



JADE CHEMICAL S.L.

BROADBAND EMI SHIELDING ABSORBING PRODUCTS

COMPANY PROFILE

JADE CHEMICA was founded in Madrid, Spain, in 2023, one of our key business areas is Broadband EMI Shielding & Absorbing Products. We provide not only standard products but also offer customized solutions tailored to specific customer requirements.

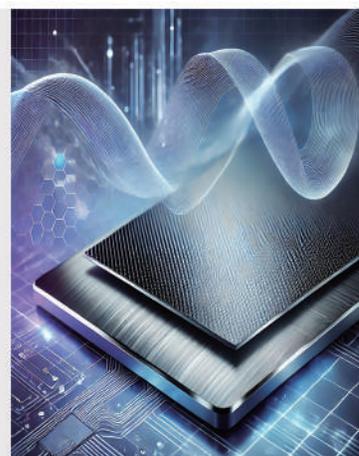
Our MXene based wideband absorbers utilize an innovative two-dimensional metal carbide/nitride material. Compared to traditional metal shielding materials, MXene maintains high electrical conductivity while offering additional advantages such as lightweight properties, high surface activity, and ease of processing and shaping. By leveraging its hydrophilic nature, we incorporate MXene into various water-based resins, paints, and other materials. These MXene composites can be applied to stainless steel, acrylic, glass, and other common surfaces, providing customers with a wider range of options for electromagnetic shielding solutions.

The company was first established in China in 2013 and has one R&D facility and two manufacturing plants in China, with customers across multiple industries worldwide. We have built a strong global presence. Our sales and service team in Europe, along with a dedicated warehouse, ensures efficient and localized support for European customers.

Beyond delivering high-quality products, we are committed to providing integrated logistics and warehousing services, offering our customers a seamless and worry-free experience. We strive to create value for our customers, shareholders, and employees, guided by our philosophy of pursuing excellence and continuous innovation.

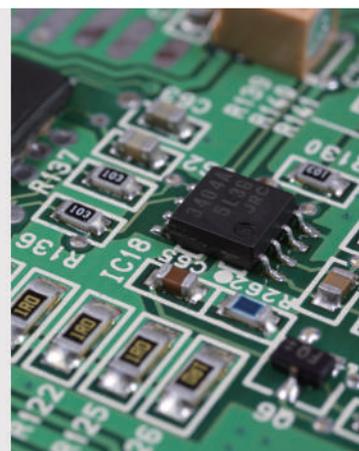
01 Production Control

Strict and prudent working attitude, highly efficient management, and advanced facilities are essential to product safety and quality. Jade Chemical has implemented an advanced production line with automatic control to assure the homogeneity of products. The production and quality control always follows the ISO 9001 regulations and principles strictly.



02 Quality Control

We have established and implemented an integrated quality assurance system. We closely monitor the quality from raw materials to final products by using a variety of advanced analytical instruments such as gas chromatography, infrared analyzer, high performance liquid chromatography, gel instrument, thermal analysis system etc.



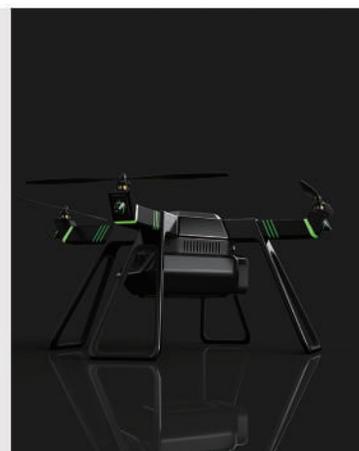
03 Research and Development Center

Innovation is the engine of the Jade Chemical growth. After years of efforts, our company in such aspects as scientific research development, technology industrialization formed own advantages, not only can we provide high quality products, to undertake a variety of analysis detection, also can undertake chemical or entrusted by customers at home and abroad or cooperate new material, new technology, new technology research and development. And a number of patented products.



04 Custom Service

Jade Chemical is engaged in providing highly individualized solutions and innovative to our customers. We discarded traditional "product oriented" way of service in the industry. Based on our powerful R&D, product testing, and application technology platforms, we are able to individualize our products according to our customers' need and optimize our products' performance in every respect. We can help our customers derive the economic and competitive advantage over other companies in the industry and maximize their added value.



Contents

Series 1: Conventional Electromagnetic Shielding Products

Introduction to electromagnetic shielding products	2
1-1. Flexible magnetic patch	3
1-2. Conductive foam	4
1-3. Conductive cloth	5
1-4. Absorbing rubber	6

Series 2: Broad-band Electromagnetic Shielding Products

Introduction of new two-dimensional wide-band shielding materials	7
2-1. MXene-based conductive fabrics	8
2-2. MXene-based conductive sponge	9
2-3. MXene-based electromagnetic shielding rubber	10
2-4. MXene based carbon fiber plates	11

Series 3: MXene Based Broadband Absorbers

Introduction to MXene broadband absorption mechanism	12
3-1. MXene-based absorbing paints	13
3-2. MXene-based absorber plates	14
3-3. MXene-based absorber terminal products and solutions	15

Series 1: Conventional Electromagnetic Shielding Products

Introduction to Electromagnetic Shielding Products

Functions

Electromagnetic Interference (EMI) Shielding	Prevent external electromagnetic waves from interfering with internal equipment, or prevent internal electromagnetic waves from leaking out to interfere with other equipment.
Radio Frequency Interference (RFI) Shielding	Blocks high-frequency radio frequency signals, commonly found in communication equipment and wireless devices.
Electrostatic Shielding	Prevents static electricity accumulation and discharge, and protects electronic components.
Magnetic Field Shielding	Weakens or eliminates the effects of low-frequency magnetic fields, commonly used in power equipment and medical equipment.

Fields of Application

Electronic Equipment	Mobile phones, computers, TVs, etc., to prevent electromagnetic interference from affecting performance.
Aerospace	Aircraft, satellites, drones, etc., to ensure that the equipment works normally in a strong electromagnetic environment.
Medical Equipment	MRI, CT, etc., to prevent electromagnetic interference from affecting imaging and diagnosis.
Automotive Industry	Electric and hybrid vehicles to prevent electromagnetic interference from affecting electronic systems.
Military and Defense	Radar, communication equipment, etc., to prevent electromagnetic interference and signal leakage.

Typical Materials

Metals	Copper, aluminum, steel, shielded by reflecting and absorbing electromagnetic waves.
Conductive Polymers	Lightweight and easy to process, suitable for equipment with complex shapes.
Composite Materials	Combine the advantages of a variety of materials to provide better shielding.
Nanomaterials	Carbon nanotubes and graphene have excellent conductivity and shielding properties.

Selection Guide

Frequency Range	Different materials have different shielding effects on electromagnetic waves at different frequencies.
Thickness and Layers	Affect the shielding effect, which needs to be designed according to specific needs.
Environmental factors	Temperature, humidity, etc., affect the performance and life of the material.

Performance

Shielding Effectiveness (SE)	The main measure of a material's shielding ability.
Standard Test Methods	ASTM D4935, MIL-STD-285, etc., to ensure that the material meets the requirements.

The Company's Product route

High-performance Materials	To develop materials with wider wavelength bands and higher shielding effectiveness.
Multifunctional Material	Materials with the characteristics of electromagnetic shielding, thermal conductivity, and corrosion resistance.
Eco-friendly Materials	To reduce environmental impact and promote sustainable development.

Series 1: Conventional Electromagnetic Shielding Products

1-1. Flexible Magnetic Patch

Product Overview



A flexible magnetic material, with excellent electromagnetic shielding performance, can effectively suppress electromagnetic interference (EMI), widely used in electronic equipment, communication equipment, medical equipment and other fields.

Features

- Frequency Range(100K-6GHz) Shielding Effectiveness: >8dB
- Good flexibility, easy processing and installation, corrosion resistance

Product Model and Parameters

Model	Thickness (mm)	Dimensions (mm)	Shielding Effectiveness (dB)	Application sectors
SMP-010-100	0.10	100 x 100	>8	3C electronic devices such as mobile phones and tablets
SMP-010-150	0.10	150 x 150	>8	3C electronic devices such as mobile phones and tablets
SMP-010-200	0.10	200 x 200	>8	3C electronic devices such as mobile phones and tablets
SMP-020-100	0.20	100 x 100	>10	Medium-sized electronic devices such as laptops, routers, etc
SMP-020-150	0.20	150 x 150	>10	Medium-sized electronic devices such as laptops, routers, etc
SMP-020-200	0.20	200 x 200	>10	Medium-sized electronic devices such as laptops, routers, etc
SMP-030-100	0.30	100 x 100	>12	Large electronic devices such as servers and base stations
SMP-030-150	0.30	150 x 150	>12	Large electronic devices such as servers and base stations
SMP-030-200	0.30	200 x 200	>12	Large electronic devices such as servers and base stations
SMP-050-100	0.50	100 x 100	>15	Scenarios that require special high shielding
SMP-050-150	0.50	150 x 150	>15	Scenarios that require special high shielding
SMP-050-200	0.50	200 x 200	>15	Scenarios that require special high shielding

Note: Above parameters are for reference only and can be customized according to customer needs.

Series 1: Conventional Electromagnetic Shielding Products

1-2. Conductive Foam

Product Overview



Conductive foam material has excellent electromagnetic shielding properties and can effectively suppress electromagnetic interference (EMI), and is widely used in electronic equipment, communication equipment, medical equipment and other fields.

Features

- Frequency Range(8.2-12.4GHz) Shielding Effectiveness: >45dB.
- Excellent electrical conductivity, good flexibility, easy processing and installation.

Product Model and Parameters

Model	Thickness (mm)	Dimensions (mm)	Shielding Effectiveness (dB)	Application sectors
CF-010-100	1.0	100 x 100	45	High-frequency equipment such as radar and satellites
CF-010-150	1.0	150 x 150	45	High-frequency equipment such as radar and satellites
CF-010-200	1.0	200 x 200	45	High-frequency equipment such as radar and satellites
CF-020-100	2.0	100 x 100	50	Special scenarios that require high shielding performance
CF-020-150	2.0	150 x 150	50	Special scenarios that require high shielding performance
CF-020-200	2.0	200 x 200	50	Special scenarios that require high shielding performance
CF-030-100	3.0	100 x 100	55	Scenarios that require extremely high shielding performance
CF-030-150	3.0	150 x 150	55	Scenarios that require extremely high shielding performance
CF-030-200	3.0	200 x 200	55	Scenarios that require extremely high shielding performance
CF-050-100	5.0	100 x 100	60	Special customization needs
CF-050-150	5.0	150 x 150	60	Special customization needs
CF-050-200	5.0	200 x 200	60	Special customization needs

Note: Above parameters are for reference only and can be customized according to customer needs.

Series 1: Conventional Electromagnetic Shielding Products

1-3. Conductive Cloth

Product Overview



Conductive cloth is an electromagnetic shielding fabric with excellent electromagnetic shielding properties and effective suppression of electromagnetic interference (EMI), which is widely used in electronic equipment, communication equipment, medical equipment and other fields.

Features

- Frequency range (30-1500MHz) Shielding effectiveness: >65dB
- Good flexibility, easy to process and install.

Product Model and Parameters

Model	Thickness (mm)	Dimensions (mm)	Shielding Effectiveness (dB)	Application sectors
ESC-010-100	0.10	100 x 100	65	Electronic equipment, communication equipment, etc
ESC-010-150	0.10	150 x 150	65	Electronic equipment, communication equipment, etc
ESC-010-200	0.10	200 x 200	65	Electronic equipment, communication equipment, etc
ESC-020-100	0.20	100 x 100	70	Special scenarios that require high shielding performance
ESC-020-150	0.20	150 x 150	70	Special scenarios that require high shielding performance
ESC-020-200	0.20	200 x 200	70	Special scenarios that require high shielding performance
ESC-030-100	0.30	100 x 100	75	Scenarios that require extremely high shielding performance
ESC-030-150	0.30	150 x 150	75	Scenarios that require extremely high shielding performance
ESC-030-200	0.30	200 x 200	75	Scenarios that require extremely high shielding performance
ESC-050-100	0.50	100 x 100	80	Special customization needs
ESC-050-150	0.50	150 x 150	80	Special customization needs
ESC-050-200	0.50	200 x 200	80	Special customization needs

Note: Above parameters are for reference only and can be customized according to customer needs.

Series 1: Conventional Electromagnetic Shielding Products

1-4. Absorbing Rubber

Product Overview



Absorbing Rubber is a kind of absorbing rubber material, with excellent electromagnetic wave absorption performance, can effectively reduce electromagnetic wave reflection, widely used in microwave anechoic chamber, radar testing, communication equipment and other fields.

Features

- Frequency range (60-80GHz) Shielding effectiveness: >10dB
- Good flexibility, easy to process and install. High temperature and corrosion resistance.

Product Model and Parameters

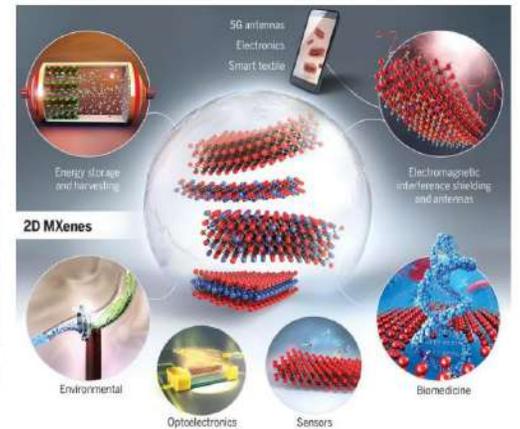
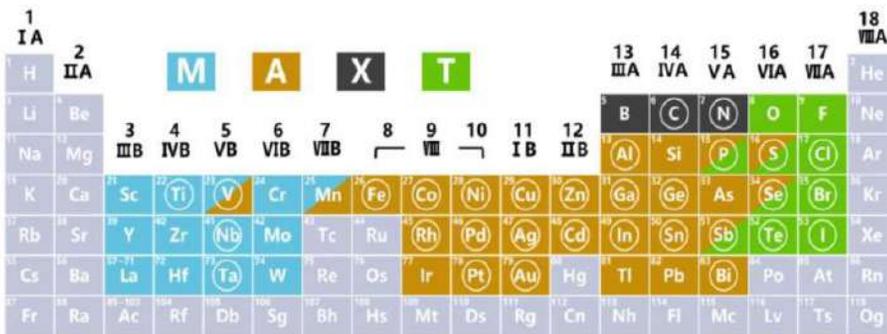
Model	Thickness (mm)	Dimensions (mm)	Shielding Effectiveness (dB)	Application sectors
AR-010-100	1.0	100 x 100	>10	Microwave anechoic chambers, radars, etc
AR-010-150	1.0	150 x 150	>10	Microwave anechoic chambers, radars, etc
AR-010-200	1.0	200 x 200	>10	Microwave anechoic chambers, radars, etc
AR-020-100	2.0	100 x 100	>15	Special scenarios that require high shielding performance
AR-020-150	2.0	150 x 150	>15	Special scenarios that require high shielding performance
AR-020-200	2.0	200 x 200	>15	Special scenarios that require high shielding performance
AR-030-100	3.0	100 x 100	>20	Scenarios that require extremely high shielding performance
AR-030-150	3.0	150 x 150	>20	Scenarios that require extremely high shielding performance
AR-030-200	3.0	200 x 200	>20	Scenarios that require extremely high shielding performance
AR-050-100	5.0	100 x 100	>25	Special customization needs
AR-050-150	5.0	150 x 150	>25	Special customization needs
AR-050-200	5.0	200 x 200	>25	Special customization needs

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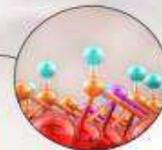
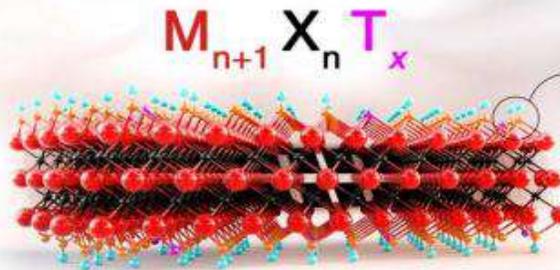
Series 2: Broadband Electromagnetic Shielding Products

Introduction

The Elemental Composition, Structure and Application of MXenes

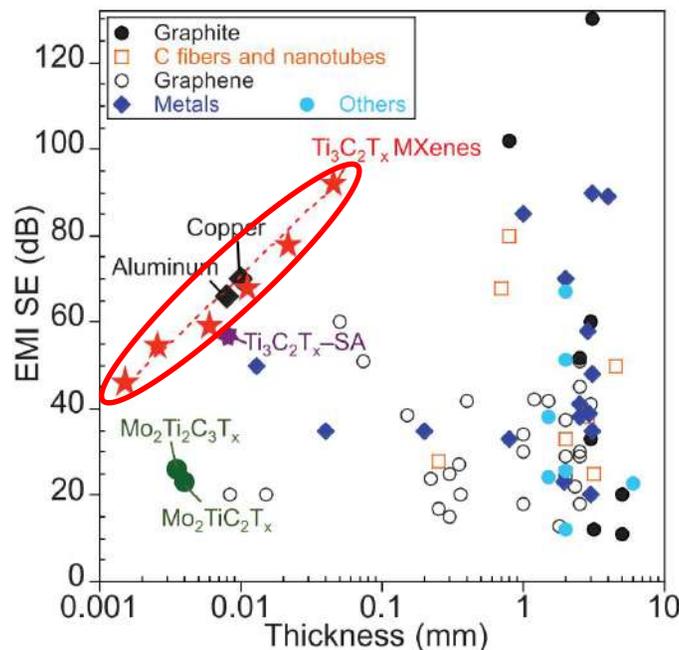


- M: Transition metal
- X: Carbon/Nitrogen
- T_x: Surface groups



Surface terminations

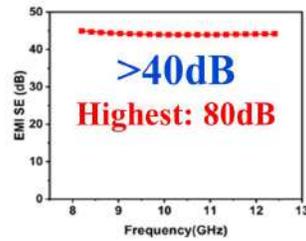
Advantages of MXene's Electromagnetic Shielding Properties



Series 2: Broadband Electromagnetic Shielding Products

2-1. MXene Based Conductive Fabrics

Product Overview



This product is a new MXene-based conductive fabric with advanced 2D MXene material as a functional layer with ultra-wideband electromagnetic shielding performance covering the kHz to GHz and terahertz bands. The product has the advantages of lightness, flexibility, corrosion resistance, etc., and can be widely used in electronic equipment, communication equipment, medical equipment, aerospace and other fields.

Features

- Ultra-wideband shielding:** Covers the 10kHz-1THz band to meet the needs of different application scenarios.
- High Shielding Effectiveness:** When the mass loading of MXene reaches 0.5mg/cm², the shielding effectiveness in 8-12GHz band is >40dB; >80dB shielding effectiveness can be achieved with the increase of MXene loading.

Product Model and Parameters

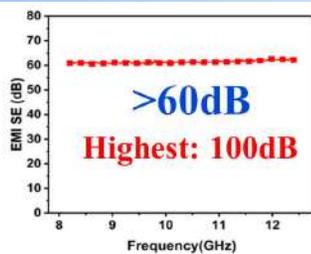
Model	MXene loading (mg/cm ²)	Thickness (mm)	Size (mm)	Shielding effectiveness			Application sectors
				10kHz-1GHz	8-12GHz	100GHz-1THz	
MXF-005-010	0.5	0.10	100 x 100	>20 dB	>40 dB	>40 dB	Electronic equipment, communication equipment, etc
MXF-005-015	0.5	0.10	150 x 150	>20 dB	>40 dB	>40 dB	Electronic equipment, communication equipment, etc
MXF-005-020	0.5	0.10	200 x 200	>20 dB	>40 dB	>40 dB	Electronic equipment, communication equipment, etc
MXF-010-010	1.0	0.15	100 x 100	>25 dB	>50 dB	>40 dB	Special scenarios that require high shielding performance
MXF-010-015	1.0	0.15	150 x 150	>25 dB	>50 dB	>40 dB	Special scenarios that require high shielding performance
MXF-010-020	1.0	0.15	200 x 200	>25 dB	>50 dB	>40 dB	Special scenarios that require high shielding performance
MXF-020-010	2.0	0.20	100 x 100	>30 dB	>60 dB	>40 dB	Scenarios that require extremely high shielding performance
MXF-020-015	2.0	0.20	150 x 150	>30 dB	>60 dB	>40 dB	Scenarios that require extremely high shielding performance
MXF-020-020	2.0	0.20	200 x 200	>30 dB	>60 dB	>40 dB	Scenarios that require extremely high shielding performance
MXF-050-010	5.0	0.30	100 x 100	>40 dB	>80 dB	>40 dB	Special customization needs
MXF-050-015	5.0	0.30	150 x 150	>40 dB	>80 dB	>40 dB	Special customization needs
MXF-050-020	5.0	0.30	200 x 200	>40 dB	>80 dB	>40 dB	Special customization needs

Note: Above parameters are for reference only and can be customized according to customer needs.

Series 2: Broadband Electromagnetic Shielding Products

2-2. MXene Based Conductive Sponge

Product Overview



MXene-based conductive sponge is a functional layer, with ultra-broadband electromagnetic shielding performance, covering kHz to THz and terahertz frequency bands to meet the needs of different application scenarios. The product has the advantages of light weight, high elasticity, corrosion resistance, etc., and can be widely used in electronic equipments, communication equipments, medical equipments, aerospace and other fields.

Features

- Ultra-wideband shielding:** Covers the 10kHz-1THz band to meet the needs of different application scenarios.
- High Shielding Effectiveness:** When the mass loading of MXene reaches 0.5mg/cm², the shielding effectiveness in 8-12GHz band is >60dB; >100dB shielding effectiveness can be achieved with the increase of MXene loading

Product Model and Parameters

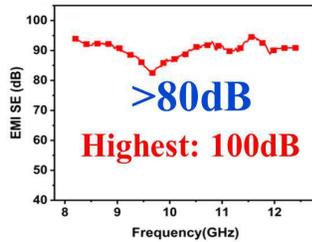
Model	MXene loading (mg/cm ²)	Thickness (mm)	Size (mm)	Shielding effectiveness			Application sectors
				10kHz-1GHz	8-12GHz	100GHz-1THz	
MXS-005-010	0.5	5.0	100 x 100	>30 dB	>60 dB	>40 dB	Electronic equipment, communication equipment, etc
MXS-005-015	0.5	5.0	150 x 150	>30 dB	>60 dB	>40 dB	Electronic equipment, communication equipment, etc
MXS-005-020	0.5	5.0	200 x 200	>30 dB	>60 dB	>40 dB	Electronic equipment, communication equipment, etc
MXS-010-010	1.0	10.0	100 x 100	>40 dB	>80 dB	>40 dB	Special scenarios that require high shielding performance
MXS-010-015	1.0	10.0	150 x 150	>40 dB	>80 dB	>40 dB	Special scenarios that require high shielding performance
MXS-010-020	1.0	10.0	200 x 200	>40 dB	>80 dB	>40 dB	Special scenarios that require high shielding performance
MXS-020-010	2.0	15.0	100 x 100	>50 dB	>100 dB	>40 dB	Scenarios that require extremely high shielding performance
MXS-020-015	2.0	15.0	150 x 150	>50 dB	>100 dB	>40 dB	Scenarios that require extremely high shielding performance
MXS-020-020	2.0	15.0	200 x 200	>50 dB	>100 dB	>40 dB	Scenarios that require extremely high shielding performance
MXS-050-010	5.0	20.0	100 x 100	>60 dB	>100 dB	>40 dB	Special customization needs
MXS-050-015	5.0	20.0	150 x 150	>60 dB	>100 dB	>40 dB	Special customization needs
MXS-050-020	5.0	20.0	200 x 200	>60 dB	>100 dB	>40 dB	Special customization needs

Note: Above parameters are for reference only and can be customized according to customer needs.

Series 2: Broadband Electromagnetic Shielding Products

2-3. MXene Based Electromagnetic Shielding Rubber

Product Overview



MXene based electromagnetic shielding rubber uses advanced two-dimensional MXene material as the functional layer, with ultra-wideband electromagnetic shielding performance, to meet the needs of different application scenarios. The product has the advantages of high elasticity, wear resistance, corrosion resistance, etc., and can be widely used in electronic equipment, communication equipment, medical equipment, aerospace and other fields.

Features

- Ultra-wideband shielding:** Covers the 10kHz-1THz band to meet the needs of different application scenarios.
- High Shielding Effectiveness:** When the mass loading of MXene reaches 0.5mg/cm², the shielding effectiveness in 8-12GHz band is >80dB; >100dB shielding effectiveness can be achieved with the increase of MXene loading

Product Model and Parameters

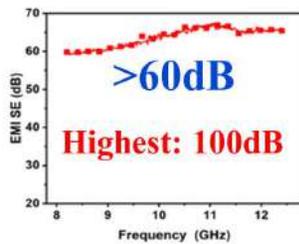
Model	MXene loading (mg/cm ²)	Thickness (mm)	Size (mm)	Shielding effectiveness			Application sectors
				10kHz-1GHz	8-12GHz	100GHz-1THz	
MXR-005-010	0.5	1.0	100 x 100	>40 dB	>80 dB	>40 dB	Electronic equipment, communication equipment, etc
MXR-005-015	0.5	1.0	150 x 150	>40 dB	>80 dB	>40 dB	Electronic equipment, communication equipment, etc
MXR-005-020	0.5	1.0	200 x 200	>40 dB	>80 dB	>40 dB	Electronic equipment, communication equipment, etc
MXR-010-010	1.0	2.0	100 x 100	>50 dB	>90 dB	>40 dB	Special scenarios that require high shielding performance
MXR-010-015	1.0	2.0	150 x 150	>50 dB	>90 dB	>40 dB	Special scenarios that require high shielding performance
MXR-010-020	1.0	2.0	200 x 200	>50 dB	>90 dB	>40 dB	Special scenarios that require high shielding performance
MXR-020-010	2.0	3.0	100 x 100	>60 dB	>100 dB	>40 dB	Scenarios that require extremely high shielding performance
MXR-020-015	2.0	3.0	150 x 150	>60 dB	>100 dB	>40 dB	Scenarios that require extremely high shielding performance
MXR-020-020	2.0	3.0	200 x 200	>60 dB	>100 dB	>40 dB	Scenarios that require extremely high shielding performance
MXR-050-010	5.0	5.0	100 x 100	>70 dB	>100 dB	>40 dB	Special customization needs
MXR-050-015	5.0	5.0	150 x 150	>70 dB	>100 dB	>40 dB	Special customization needs
MXR-050-020	5.0	5.0	200 x 200	>70 dB	>100 dB	>40 dB	Special customization needs

Note: Above parameters are for reference only and can be customized according to customer needs.

Series 2: Broadband Electromagnetic Shielding Products

2-4. MXene Based Carbon Fiber Plates

Product Overview



MXene-based carbon fiber plates uses advanced two-dimensional MXene material as the functional layer, with ultra-wideband electromagnetic shielding performance, covering the kHz-THz frequency band, to meet the needs of different application scenarios. The product has the advantages of high strength, light weight, corrosion resistance, etc., and can be widely used in aerospace, automobile manufacturing and other fields.

Features

- Ultra-wideband shielding:** Covers the 10kHz-1THz band to meet the needs of different application scenarios.
- High Shielding Effectiveness:** When the mass loading of MXene reaches 0.5mg/cm², the shielding effectiveness in 8-12GHz band is >60dB; >100dB shielding effectiveness can be achieved with the increase of MXene loading

Product Model and Parameters

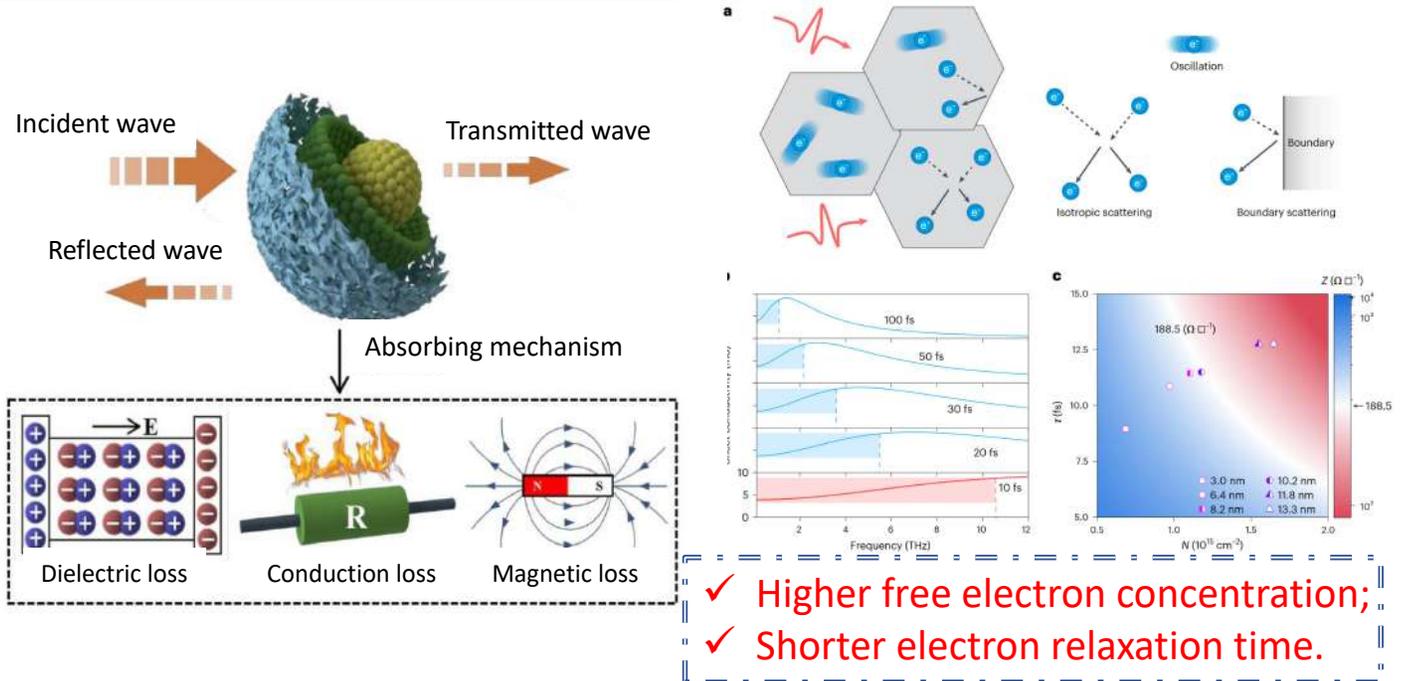
Model	MXene loading (mg/cm ²)	Thick ness (mm)	Size (mm)	Shielding effectiveness			Application sectors
				10kHz-1GHz	8-12GHz	100GHz-1THz	
MXB-005-010	0.5	1.0	100 x 100	>30 dB	>60 dB	>40 dB	Electronic equipment, communication equipment, etc
MXB-005-015	0.5	1.0	150 x 150	>30 dB	>60 dB	>40 dB	Electronic equipment, communication equipment, etc
MXB-005-020	0.5	1.0	200 x 200	>30 dB	>60 dB	>40 dB	Electronic equipment, communication equipment, etc
MXB-010-010	1.0	2.0	100 x 100	>40 dB	>80 dB	>40 dB	Special scenarios that require high shielding performance
MXB-010-015	1.0	2.0	150 x 150	>40 dB	>80 dB	>40 dB	Special scenarios that require high shielding performance
MXB-010-020	1.0	2.0	200 x 200	>40 dB	>80 dB	>40 dB	Special scenarios that require high shielding performance
MXB-020-010	2.0	3.0	100 x 100	>50 dB	>100 dB	>40 dB	Scenarios that require extremely high shielding performance
MXB-020-015	2.0	3.0	150 x 150	>50 dB	>100 dB	>40 dB	Scenarios that require extremely high shielding performance
MXB-020-020	2.0	3.0	200 x 200	>50 dB	>100 dB	>40 dB	Scenarios that require extremely high shielding performance
MXB-050-010	5.0	5.0	100 x 100	>60 dB	>100 dB	>40 dB	Special customization needs
MXB-050-015	5.0	5.0	150 x 150	>60 dB	>100 dB	>40 dB	Special customization needs
MXB-050-020	5.0	5.0	200 x 200	>60 dB	>100 dB	>40 dB	Special customization needs

Note: Above parameters are for reference only and can be customized according to customer needs.

Series 3: MXene Base Broadband Absorbers

Introduction

Conventional Absorption Mechanism vs. MXene Absorption Mechanism



Performance Advantages of MXene-based Absorbers

Features	MXene base absorbers	Conventional absorbers
Frequency band range	Broad (kHz - THz)	Narrow (~ GHz)
Absorbing properties	High (>90% Absorption)	Medium (60%-80%)
Thickness and weight	Ultra-thin and lightweight	Thicker and heavier
Mechanical properties	Flexible and bendable	Rigid and brittle
Chemical stability	Good (can be enhanced with surface modifications)	General (easy to oxidize or corrode)
Processability	Easy (solution-treatable, coated, printable)	Complex (special processes such as high temperature and high pressure are required)
Cost	Medium (The cost of raw materials is high, but the cost of processing is low)	Low to high (depending on materials)
Fields of application	Broad (Electronic devices, communications, stealth technology, medical equipment)	Limited (usually for a specific frequency band or scenario)

Series 3: MXene Base Broadband Absorbers

3-1. MXene-based Absorption Paints

Product Overview



This series of products is a new type of MXene-based absorbing coating, which is prepared by using advanced two-dimensional MXene material as functional filler, using different water-based resins as the matrix, and integrating conventional water-based resin coating additives such as defoamer and leveling agent. The product has ultra-wide-band electromagnetic wave absorption performance, covering the kHz to THz band, and the absorption performance is more than 10dB when the coating thickness is only 0.3mm. The product has the advantages of strong adhesion, convenient construction, environmental protection and non-toxicity, and can be widely used in electronic equipment, communication equipment, medical equipment, aerospace and other fields.

Product Model and Parameters

Product model	Water-based resin type	Substrates	Color	State	Viscosity (cps)	Reflection loss (dB)	Features
MXW-AR	Acrylic resin	Metal, plastic, glass	black	liquid	500-1000	>10 (kHz-THz)	Strong adhesion and good weather resistance
MXW-EP	epoxy resin	Metals, ceramics	Dark gray	liquid	1000-1500	>12 (kHz-THz)	Chemically resistant and mechanically strong
MXW-PU	Polyurethane resin	Plastic, rubber	grey	liquid	800-1200	>11 (kHz-THz)	Good flexibility and abrasion resistance
MXW-PVA	Polyvinyl alcohol resin	Paper, wood	Light gray	liquid	300-500	>10 (kHz-THz)	Environmentally friendly, non-toxic, and low cost
MXW-SR	Silicone	Metal, glass, ceramic	black	liquid	1500-2000	>13 (kHz-THz)	High temperature resistance and good insulation performance

Note:

- Above parameters are typical values and actual performance may vary.
- Absorption test conditions: coating thickness 0.3mm, frequency range kHz-THz.

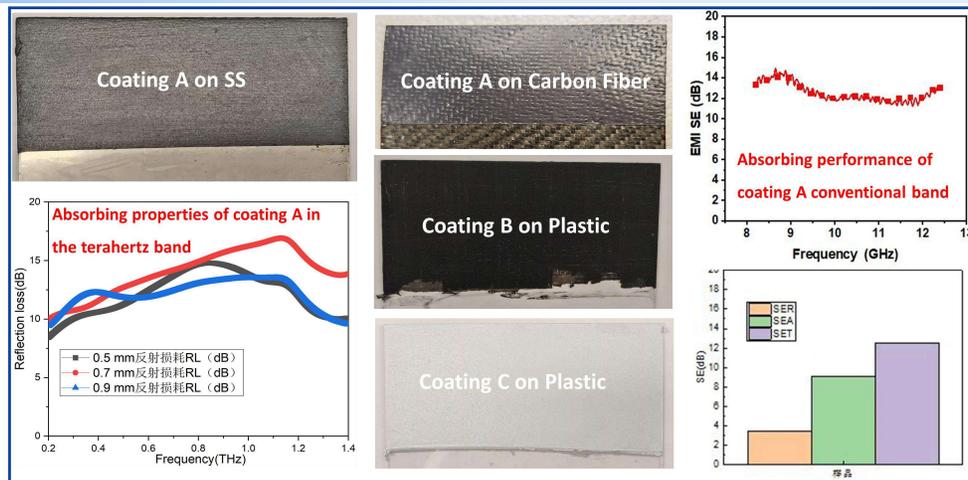
Series 3: MXene Base Broadband Absorbers

3-2. MXene-based Absorber Plates

Product Overview

This series of products is a new type of MXene-based absorbing sheet, which is prepared by using advanced two-dimensional MXene material as a functional filler, with different water-based resins as the matrix, coated on plastic, glass, ceramic, metal and carbon fiber substrates. The product has ultra-wideband electromagnetic wave absorption performance, covering the kHz to THz frequency band, and the absorption performance is more than 10dB. The product has the advantages of light weight, high strength and easy processing, and can be widely used in electronic equipment, communication equipment, medical equipment, aerospace and other fields.

Example Image of the Product



Different types of absorbing coatings and their absorption properties in different wavelength bands

Examples of Product Models and Parameters

Product model	Substrates	Resins	Thickness (mm)	Absorption (dB)	Features
MXB-PL	plastics	acrylic resin	0.5-2.0	>10 (kHz-THz)	Lightweight, easy to process, low cost
MXB-GL	glass	epoxy resin	0.5-2.0	>12 (kHz-THz)	Easy to process, good weather resistance
MXB-CE	ceramics	Silicone	0.5-2.0	>13 (kHz-THz)	High temperature resistance and good insulation performance
MXB-ME	metal	Polyurethane resin	0.5-2.0	>11 (kHz-THz)	High strength, corrosion resistance
MXB-CF	Carbon fiber	Polyvinyl alcohol resin	0.5-2.0	>10 (kHz-THz)	Lightweight, high strength

- Note:**
- Above parameters are typical values and actual performance may vary.
 - Absorption test conditions: coating thickness 0.3mm, frequency range kHz-THz.
 - Support customization

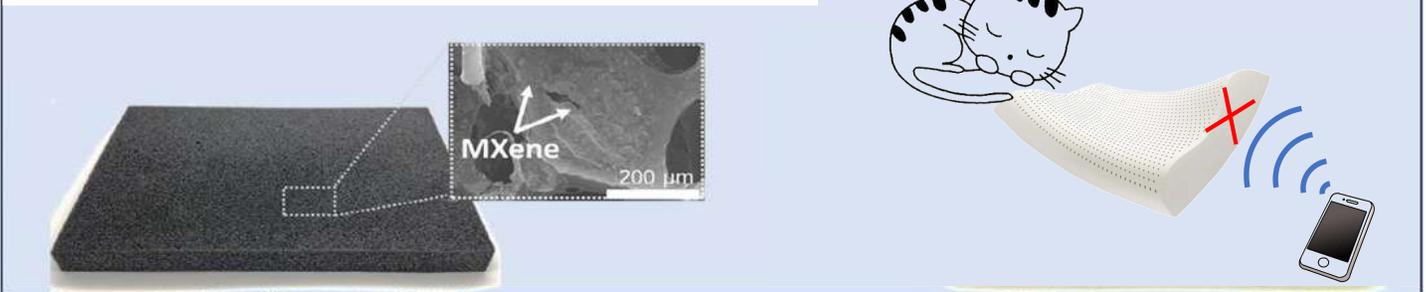
Series 3: MXene Base Broadband Absorbers

3-3. MXene-based Absorber Terminal Products and Solutions

Customized Services for All Kinds of Terminal Products - Cases



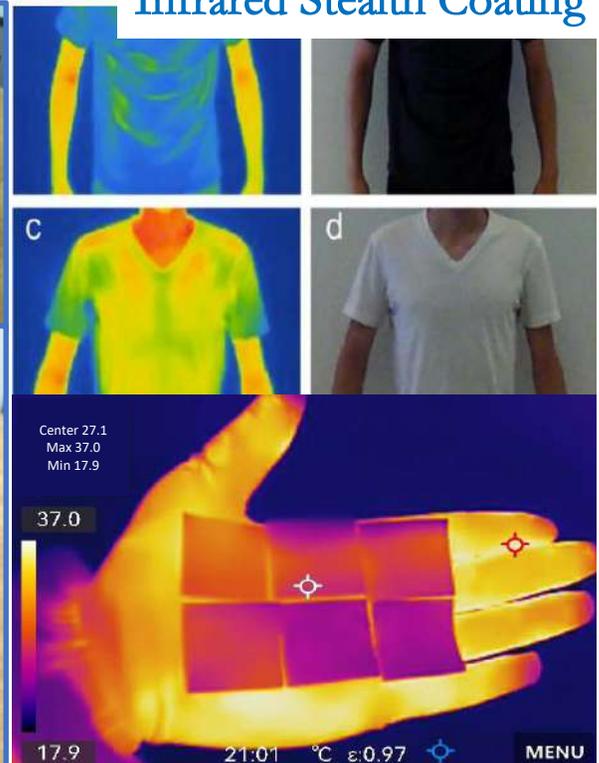
Customized Absorbing Coating Materials



Broadband Electromagnetic Shielding Box



Infrared Stealth Coating

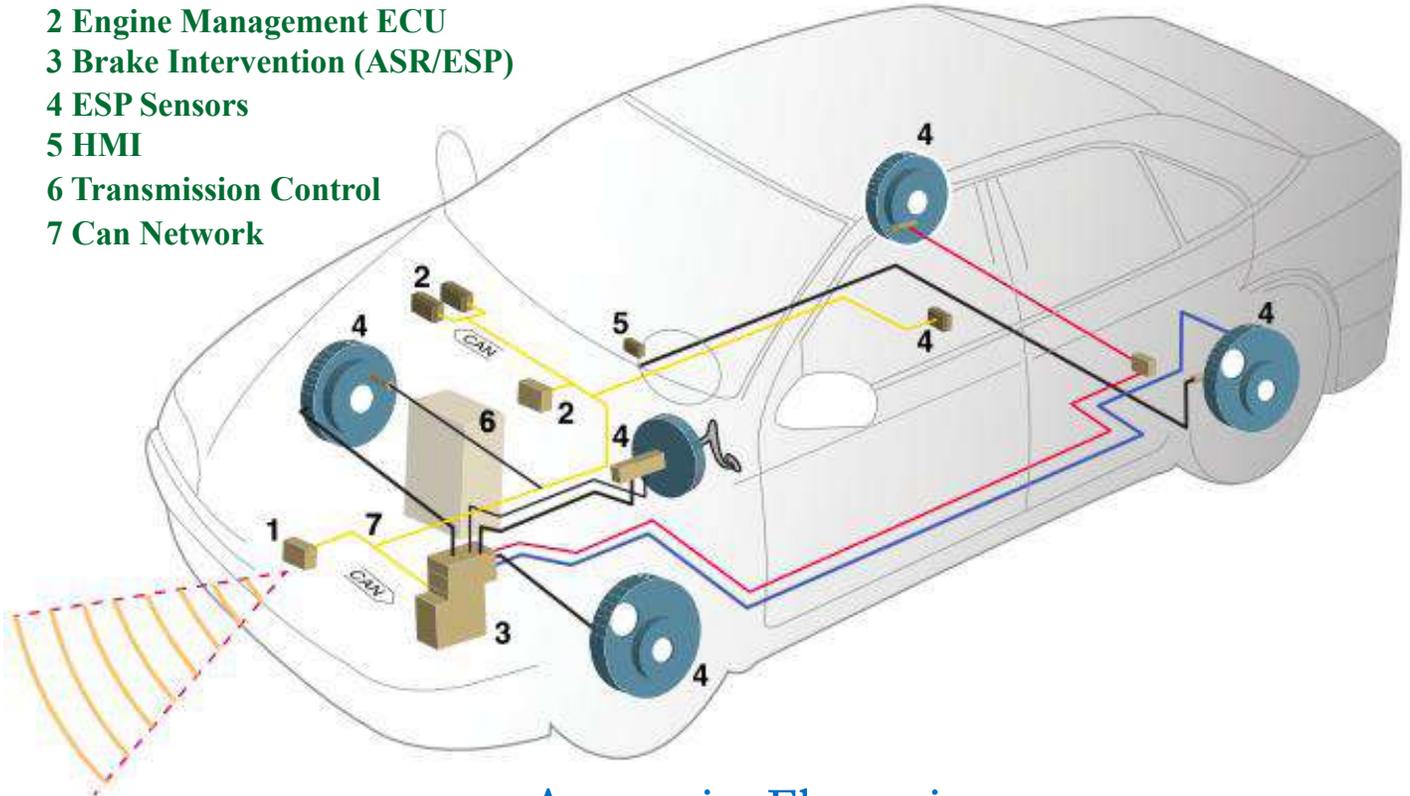


Series 3: MXene Base Broadband Absorbers

3-3. MXene-based Absorber Terminal Products and Solutions

Absorber Solutions for Different Applications

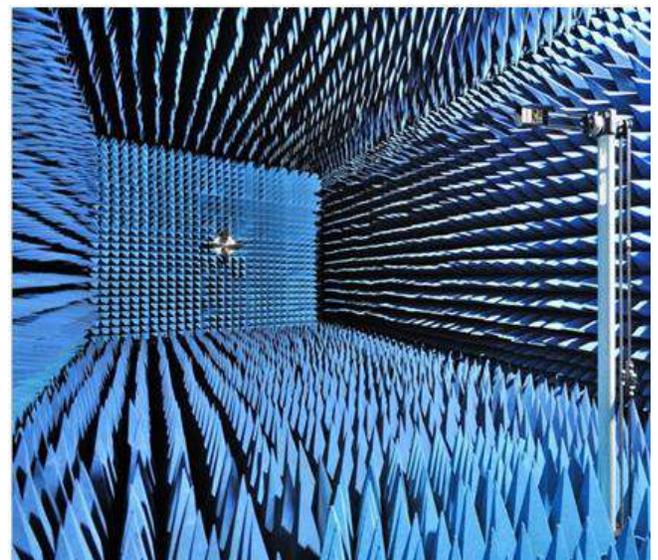
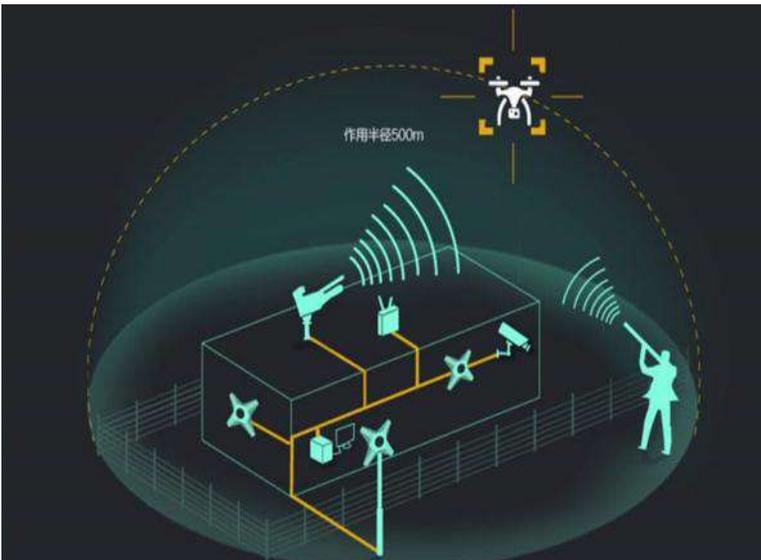
- 1 ACC Radar SCU
- 2 Engine Management ECU
- 3 Brake Intervention (ASR/ESP)
- 4 ESP Sensors
- 5 HMI
- 6 Transmission Control
- 7 Can Network



Automotive Electronics

Drone Anti-jamming

Broadband Microwave Anechoic Chamber





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