 142 MEA: METAL MATRIX COMPOSITE MARKET SIZE, BY REINFORCEMENT TYPE, 2018–2025 (USD MILLION)

TABLE 143 MEA: METAL MATRIX COMPOSITE MARKET SIZE, BY REINFORCEMENT TYPE, 2018–2025 (TON)

TABLE 144 MEA: METAL MATRIX COMPOSITE MARKET SIZE, BY REINFORCEMENT MATERIAL, 2018–2025 (USD MILLION)

TABLE 145 MEA: METAL MATRIX COMPOSITE MARKET SIZE, BY REINFORCEMENT MATERIAL, 2018–2025 (TON)

12.6.1 UAE

12.6.1.1 Automotive & transportation is the major end-use industry

TABLE 146 UAE: METAL MATRIX COMPOSITE MARKET SIZE, BY END-USE INDUSTRY, 2018–2025 (USD MILLION)

TABLE 147 UAE: METAL MATRIX COMPOSITE MARKET SIZE, BY END-USE INDUSTRY, 2018–2025 (TON)

12.6.2 ISRAEL

12.6.2.1 Aerospace & defense sector to drive the MMC market

TABLE 148 ISRAEL: METAL MATRIX COMPOSITE MARKET SIZE, BY END-USE INDUSTRY, 2018–2025 (USD MILLION)

TABLE 149 ISRAEL: METAL MATRIX COMPOSITE MARKET SIZE, BY END-USE INDUSTRY, 2018–2025 (TON)

12.6.3 REST OF MEA

TABLE 150 REST OF MEA: METAL MATRIX COMPOSITE MARKET SIZE, BY END-USE INDUSTRY, 2018–2025 (USD MILLION)

TABLE 151 REST OF MEA: METAL MATRIX COMPOSITE MARKET SIZE, BY END-USE INDUSTRY, 2018–2025 (TON)

13 COMPETITIVE LANDSCAPE

13.1 MARKET SHARE ANALYSIS

FIGURE 36 MARKET SHARE ANALYSIS

13.2 REVENUE ANALYSIS OF TOP MARKET PLAYERS, 2019

TABLE 152 REVENUE ANALYSIS OF TOP MARKET PLAYERS, 2019

13.3 COMPANY EVALUATION MATRIX

13.3.1 STAR

13.3.2 PERVASIVE

13.3.3 PARTICIPANTS

13.3.4 EMERGING LEADERS

FIGURE 37 METAL MATRIX COMPOSITE MARKET (GLOBAL) COMPETITIVE LEADERSHIP MAPPING, 2019

13.4 STRENGTH OF PRODUCT PORTFOLIO

FIGURE 38 PRODUCT PORTFOLIO ANALYSIS OF TOP PLAYERS IN THE METAL MATRIX COMPOSITE MARKET

13.5 BUSINESS STRATEGY EXCELLENCE

FIGURE 39 BUSINESS STRATEGY EXCELLENCE OF TOP PLAYERS IN METAL MATRIX COMPOSITE MARKET

14 COMPANY PROFILES

(Business Overview, Products Offered, SWOT Analysis, Winning Imperatives, Development and Growth Strategies, Threat from Competition and Right to Win)*

14.1 MATERION CORPORATION

FIGURE 40 MATERION CORPORATION: COMPANY SNAPSHOT

FIGURE 41 MATERION CORPORATION: SWOT ANALYSIS

14.2 CPS TECHNOLOGIES CORPORATION

FIGURE 42 CPS TECHNOLOGIES CORPORATION: COMPANY SNAPSHOT

FIGURE 43 CPS TECHNOLOGIES CORPORATION: SWOT ANALYSIS

14.3 GKN SINTER METALS

FIGURE 44 GKN SINTER METALS: SWOT ANALYSIS

14.4 3M

FIGURE 45 3M: COMPANY SNAPSHOT

FIGURE 46 3M: SWOT ANALYSIS

14.5 DESTSCE EDELSTASLWERKE GMBH

FIGURE 47 DESTSCE EDELSTASLWERKE GMBH: SWOT ANALYSIS

14.6 METAL MATRIX CAST COMPOSITES, LLC

14.7 PLANSEE SE

14.8 CERAMTEC

FIGURE 48 CERAMTEC: COMPANY SNAPSHOT

14.9 SANDVIK AB

FIGURE 49 SANDVIK AB: COMPANY SNAPSHOT

14.10 FERROTEC CORPORATION

14.11 OTHER COMPANIES

14.11.1 DWA ALUMINUM COMPOSITES

14.11.2 SITEK INSULATION

14.11.3 TALON COMPOSITES

14.11.4 FABRISONIC

14.11.5 MC 21

14.11.6 COMPOSITES METAL TECHNOLOGY

14.11.7 TISICS

14.11.8 AMETEK SPECIALTY METAL PRODUCTS

14.11.9 MBN NANOMATERIALIA

*Business Overview, Products Offered, SWOT Analysis, Winning Imperatives, Development and Growth Strategies, Threat from Competition and Right to Win might not be captured in case of unlisted companies.

15 APPENDIX

15.1 DISCUSSION GUIDE

15.2 KNOWLEDGE STORE: MARKETSANDMARKETS' SUBSCRIPTION PORTAL

15.3 AVAILABLE CUSTOMIZATIONS

15.4 RELATED REPORTS

15.5 AUTHOR DETAILS

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