

# Specification — Lead Lined Plywood

A&L Shielding's lead lined plywood is designed to allow the application of various levels of shielding protection, including heavier lead thickness requirements, to wall surfaces.

## Lead Lined Plywood

### **GENERAL:**

This material is designed to cover surfaces of a room requiring radiation shielding. It is attached to walls using techniques designed to ensure a continuous lead sheet to the height specified.

### **PRODUCT DETAILS:**

Unpierced sheet lead meeting or exceeding Federal Specification QQ-L-201F, Grade C, and which is 99.9 percent pure lead, free from dross, oxide inclusions, laminations, scale blisters or cracks and is factory laminated to plywood panels. The plywood, in 3/4" thickness, conforms to APA Standard PSI-95, Grade A-C or better, interior plywood, sanded two sides.

Lead sheets are 48 wide on 48" plywood. Two-inch wide batten strips are used to shield all joints. Panels may be factory or field cut to a smaller size for ease of handling during erections. This will require more batten strips and installation labor, but may be done due to weight limits during the installation process.

In most cases, panels are mounted to metal studs with conventional drywall screws. Lead lined plywood also can be mounted to the ceiling if lead lining is required above.

Additional sheet lead material is available to permit site physicist-designed shielding in the field at penetrations of sheet lead, including outlet boxes, wall switches, telephone cables, etc. Specify this requirement with order.

### **INSTALLATION:**

Install per local standards and code regulations, which vary somewhat by site location and are governed by the local Authority Having Jurisdiction (AHJ). In all cases, partial pieces should be used wherever possible due to the value of the material. Room calculations assume this will occur.

Size panels to bring lead on plywood into each door and window frame to allow full overlap of shielding in the walls and frames. Shielding of walls over door frames is required if the top of the door openings are below the lead height required in the adjacent walls,

i.e. 6'8" door frame in a 7'0" shielded wall.

Panels are to be installed on heavy gauge metal studs. Recommended installation consists of first installing fastener shields (supplied with panels) in the web of the studs by screwing through the stud face into the fastener shields anchoring it securely. Once all shields are installed horizontal and vertical batten strips will need to be installed at the joint locations. This procedure requires first installing a row of horizontal battens at the lowest joint location followed by installing vertical battens at each vertical joint location then installing another horizontal batten (the vertical batten strips can be provided by the factory at the appropriate length or may be field cut to assure proper fit), then repeating until all joints are shielded. Please note that "shims" may need to be installed at the stud locations not covered by batten strips. Once all batten strips and wall penetrations are shielded to the project physicists' satisfaction the plywood panels may be installed by screwing through the face of the plywood panel into the stud using screws that will penetrate the stud but not penetrate the lead on the "stud strip". Install the drywall to the plywood with a combination of screws and adhesive as required.

### **RESTRICTIONS:**

Lead must be protected from public contact after installation for both environmental and health reasons. Installers should be trained in the safe handling of lead and must observe proper techniques for installation and clean-up.

**WASTE** – Disposal of all scrap lead must be handled in an environmentally responsible manner.



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