

Introduction to Gypsum Installation

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Designed as a quick-reference guide for beginners and seasoned tradespeople alike.

1. What Is Gypsum?

Property	Details
Composition	Calcium sulfate dihydrate (CaSO ₄ ·2H ₂ O) with a paper or fiberglass facing
Common Names	Drywall, plasterboard, wallboard, sheetrock (brand)
Typical Thicknesses	1/4" (6mm), 3/8" (9mm), 1/2" (12mm), 5/8" (15mm)
Core Uses	Interior walls, ceilings, partitions, fire-resistant assemblies, moisture-resistant (green/blue) areas

2. Types of Gypsum Board

Type	Key Features	Typical Applications
Standard (White)	General purpose, easy to finish	Living rooms, bedrooms, offices
Moisture-Resistant (MR / Green/Blue)	Water-repellent core, mildew-resistant facing	Bathrooms, kitchens, laundry rooms
Fire-Resistant (Type X)	Added glass fibers, ½-hour fire rating per board	Fire walls, garage walls, commercial spaces
Sound-Control (Acoustic)	Denser core, sometimes with additional layers	Home theaters, conference rooms
Impact-Resistant	Reinforced core, tougher surface	Corridors, high-traffic areas
Mold-Resistant (Purple)	Proprietary additives, high mold tolerance	Wet areas, basements

3. Tools & Materials Checklist

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Cutting	Utility knife, drywall saw, rotary cutter, T-square, straight edge
Fastening	Drywall screws (coarse or fine thread), drywall nails, screw gun or drill with clutch
Finishing	Joint tape (paper or fiberglass), joint compound (all-purpose, topping, or setting), sanding block/sponge, corner bead
Safety	Dust mask/respirator, safety glasses, ear protection, gloves
Support	T-bars & joist hangers (for ceilings), stud finder, laser level or chalk line
Accessories	Drywall lift (for ceilings), pry bar, hammer, utility knife refills, cleaning cloths

4. Basic Installation Steps

1. Plan & Layout

- Locate studs/joists with a stud finder.
- Mark stud centers on floor and ceiling.
- Sketch a layout showing board orientation (long edge perpendicular to studs for maximum strength).

2. Measure & Cut

- Measure board length; score with a utility knife along a straight edge.
- Snap the board, then cut the paper backing.
- For openings (doors, windows), cut openings on the board using a drywall saw or rotary cutter.

3. Hang the Boards

- **Walls:** Start at the bottom, attach the first board with screws ½" in from edges and every 12" in along studs.
- **Ceilings:** Use a drywall lift; fasten to joists, spacing screws 12" in apart.
- Stagger joints (avoid aligning vertical joints on adjacent rows).

4. Taping & Mudding

- Apply a thin coat of joint compound over seams.
- Embed paper or fiberglass tape