

CORE ANALYSIS PROGRAM

PROCESS INSTRUCTIONS

1. Complete and sign the Floor Pre-Test Info form.
2. Based on the size of your floor, determine how many cores you will need to take and note them on the sketch per the sample shown on the front page of the form. If you are planning to install an epoxy or MMA floor, perform RH tests also and note their locations and readings on the sketch.
3. Use the Floor Layout Sketch Form to draw a diagram of the floor with approximate dimensions, noting where cores were taken and any adverse conditions per the instructions.
4. Extract the core samples, numbering each per the sketch, preferably on the side, near the bottom of core.
NOTE: Core samples should be a minimum of 1½" diameter x 2" long.
5. Package the cores with the forms and ship to Dur-A-Flex per the instructions below.
6. You will receive your evaluation within 72 hours of receipt.
7. A charge of \$300.00 per core will be invoiced at the time of order.

PACKING & SHIPPING INSTRUCTIONS

Securely pack cores to reduce the risk of damage to the cores and the packaging. Use only corrugated packaging – do not use express envelopes. To ensure a prompt turnaround, please include the following in the package:

- Completed Pre-Test Info form
- Completed Floor Layout Sketch form
- Cores, numbered per the sketch

Address all core sample shipments to:

Dur-A-Flex, Inc.
Attn: Core Testing Dept.
95 Goodwin Street
East Hartford, CT 06108

Please direct any questions to your Dur-A-Flex Territory Sales Manager or contact the Core Analysis Department at 800-253-3539.

CORE ANALYSIS PROGRAM: FLOOR PRE-TEST INFO. FORM

New Submission Complaint (Complaint Only Salts X-Section)

GENERAL INFORMATION (All fields are mandatory for processing.)

Project Name _____ Date _____

Project Facility Address _____ City _____ State _____ Zip code _____

Flooring Contractor _____ Phone _____

Flooring Contractor Address _____ City _____ State _____ Zip code _____

Send Report to _____ Email _____

Size of Floor _____ SF Number of Cores _____ Dur-A-Flex Territory Sales Manager _____

CONCRETE INFORMATION

Approximate Age of Concrete _____ Slab on Grade? Y N Vapor Barrier Installed? Y N Thickness _____ Mils

Previous Flooring System (circle one): Tile* VCT* Sheet Vinyl* Rubber Carpet Wood Sports Floor Epoxy None

*Cores should be pulled from grout or seam lines whenever possible.

(ATSM F2170) Relative Humidity Testing? Y N (If yes, note locations and readings on sketch form.)

Compressive Strength Spec'd? Y N _____ psi Concrete Surface Preparation _____

FLOOR LAYOUT

Use the Floor Layout Sketch form to draw a diagram of the floor to be tested with approximate dimensions.

Note on the drawing as follows:

- © with number to denote where core samples were taken
- RH to denote where relative humidity was tested (if applicable)
- Note any adverse areas (seams, drains, etc.) on the page

Core Testing

The goal is to provide an accurate representation of the floor. Core samples must be a minimum of 1½" diameter x 2" long. As a guide, a minimum of 5 core samples should be taken up to 5,000 SF. (see example below), then 1 for every 1,500 SF thereafter. For smaller areas and / or unusual floor layouts, please contact Dur-A-Flex Tech Support (800-253-3539).



*** Please number your cores ***

I certify that the information provided is true and accurate to the best of my knowledge and have received and agree to the core analysis conditions and qualifications attached.

Signature / Name _____ Date _____

CORE ANALYSIS PROGRAM: FLOOR LAYOUT SKETCH FORM

Draw approximate floor plan with dimensions here. Note where core samples were taken, any adverse conditions (seams, drains, etc.), and RH values as needed.

A large grid of 30 columns and 25 rows, intended for drawing a floor plan sketch. The grid is composed of thin grey lines forming a uniform pattern of squares.

CORE ANALYSIS PROGRAM

FREQUENTLY ASKED QUESTIONS

What is the Dur-A-Flex Core Analysis Program?

The Dur-A-Flex Core Analysis Program is a process from Dur-A-Flex that can predict the potential for osmotic blistering in concrete floors. The process examines core samples for their content of ionic components, along with moisture, the leading cause of floor failures. Based on the findings of this process, Dur-A-Flex can then make a recommendation as to the best flooring options.

How is the Dur-A-Flex Core Analysis Program different from a moisture mitigation system?

Moisture mitigation systems are products that are installed when moisture test results are above acceptable levels. The Dur-A-Flex Core Analysis Program is not a product but a process by which the floor is scientifically analyzed taking into account additional factors such as the levels of various ionic compounds. From this analysis we can predict the probability of osmotic blistering and recommend suitable flooring options.

What causes blistering?

For osmotic blistering to occur four things must be present:

- A semi-permeable membrane (like concrete)
- A level of ionic components
- Moisture vapor emission
- An impermeable topcoat

Without any one of these, blistering cannot occur.

I do calcium chloride testing now. How is the Core Analysis Program different?

Calcium chloride testing provides a “snapshot” of the moisture in a floor at the time it is tested. Because of the many factors that can affect this moisture level, the amount of vapor emission can change over time. The Core Analysis Program, however, is a scientific approach based on the measurement of ionic components in the concrete, a factor that is not easily affected. Since there is always some level of moisture in the slab, the level of these components will predict how likely it is for a failure to occur. Another key difference is that CaCl testing can only be performed above 50° F and 50% (+/- 10%) RH. Cores can be taken at any temperature and RH, both indoors and out.

How many cores do I need to submit for evaluation?

Simply put, we are looking for the best possible representation of the floor. The rule of thumb is one core for every 1,500 square feet. For smaller areas (under 5,000 SF) the ideal sampling will include four corners and one in the center. Please consult the Dur-A-Flex Tech Department for specific applications.

What size core sample should I take?

Core samples should be a minimum of 1½" diameter x 2" long. Also, number the cores with a Sharpie marker (or equivalent) and note their locations on the survey form accordingly.

Do I need to do Relative Humidity Testing?

Only if you are planning to install an epoxy or MMA flooring system and core test results are in the Level 1 / Green Range. To expedite the process, you may wish to conduct the RH testing at the same time you do cores and submit both at the same time. RH testing should be performed in accordance with ASTM F 2170 standards.

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FREQUENTLY ASKED QUESTIONS CONT'D

Who do I send the RH test results to at Dur-A-Flex?

If sending RH test results separately forward them to the Dur-A-Flex Core Dept. with the job reference noted.

After the evaluation, what will I receive from Dur-A-Flex?

Upon completion of the evaluation you will receive a report showing your floor in one of four categories. Each category is based on the level of ionic components found and will allow us to make a recommendation of flooring options best suited for your slab.

What do you recommend for coring?

There are a variety of tools available for coring including coring machines, hammer drills, and grinders. These tools can be sourced through your local professional tool supplier.

What are the typical floor prep requirements?

Floor preparation remains an important part of the process. As with all our flooring products, please refer to our Surface Preparation Guidelines on our website for more information.

CORE ANALYSIS CONDITIONS & QUALIFICATIONS

The results of any core analysis test are necessarily influenced by the condition and selection of the samples to be analyzed. It should be recognized that geological samples are commonly heterogeneous and lack uniform properties. Mineralogical data obtained for a specific sample provides compositional data pertinent to that specific sampling location. Such site-specific data may fail to provide adequate characterization of the range of compositional variability possible within a given project area. Thus the projection of these laboratory findings and values to adjoining, untested areas of the project area is inherently risky, and exceeds the scope of the laboratory work request. Unless otherwise directed, the samples selected for analysis will be chosen to reflect a visually representative portion of the bulk sample submitted for analysis. Where provided, the interpretation of core analysis results constitutes the best geological judgment of Dur-A-Flex, Inc. and is subject to the sampling limitations described above, and the detection limits inherent to semi-quantitative and/or qualitative mineralogical analysis.

Dur-A-Flex, Inc. shall not assume liability, risk or responsibility for any loss or failure associated with the application or use of laboratory data. Dur-A-Flex, Inc. assumes no responsibility nor offers any warranty based upon the data or conclusions presented in this report or its recommendations.

DUR-A-FLEX MAKES NO WARRANTY, EXPRESS OR IMPLIED, AND ALL IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE HEREBY DISCLAIMED. DUR-A-FLEX SHALL NOT BE LIABLE FOR PROSPECTIVE PROFITS OR SPECIAL, INDIRECT, INCIDENTAL OR CONSEQUENTIAL DAMAGES, based upon negligence, breach of warranty, strict liability in tort or any other cause of action. Any controversy or claim arising out of or relating to the within Core Analysis Conditions & Qualifications shall be settled by arbitration in accordance with the commercial arbitration rules of the American Arbitration Association, and judgment upon the award rendered by the arbitrator may be entered in any court having jurisdiction thereof. Venue for the arbitration shall be in Hartford, Connecticut.