

MATERIAL SAFETY DATA SHEET

MightySlab® wall panel system | Assembly safety summary

Product Description

MightySlab® is a patented 16 mm composite wall panel consisting of:

- 6 mm Premium Italian Porcelain (dry-pressed ceramic slab)
- 10 mm reinforced Mighty Core Board (MCB)
- Bonded with a structural epoxy adhesive

This engineered assembly yields a lightweight, high-strength, low-silica panel for showers, fireplaces, accent walls, and commercial interiors.

1. IDENTIFICATION

Product Name: MightySlab®

Intended Use: Vertical interior architectural surfacing (shower walls, fireplace surrounds, accent walls, commercial interiors).

Physical Form: Rigid laminated composite panel (63" × 126" standard; 16 mm nominal thickness).

2. HAZARD IDENTIFICATION

2.1 Premium Italian Porcelain Slab

- Finished fired slabs are odourless, stable, non-flammable, and not hazardous under normal handling.
- Cutting and other dust-generating processing can produce respirable dust containing crystalline silica. Wet processing reduces dust but does not remove the need for exposure controls.
- Crystalline silica dust may cause respiratory irritation (GHS Category 3) and lung damage through prolonged exposure (Category 1A).

2.2 Mighty Core Board (MCB)

- Rigid polymer foam (PET-based).
- Not considered hazardous when used as intended.
- Fine dust may be generated during cutting, sanding, or milling.
- Molten material (if heated excessively) can cause burns.

2.3 Epoxy Adhesive (BD9102)

- Two-component epoxy adhesive system.
- Non-flammable at room temperature (flash point >110°C).
- Avoid skin and eye contact; uncured resin may cause irritation.

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3. COMPOSITION / INFORMATION ON COMPONENTS

3.1 Premium Italian Porcelain (6 mm)

Ceramic slab produced from natural raw materials (clays, kaolins, feldspathic sands, pigments).

Key mineral components:

- α -Quartz: 7-18%
- Mullite: 5-12%
- Amorphous vitreous phase: 60-70%

3.2 Mighty Core Board (10 mm PET Foam)

Rigid polymeric foam based on polyethylene terephthalate (PET).

3.3 Epoxy Adhesive

Two-part epoxy (2:1 mix ratio) used to bond the porcelain and MCB.

Properties: high strength, Shore D 82, elongation 20%, full cure 24 hrs.

4. FIRST-AID MEASURES

Inhalation

- Move to fresh air if exposed to high dust concentrations from cutting.
- Seek medical attention if persistent irritation occurs.

Skin Contact

- For dust: wash with soap and water.
- For epoxy: wash immediately; remove contaminated clothing.
- For molten MCB (rare/abnormal): cool with water; do not remove adhered material.

Eye Contact

- Rinse for 15-20 minutes; remove contact lenses if easy to do.

Ingestion

- Not applicable for intact panels; seek care if symptoms occur.

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5. FIRE-FIGHTING MEASURES

Premium Italian Porcelain

- Non-flammable.
- No special procedures required.

Mighty Core Board

- Not classified as flammable, but will burn under fire conditions.
- Combustion may release CO and acidic gases.
- Suitable agents: foam, CO2, dry chemical, water spray.

Epoxy Adhesive

- Flash point >110°C; use standard extinguishing methods.

6. ACCIDENTAL RELEASE MEASURES

- For intact panels: no special measures.
- For dust: avoid dispersal, use a HEPA-capable vacuum, and ventilate.

7. HANDLING & STORAGE

Handling

- Use wet-cutting methods when possible.
- When dry-cutting, respirator protection and ventilation are required (due to silica).
- Avoid dust accumulation when processing MCB or porcelain.
- For epoxy: mix according to manufacturer guidance; avoid skin contact.

Storage

- Store panels flat and fully supported.
- Avoid storing porcelain near acids (may cause surface damage).
- Keep foam components away from ignition sources and static discharge potential.

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8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Respirable Crystalline Silica (porcelain dust)

Exposure limits (typical regulatory values referenced in source SDS):

- OSHA PEL: 0.05 mg/m³ (50 micrograms/m³), 8-hour time-weighted average; action level: 0.025 mg/m³ (25 micrograms/m³), 8-hour time-weighted average.
- ACGIH TLV: 0.025 mg/m³

Recommended PPE

- Respiratory: Dust/mist filtering respirator when cutting.
- Eye: Safety goggles with side shields.
- Hands: Gloves (cotton, leather, nitrile for epoxy).
- Clothing: Long sleeves and protective footwear.

Engineering Controls

- Provide adequate ventilation.
- Use wet-cutting and dust-capture systems.

9. PHYSICAL & CHEMICAL PROPERTIES

MightySlab Composite

- Form: Laminated rigid panel
- Color/Finish: Varies by porcelain aesthetic
- Odor: None
- Water Absorption: Porcelain <0.5% (Group Bla)
- Density: Composite is significantly lighter than stone (~165 lbs per panel as noted in product details).

Sub-components

- Porcelain: Brittle solid, insoluble in water; chemically resistant.
- MCB: White polymer foam; melts at ~250°C; decomposition >340°C.

10. STABILITY & REACTIVITY

- Stable under normal conditions.
- Avoid contact with strong acids (porcelain surface) and oxidizing agents (MCB).
- Hazardous decomposition (in fire): CO, aldehydes, acidic gases.

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11. TOXICOLOGICAL INFORMATION

Primary Hazards

- Respirable crystalline silica from porcelain cutting: may cause lung injury over prolonged exposure.
- PET-foam dust: may cause irritation to eyes, skin, or respiratory tract.
- Epoxy adhesive (uncured): may cause irritation or sensitization in some individuals.

Toxicity Notes

- PET foam LD50 >2000 mg/kg (low toxicity).

12. ECOLOGICAL INFORMATION

- Porcelain: inert, non-bioaccumulative.
- PET foam: not biodegradable but immobile in water.
- Epoxy adhesive: cured matrix considered stable; avoid environmental release of uncured components.

13. DISPOSAL CONSIDERATIONS

- Panels can be disposed of as inert construction waste, subject to local regulations.
- Dust and offcuts should be collected and disposed of per regional guidelines.
- Epoxy waste: dispose of following regulations for chemical residues.

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14. TRANSPORT INFORMATION

- Premium Italian Porcelain: Non-hazardous.
- MCB: No transportation restrictions (RID/ADR/IMDG/IATA).
- Epoxy adhesive: Non-regulated for standard shipment.

15. REGULATORY INFORMATION

- Porcelain is classified as an article, not requiring chemical registration under REACH-equivalent frameworks.
- MCB requires no hazard labeling under referenced regulatory systems.
- Epoxy adhesive components may require standard workplace chemical handling compliance.

16. OTHER INFORMATION

This MSDS summarizes safety-critical information relevant to the engineered MightySlab® assembly. For fabrication:

- Wet cutting is strongly recommended to minimize silica exposure.
- Panels may be installed using construction adhesive and can mount directly to studs (per product description).
- MightySlab® eliminates many challenges associated with full-slab shower walls (e.g., weight, fragility, cranes, surface prep).

REFERENCES

OSHA: 29 CFR 1910.1053 and 29 CFR 1926.1153. www.osha.gov/silica-crystalline

For uncured adhesives, consult the individual supplier safety data sheets.