



1. Product Name

■ ZCM—Zinc Composite Material Panels

2. Manufacturer

MetalTech-USA
611 Highway 74 South
Suite 900
Peachtree City, GA 30269
Tel: 770-486-8825
Fax: 770-631-7689
Email: info@metaltch-usa.com
Website: www.metaltch-usa.com

3. Product Description

Basic Use

MetalTech-USA offers a wide variety of Zinc Composite Material panel systems for interior and exterior applications.

ZCM

Zinc Composite Material surface face is composed of titanium, zinc and copper to create pre-finished architectural panels used for interior and exterior applications. ZCM can be used for:

- Wall cladding
- Partitions
- Signs
- Ceilings
- Column covers
- Awnings
- Soffits
- Displays
- Sunshade panels

ZCM provides design flexibility through a wide variety of fabrication methods. Flat panels can be curved, bent, routed, drilled, sawed, sheared, punched, trimmed and folded into curves, angles and pan shapes with conventional tools.

Table 1—ZCM Panel/Sheet Dimensions*

ZCM	PrePATINA Blue Gray and PrePATINA Graphite Gray
Thickness	0.157" (4 mm)
Sheet width	39.4" (1000 mm)
Sheet length	177" (4500 mm)
Panel W × L	3 × 12' (91 × 36.6 cm)
Depth/dimensionality	±1.25" (32 mm)
* For sizes and applications outside these ranges, contact MetalTech-USA.	



Composition and Materials

The ZCM material is manufactured by MIJIEPANEL using RHEINZINK and fabricated by MetalTech-USA.

ZCM is a laminated composite panel with total thickness of 0.157 inch (4 mm), including: 0.020 inch (0.5 mm) thick RHEINZINK zinc-copper-titanium alloy face sheet; 0.118 inch (3 mm) thick PE (polyethylene) or FR (fire resistant) core; and 0.020 inch (0.5 mm) thick aluminum back sheet.

Color(s), Finish(es)

ZCM is available in two factory finishes:

- PrePATINA Blue Gray
- PrePATINA Graphite Gray

PixArt and Prisma mechanical finishes are available, please see MetalTech's Decorative Metal SPEC-DATA.

Benefits

- 90 year useful life
- Self-healing patina
- Surface flatness
- Recyclable
- Rigidity
- Sound dampening

Sizes

Sheet and panel sizes are shown on Table 1.

Shapes

ZCM can be shaped into curved and multi-geometrical design elements such as soffits, cornices, window sills, column covers and beam wraps.

Table 2A—RHEINZINK (ZCM) Technical Information

Standard Composition	
Face	0.020" (0.5 mm) PW zinc finish
Core	0.118" (3 mm) PE (LDPR) or FR (Mineral)
Base	0.020" (0.5 mm) Aluminum (service coating or mill finish available)
Standard Dimension and Weight	
Thickness	0.157" (4 mm)
Width	Blue-Gray: 39.4" (1001 mm)
Width	Graphite Gray: 39.4" (1001 mm)
Length	Maximum 177" (4496 mm)
PE Core weight	14.7 lbs./yd. ² (7.8 kg/m ²)
FR Core weight	17.4 lbs./yd. ² (9.2 kg/m ²)
Product Tolerance	
Thickness	±0.008" (± 0.2 mm)
Width	±0.079" (± 2 mm)
Length	±0.157" (± 4 mm)
Weight	±0.7 lbs./m ² (± 0.3 kg/m ²)
Physical Properties ZCM Aluminum Backing	
Specific density	170 lbs./ft ³ (2.72 g/cm ³)
Tensile strength	0.17 btu/ft. ² × h F° (0.26 kcal/m ² × hr × C°)

Table 2B—RHEINZINK (ZCM) Test Reports

Item	ASTM	Unit	Result	
			PE	FR
Unit weight	—	kg/m ²	7.8	9.2
Tensile strength	ASTM D638	kg/m ²	5.6	6.23
Yield strength	ASTM D638	kg/m ²	4.55	4.86
Tensile elongation	ASTM D638	%	16.38	21.26
Flexural strength	ASTM D790	kg/m ²	15.8	14.39
Flexural modulus	ASTM D790	kg/m ²	8924	9396
Thermal conductivity	ASTM C518	cal/scm °C	0.01	0.01
Bond integrity				
Vertical pull	ASTM C297	N/mm ²	7.31	3.83
Drum peel	ASTM D1781	mm N/mm	112.98	213.51
Flatwise shear	ASTM D1002	N/mm ²	3.38	3.96
Fire Behavior				
Core	BS	Result and Classification		
PE	476 part 6	Index 0		
	476 part 7	Class 1		
FR	476 part 4	Pass		

Accessories

- Flashings
- Fasteners
- RHEINZINK rainwater goods
- Underlayments
- Stiffeners
- Clips

Options

MetalTech-USA offers ZCM with choice of core materials; either PE (polyethylene) or FR (fire resistant).

4. Technical Data

Applicable Standards

American Society for Testing and Materials (ASTM)

- ASTM C297—Standard Test Method for Flatwise Tensile Strength of Sandwich Constructions
- ASTM D638—Standard Test
- ASTM D790—Standard Test Method for Determination of Light Hydrocarbons in Stabilized Crude Oils by Gas Chromatography
- ASTM D1002—Standard Test Method for Apparent Shear Strength of Single-Lap-Joint Adhesively Bonded Metal Specimens by Tension Loading (Metal-to-Metal)
- ASTM D1781—Climbing Drum Peel Test for Adhesives

Environmental Considerations

Completely recyclable; ZCM panels provide clean water runoff.

Product Limitations

Store zinc and copper products securely away from each other and create no designs that require these two materials come in contact with each other. Assure that rain water runoff from copper surfaces never contact zinc surfaces. Avoid contact between metals that are further apart on the galvanic scale. Contact MetalTech-USA for additional questions.

Cautions

Comply with manufacturer's recommendations for expansion and contraction in detailing and installation. Design exterior walls with drainage to outside for any water leakage from panel joints and condensation from within the wall construction. Wear gloves at all times when handling RHEINZINK to avoid permanent blemishes caused by hand prints or fingerprints.

5. Installation Instructions

ZCM panel systems are 100 percent shop fabricated.

Methods

Panels can be installed by using perimeter panel extrusions. Rout and return fabrication with dry joint and wet joint applications.



ZCM composite metal panels are adaptable to various installation methods including:

- Mechanical attachment to metal or wood furring strips
- Mechanical attachment to specialty metal sub-framing grids
- Glazed-in attachment at curtain-wall or storefront framing
- Adhesive attachment to gypsum board at interior locations
- Custom combination attachment systems

Precautions (Performance, Safety)

Provide for expansion and contraction of ZCM panels in design and installation.

Weather/Ambient Considerations

Minimum temperature for field fabrication is 48 degrees F (8 C).

Delivery, Storage and Handling

- Deliver and store panels in dry, ventilated shipping crates
- Protect panels from contact with moisture
- Allow panels to acclimatize to storage area for 72 hours before opening shipping crates
- Wear clean cotton gloves whenever handling ZCM, after removal of protective film, to avoid permanent blemishes caused by perspiration from fingerprints

6. Availability and Cost

Please contact MetalTech-USA for availability and pricing information.

7. Warranty

MetalTech-USA offers a two-year workmanship warranty on systems. ZCM panels are warranted for 20 years by the manufacturer.

Please contact MetalTech-USA for further warranty information.

8. Maintenance Instructions

ZCM panels are normally maintenance-free, when properly installed; however, the following recommendations are considered good practice:

- Inspect panels and system components every six months to ensure long term performance
- Do not use abrasive cleaners, pads or brushes
- Repair or replace defective panels or system components as soon as problems are detected
- Clean small test area first to verify intended results before proceeding
- Clean light soiled areas with mild soap and water, from top to bottom and rinse thoroughly
- Use skilled contractors to provide maintenance and repair work in accordance with terms of manufacturer's warranty
- Clean heavy soiled areas with light pressure washing from top to bottom and rinse thoroughly
- Contact manufacturer for complete maintenance instructions
- Maintain per manufacturers maintenance instructions

9. Technical Services

MetalTech-USA provides engineering services for shop drawings, testing and job specific engineering; technical assistance for preparation of project drawings and specifications; and product information upon request.

10. Filing Systems

- MANU-SPEC®
- Additional product information is available from MetalTech-USA upon request