

## Sampling and Shipment of Concrete, FTB or Grout Samples for Thermal Analysis

This document provides comprehensive guidelines for the proper sampling, preparation, and shipment of concrete, FTB, or grout samples for thermal analysis testing by **GEOTHERM USA**.

### **Sample Preparation and Shipping Instructions**

#### **Initial Curing Period**

The samples can be shipped after 24-36 hours of curing period.

#### **Sealing Samples**

Please cap and duct-tape the sample moulds to prevent loss of moisture and to minimize disturbance during transportation.

#### **Packaging**

Samples should be bubble-wrapped, taped, and shipped in a cardboard box or 5-gallon bucket with proper packaging material to minimize disturbance.

#### **Documentation**

Include a chain of custody form (**see below**) with each set of samples in a ziploc bag.

#### **Shipping Method**

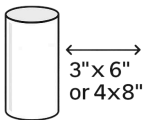
Send all samples via FedEx or UPS overnight service (or 2nd day air service).

#### **Tracking**

Email the tracking number to [questions@geothermusa.com](mailto:questions@geothermusa.com)

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### **Sample Collection Requirements**



#### **Sample Size Requirements**

All samples should be carefully collected and prepared using standardized test molds measuring either 3"x6" or 4"x8"



#### **Pre-approval Samples**

If these are for pre-approval, a set of 3 samples is required. Please include a copy of the mix design and thermal specifications.



#### **Quality Assurance Samples**

If these samples are for Q/A (quality assurance test program), a set of 2-3 should be taken at each station and elevation.



#### **Sample Identification**

All samples must be labeled with the casting date, station number or Mix ID and material type (FTB, Grout, or Concrete).

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[www.geothermusa.com](http://www.geothermusa.com)



## Frequently Asked Questions

**Q: What is the typical turnaround time for test results?**

A: Please send an email to [questions@geothermusa.com](mailto:questions@geothermusa.com) to get the latest turnaround times. Typically, our standard turnaround times are 15-21 business days.

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**Q: Are there any special instructions for taking samples and placing the material into the test cylinders? For instance, placing test cylinders for compressive strength testing requires three lifts, with rodding each lift a specific number of times.**

A: The high-strength and low-strength materials have a slump and will self-level and fill all the annular space. Vibration is not necessary and will create segregation.

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**Q: Do the test cylinders have to be set for a specific length of time before shipping?**

A: Low-strength samples should sit for a minimum of 36 hours. High-strength samples should sit for a minimum of 24 hours. All cylinders should be capped and taped, with proper ID on the side of each sample.

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**Q: Can our field personnel take the samples and make the cylinders, or do we need the testing company to also make these cylinders for the compressive strength tests?**

A: Typically, a third-party contractor who performs strength testing will take the cylinders for thermal testing as well.

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**Q: Are there any special concerns or methods we should consider when shipping the samples?**

A: This is covered in the shipping/sampling instructions. Each sample should be capped, bubble-wrapped, and taped.

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