Astm c143 pdf

Melissa has a bachelor's degree in geology, and an ACI-certified field and lab technician at Froehling and Robertson.To measure your decline, measure down from the height of your slump cone, using your tamping rod to provide a marker to measure off. The value and use of the ASTM C143Slump is a measure of consistency of the concrete sample, and tells you how the liquid concrete will be. This can help give an idea of the suitability for the job, telling you how easy or difficult it will be to accommodate, and can help predict strength. You can also get a general idea of how much water is in the mix and if it is too wet or too dry for project specifications. One gallon of added water per cubic yard is 200 to 300 psi less force, so knowing the decline of concrete when this liquid is vital to knowing how strong and durable it will be once it hardens. One gallon of water per cubic yard is also about another 1 inch of decline (the decline is measured by how far down the concrete sinks when the cone's fall rises and the concrete is no longer carried in place). The smaller the size of the stone or gravel in the batch, the more water will need to be added, since the smaller stones have a larger surface area and have more areas for cement and water to bond. As the air content in the concrete increases, so does the decline. A superplasticizer, a substance that makes the flow of concrete easier, can be added from time to time to increase the decline without adding water or air and damaging the strength of the concrete. Please clean your slump cones, especially inside, or your test results will be reset by changes in volume. The equipment needed for the Slump TestSlump cone - must have an average thickness of at least 0.06 inches for metal cones. Must have a base that is 8 inches in diameter and top that is 4 inches in diameter. All diameters should be within 1/8 of these sizes. The inner part of the cone should be smooth and clean, and the cone should be free of dents and deformations. Tamping rod - should have a smooth hemisphere tip and should have a 5/8 inch diameter ± 1/16 inches. Should be at least 4 inches longer than the depth of the cone slump. The rod itself cannot be longer than 24 inches. The rod should be smooth and clean. Scoop - Must be big enough to get a representative scoop of concrete and small enough to be where you don't spill any concrete on the ground as you're pouring concrete into a cone. Ruler or measuring tape - must have a marking on the 1/4 inch mark or less. Should be at least 12 inches long. Slump plates - Must have a clean, roving surface without potholes, grooves or indentations. If it has clamps, they should be able to move freely and be completely released without moving the slump during the test. There should be more diameter of the base of the cone of decline. A bucket of water and rags - to clean the equipment before and after the test. Sample vessel - - Car. Should be able to hold at least 1 cubic foot of concrete, and be able to be wheeled comfortably without spilling the sample. Only take off your feet when you are ready to lift the decline of the cone and measure the decline. ASTM C143 ProcedureSample concrete, first check with the crew to make sure that all the water has been added, according to ASTM C172, and mix it thoroughly. Get your test pad in a place free of debris and traffic, and make sure your drop plate is at the very surface level possible. Get a bucket of water and moisten the surface of the drop plate and inside the cone to keep the concrete from sticking to it. Put the slumping cone on the plate and either clamp it down or stand on the leg pieces. If you stand on it, do not move away until the cone is full and ready to be removed. Fill the first layer to 2 and 5/8 inches (1/3 of the cone by volume), making sure it's even inside the cone. The rod layer 25 times, making sure to cover the entire surface area inside the cone, lightly fishing the rod to get the edges. Here, unlike other tests, you don't click on the side of the cone because it causes artificial subsidence and your slump will come out higher than it actually is. Fill the second layer to 6 and 1/8 inches (2/3 of the cone by volume), making sure the concrete layer is a thymable. Rod layer 25 times, and this time make sure you penetrate the first layer by 1 inch. Again, don't touch the side of the cone. Fill the last layer to the top, where the concrete is slightly overflowing. The rod layer 25 times and penetrate the second layer by 1 inch. Don't forget to click on the sides of the cone. This top layer should be filled at all times, so add a little concrete if it starts to go below the edge of the cone. Beat off excess concrete and if you stand on a cone keep it steady and don't get out yet. Clean around the rim of the cone, making sure it is full. (Optional: Place a penny in the center of the cone so you can see where the center is shifting when you pick it up.) Put your hands on the handles of the cone and press down while unclamping the cone or retreat from it. Keep it steady. Lift the cone straight up without sideways movement or twisting. The lifting process should take 3 to 7 seconds, calculate if necessary. Flip the cone upside down next to the fallen concrete, and place your taming rod on top of the cone and over the fallen concrete. Measure from the displaced center to the terminals, and replace the slump to the nearest quarter of an inch. The whole recession procedure should take place in 2.5 minutes. Clean the equipment and discard the used concrete. If the slump is out of the specs, perform the second test to be sure, then tell the superintendent's website if both downturns were out of the spec. Common errors related to Slump TestPlacement plate slump on uneven Make sure to plate the level before you put the concrete in the mold. Pulling the cone slump too fast or pulling the cone horizontally. Pull the cone straight up, smoothly and steadily. Failure to measure the displaced initial centre. Penny trick is very useful when looking for a center. Equipment being out of specification or dirty. The cones and plates should be calibrated annually, and cleaned after each test, especially on the inside of the cone and the surface of the plate. Recessions taken on the first 1/4 or the last 1/4 loads cannot be used to deflect concrete, as they are not the main characteristic of the batch. Use a selected material that has not been mixed up properly. Start the recession test too late when the concrete starts to harden. How to perform the Slump TestASTM C143 quiz For each question, choose the best answer. The answer key is below. How long do you have to lift your cone slump?5 plus or minus 1 second5 plus or minus 2 seconds5 plus or minus 3 secondsWho size tamping rod you use?3/8 diameter5/8 diameterWho long should the recession test take?2 minutes2.5 minutes3true or false: You don't have to touch the side of the cone after each layer How many times do you have the rod of each layer? Key5 response plus or minus 2 seconds5/8 diameter2.5 minutesT25© 2018 Melissa Clason 1. Area 1.1 This test method covers the definition of hydraulic cement concrete decline, both in the laboratory and in the field.1.2 Values stated either in inches-pound units or in SI units should be treated separately as standard. In the text, the SI units appear in brackets. The values stated in each system are not exact equivalents; therefore, each system must be used independently of the other. Combining values from these two systems can result in a non-compliance with the standard.1.3 The text of these standard reference notes and footnotes that provide explanatory materials. These notes and footnotes (except those in the tables and numbers) are not considered standard requirements.1.4 This standard is not intended to address all security issues, if any, related to its use. The user of this standard is responsible for establishing good safety and health practices and determining the applicability of regulatory restrictions before use. (Warning-fresh hydraulic cement compounds are caustic and can cause chemical burns to the skin and tissues with prolonged exposure.) 2. Reference documents (purchase separately) Documents listed below are mentioned within the subject standard, but are not provided within the standard. ASTM Standards C31/C31M Practice for the manufacture and treatment of concrete test samples in the C138/C138M Test Method for (Unit Weight), yield, and air content (gravimetric) concrete C172/C172M Sampling practice freshly tangled concrete concrete The method of testing the air content of freshly squeezed concrete by volumetric Method C231/C231M Test Method for the air content of freshly squeezed concrete by pressure method C670 practice to prepare accuracy and offset statements for testing methods for building materials D638 Testing method for the tense properties of plastics ICS Code ICS Number Code 91.100.30 (concrete UNSPSC Code 30111500 (Concrete and Mortars) Referring to this standard DOI: 10.1520/C0143_C0143M-05 Format citation ASTM C143 / C143M-05, Standard Test Method for Hydraulic Cement Concrete Decline, ASTM International, West Conshoken, PA, 2005, www.astm.org Back to the top value and use 4.1 This testing method is designed to provide the user with a procedure to determine the decline of plastic hydraulic cement concrete. Note 1: This testing method was originally designed to provide a technique to monitor the consistency of unsuptified concrete. In the laboratory, with strict control over all concrete materials, the decline is usually increased in proportion to the water content in this concrete mixture and thus back is associated with the strength of the concrete. In the field, however, such strength of the relationship is not clear and consistently shown. Therefore, the results of the decline in the field should be taken into care of in force. 4.2 This test method is considered applicable to plastic concrete with a rough unit up to 11/2 inches If the rough unit is larger, than 11/2 c. (37.5 mm) in size, the testing method is applied when it is performed on a fraction of concrete passing 11/2-0. sieve 37.5 mm, with a large unit removed under a section called Additional Procedure for large maximum size of aggregate concrete in practice C172/C172M. 4.3 This method of testing is not considered applicable to non-plastic and non-dry concrete. Note 2: Concretes that have a decline of less than 1/2 inch may not be adequately plastic and concrete, having a slump greater than about 9 inches. Caution should be exercised when interpreting such results. 1. The scope of the 1.1 test method covers the definition of hydraulic cement concrete decline both in the laboratory and on the ground. 1.2 Values declared either in SI units or in inches-pound units should be treated separately as standard. In the text, the SI units appear in brackets. The values stated in each system are not necessarily the exact equivalents; therefore, to ensure compliance with the standard, each system must be used independently of the other, and the values of the two systems should not be combined. 1.3 The text of the standard refers to notes and footnotes that provide explanatory material. These notes and footnotes (except tables and numbers) should not be considered as requirements of this standard. 1.4 This standard is not designed to address all security issues, if any, related to its use. The user of this standard is responsible for establishing good safety, health and environmental practices and determining the applicability of regulatory restrictions before they are applied. (Warning -Fresh hydraulic cement mixtures are caustic and can cause chemical burns to the skin and tissues with prolonged exposure.) 1.5 This international standard was developed in accordance with the internationally recognized standardization principles established in the International Standards, Guidelines and Recommendations Decision issued by the World Trade Organization Committee on Trade Barriers to Trade (TBT). 2. Reference documents (purchase separately) Documents listed below are mentioned within the subject standard, but are not provided within the standard. ASTM Стандарты C31/C31M Практика для изготовления и лечения бетонных образцов испытаний в поле C138/C138M Метод тестирования плотности (Unit Weight), Урожайность, и содержание воздуха (гравиметрический) бетона C172/C172M Практика отбора проб свежевыжатого бетона C173/C173M Метод тестирования на содержание воздуха свежевыжатого бетона по объемной метод C231/C231M Метод испытаний для содержания воздуха свежевыжатого бетона методом давления C67 0 Практика подготовки точности и смещения Заявления для методов тестирования строительных материалов D638 Метод тестирования для напряженных свойств пластмасс ICS Код ICS Номер Код 91.100.30 (Бетонные и конкретные продукты) UnSPSC кодекс UNSPSC Код 30111500 (Бетон и минометы) Ссылаясь на этот стандартный DOI: 10.1520/C0143_C0143M-20 Формат цитирования ASTM C143 / C143M-20, Стандартный метод испытаний для спада гидравлического цементного бетона , ASTM International, Западный Conshohocken, Пенсильвания 2020, www.astm.org to return to the top astm c143 pdf. astm c1437. astm c1433. astm c143 pdf free download. astm c1437 pdf. astm c1437 pdf free download. astm c1433 free download. astm c1435

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