

Providing "Insulation × High Thermal Conductivity" for Resin Materials

From Evaluation to Co-Development

Your One-Stop Thermal Materials Lab

Full-scale Development Support System Centered on Thermalnite®

U-MAP supports resin material developers struggling with thermal management.

With our proprietary fibrous AlN filler Thermalnite®, we enable both thermal conductivity and strength even with low loading. We offer testing, co-development, and material design to solve your heat challenges.

Why Thermalnite®?

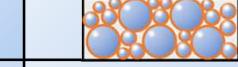
As EVs, power devices, and 5G/6G equipment advance, the need for materials with high thermal conductivity, insulation, and flexibility grows. But conventional fillers have limits.

Conventional Challenges

- ✓ Strength and processability decrease due to high filler loading

Thermalnite® Solution

- ✓ Improved thermal conductivity with minimal additive
- ✓ Achieves both mechanical strength and flexibility

	Spherical Fillers	Thermalnite® Hybrid
Filler Loading	High	Low
Through-Thickness Thermal Conductivity	○	◎
Mechanical Strength / Flexibility	△	○
Structure		
Advantages / Disadvantages	High filler loading makes it difficult to achieve both high thermal conductivity and flexibility	By adding Thermalnite®, both high thermal conductivity and flexibility are achieved

Thermalnite® builds continuous thermal pathways with fewer trade-offs.

Our 2-Step Support System

※ Support through to mass production

STEP 1

Contract Testing

- ✓ Compatibility check
- ✓ Sample sheets or paste
- ✓ Thermal, mechanical, insulation tests

STEP 2

Joint Development

- ✓ Tailor-made Thermalnite®
- ✓ Custom filler combinations
- ✓ Performance optimization

Target Applications

- EVs: Battery adhesives, thermal resins
- Power Devices: High-voltage insulating TIMs
- Communication (5G/6G): RF sheets, EMC shielding
- Optoelectronics: LED/LD encapsulants

Facing These Issues?

- High thermal conductivity weakens mechanical strength
- More fillers, but heat won't escape
- Prototyping takes too long

**Let us help you develop
the next-generation thermal solution.**

