NOISE ABSORBING PANELS

Mass Loaded Vinyl (MLV) Membrane

High-density flexible sound barrier — roll format, for wall / floor / ceiling assemblies

Doc Type	**SPEC SUBMITTAL**
Product Code	**LBD-MLV-01**
Rev.	**A — Aug 2026**

CSI MASTERFORMAT
07 21 16 — Blanket Insulation / 09 81 00 Acoustic Treatment (ref.)

SUPPLIED BY
Design Plus Studio / LUBAD® — Kuwait

1.0 GENERAL DESCRIPTION

Mass Loaded Vinyl (MLV) is a limp, dense, non-resonant membrane used as a sound barrier layer within wall, floor, and ceiling assemblies. It functions by mass law rather than absorption — increasing transmission loss through added areal density rather than acoustic damping. Specify as a component within a decoupled or resiliently-mounted assembly for optimal STC/Rw performance; MLV alone is not an absorptive finish material and should be paired with an absorptive layer (e.g. mineral wool, acoustic panel) where reverberation control is also required.

2.0 PRODUCT DATA — ROLL VARIANTS

Property	Variant A — Standard	Variant B — Heavy Duty
Base Material	PVC-based mass-loaded vinyl compound	
Nominal Thickness	3 mm	5 mm
Areal Density	5.8 kg/m² (lab-tested, see §3.0)	~9.8 kg/m² (mfr.-stated "2 lbs/ft²," not lab-verified)
Roll Dimensions	1000 mm × 5000 mm	1000 mm × 3000 mm
Coverage per Roll	5.0 m²	3.0 m²
Finish / Color	Dark charcoal grey, non-woven face	
Custom Sizing	Thickness 1.2–5.0 mm · width to 1.3 m · length to 10 m (subject to MOQ)	
Recommended Use	Walls, ceilings, partitions — standard-duty applications	Floors, heavy doors, party walls with high-noise neighbors, mechanical rooms

3.0 ACOUSTIC PERFORMANCE DATA

3mm Variant — Laboratory Verified	
Test Method	BS EN ISO 10140-2:2010
Rating Method	BS EN ISO 717-1:1997
Test Lab	Acoustic Testing Services Ltd. (HOKLAS-accredited, HK)
Report No.	ATS14-027-RP003
Specimen	3500 × 3000 mm, 3mm / 5.8 kg/m²
Rw (weighted SRI)	**26 dB** (C = −1, Ctr = −4)
$C_{100-5000}$ / Ctr ,100-5000	0 dB / −4 dB

5mm Variant — Manufacturer-Stated	
STC Rating	**STC 34** (supplier claim)
Basis	Manufacturer product literature; test method / lab not disclosed to LUBAD®
Verification Status	Not independently lab-verified at time of issue
Recommendation	Specifiers requiring certified STC/Rw for the 5mm product should request the underlying test report from the manufacturer, or specify the lab-verified 3mm variant where a documented Rw 26 dB is required.

Note: Rw (ISO 717-1) and STC (ASTM E413) use different reference curves and are not numerically interchangeable, though values trend similarly for a given assembly. Laboratory figures reflect flanking-suppressed test chamber conditions per ISO 10140-2; field performance (e.g. ASTC/apparent STC) will typically be lower and depends on the full assembly, not the membrane alone.

4.0 TYPICAL ASSEMBLY & INSTALLATION

1. Finish layer — acoustic panel / cladding (by others)
2. Sound-absorption infill (mineral wool / cotton batt)
3. LUBAD® MLV membrane — single layer, seams taped
4. Substrate — drywall, plywood, or concrete
5. Framing / resilient channel or vibration keels (by others)

Fixing Methods	Staple, nail, screw, or construction adhesive
Seam Treatment	2–3 cm overlap, sealed continuous with MLV seam tape — no gaps
Layering	Two decoupled layers (with air gap) outperform one thicker layer of equal total mass
Cutting	Standard utility knife
Substrate Compatibility	Studs, drywall, concrete, plywood

5.0 PHYSICAL & ENVIRONMENTAL PROPERTIES

Applies to both 3mm and 5mm variants — same base compound, differing only in thickness/mass (see §2.0).

Moisture Resistance	Moisture-proof
Corrosion Resistance	Corrosion-resistant
Mold / Mildew Resistance	Mildew-resistant
Fire Retardant	Yes (per mfr. literature)

Certifications	CE, ISO 9001, SGS
Temperature Behavior	Low-temperature and aging resistant (mfr. claim)
Odor	No odor (mfr. claim)

5.1 CHEMICAL COMPLIANCE — LABORATORY VERIFIED (3MM SAMPLE)

RoHS — Report B-R2504D1658	
Test Lab	Beide (Shenzhen) Product Service Ltd.
Standard	RoHS Directive 2011/65/EU Annex II, as amended by (EU) 2015/863 & (EU) 2017/2102
Result	**Conforms** to RoHS limits
Lead (Pb)	781 mg/kg (rubber layer) — below 1000 mg/kg limit
Cadmium (Cd)	3.9 mg/kg — below 100 mg/kg limit
Hg, Cr(VI), PBB, PBDE, Phthalates (DEHP/DIBP/DBP/BBP)	Not detected

REACH SVHC — Report B-R2504D1659	
Test Lab	Beide (Shenzhen) Product Service Ltd.
Standard	247 SVHC per ECHA candidate list (Regulation (EC) 1907/2006)
Result	Each of 247 SVHC **<0.1% w/w** in submitted sample
Sample Tested	3mm MLV — rubber layer & non-woven cotton facing

Note: Lead is present at 781 mg/kg (rubber) / 746 mg/kg (facing) — within the RoHS 1000 mg/kg threshold but not zero. For occupancies with stricter lead-content requirements (e.g. childcare, healthcare), confirm acceptability of this level against the applicable project standard. Both reports test the 3mm sample only; chemical composition of the 5mm variant is presumed equivalent (same base compound per manufacturer) but not independently tested.

6.0 APPLICABLE SPACE TYPES

•	Recording studios	•	Meeting / boardrooms	•	Conference rooms
•	Home theaters / media rooms	•	Hotel guestrooms	•	Industrial / factory floors
•	Apartment party walls	•	Classrooms / auditoria	•	Multi-function halls
•	Office partitions	•	Mechanical / plant rooms	•	Pipe wrap (water / HVAC)

Acoustic data (§3.0, 3mm variant) per HOKLAS-accredited report ATS14-027-RP003, Acoustic Testing Services Ltd., Hong Kong. STC 34 figure (5mm variant) is manufacturer-stated, unverified by LUBAD® or a third-party lab. Chemical compliance (§5.1) per Beide (Shenzhen) Product Service Ltd. reports B-R2504D1658 (RoHS) and B-R2504D1659 (REACH SVHC), both dated 2025-04-27. Physical and dimensional data from manufacturer product literature. Data subject to revision — confirm current batch certification before specifying on a project.