

Providing "Insulation x 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

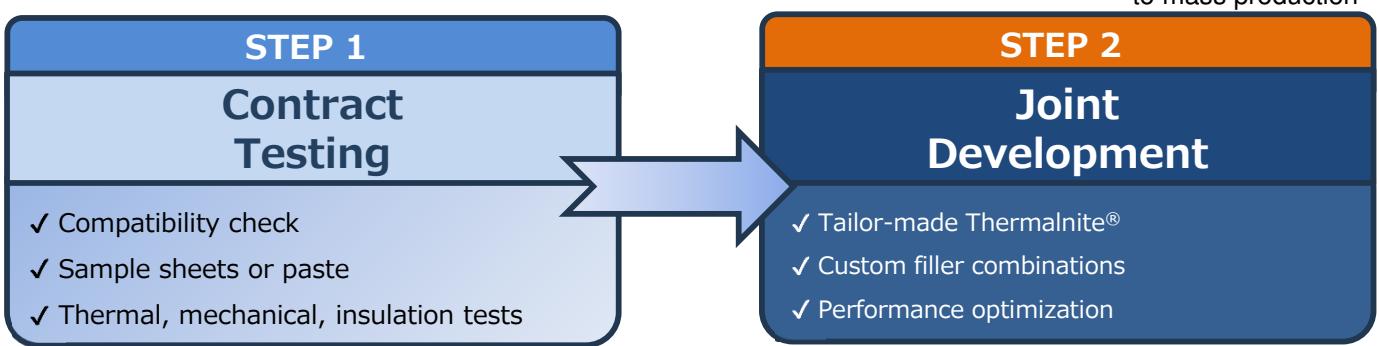
- ✓ Improved thermal conductivity with minimal additive
- ✓ Achieves both mechanical strength and flexibility

	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



## 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.**

