

OPERATING INSTRUCTIONS

INFORMATION

**A USER FRIENDLY COMPANY
FOR ASSISTANCE CALL
1-800-299-2039**

**9 A.M. - 4 P.M. EST
AMERICAN SLIP METER®
INDUSTRIAL MEASURING DEVICES**

Your Digital Gauge to Floor Safety



Model ASM 825 Digital

BACKGROUND ON SLIP METERS

Many types and designs of slip meters or friction measuring devices have been developed in the past. Most are bulky, cumbersome designs and have limitations or restrictions, i.e. wet testing with repeatability. Few are intended for actual use in field testing, but rather are designed for in house use.

Different theories and opinions have filled reports, studies and books for years.

Rulings, recommendations, and laws have been passed regarding unsafe flooring and walkways. Consequently, businesses are faced with certain compliance and uncertain remedy.

Simplification has been our goal from day one. Measuring the coefficient of friction of your floor within an acceptable range, with a specific test sample of footwear material, can now be a simple task.

It is important that the operator performing the test do so in a conscientious manner, understanding basic test methods and procedures. By so doing, reliable results may be obtained.

For those seeking information about slip and fall accidents, measuring devices, and safety engineering guidelines, check the list of publications available from Hanrow Press.

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ASM 825 AND TRACEABILITY

American Slip Meter Model ASM 825 is designed to quickly test the static coefficient of friction, using a widely recognized test sensor material, neolite. Neolite is a registered trademark of Goodyear Tire & Rubber Co. The use of neolite as a test material is described in ASTM F609.

APPARATUS: Digital Horizontal Dynamometer Pull Meter
SERIAL NO.: Engraved on Bottom of Meter Sled
WEIGHT: 4.76 lbs. With Sensors Attached
7.38 lbs. Complete Kit/Carrying Case

REFERENCE:
Sensors and Preparation - ASTM F609
Apparatus Use - ASTM D1894, F609
Test Procedures - ASTM F609
Terminology - ASTM F1646
Walkway Surfaces - ASTM F1240, F802
Bathing Facilities - ASTM F462

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TEST SENSORS

Using a drop of glue on sensor mount, place Neolite trademark pattern against glue and slightly rotate to seat and spread glue evenly. Allow to dry 24 hrs. before using. To remove old or worn sensors and glue, soak in water for about 15 minutes, as glue is water soluble.

Your kit also contains two extra sets of test sensor mounts. If neolite is determined to be the primary test material, we suggest you prepare an extra sets of sensors. Should you perform tests on wet surfaces you will have an extra set ready to use for dry testing.

Note: Test sensors (feet) are stamped with numbers on sides to avoid mixing of sets. Extra sets may be ordered with the numbers you request.

PREPARATION OF NEW TEST SENSORS

Place 400 grit wet or dry silicon carbide paper on flat surface, a clipboard is a handy accessory. Place slip meter, sensors attached, on carbide paper and slowly draw across carbide paper four times. Turn slip meter 90 degrees and repeat four sandings. Repeat until you have sanded in all four directions. At least four (4) cycles of this procedure are recommended for the preparation of new test sensors. When completed, use brush to clean sensors and carbide paper of residue. Keep sensors clean at all times. Clean sensors prior to each test.

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BUTTONS

ON/OFF (blue) **NORMAL/PEAK** (red)

Switch OFF when not in use.

CALIBRATION/PEAK MODE (No + sign in display)

Press **ON** button. Stand slipmeter on end. Attach chain with hook to end of shaft. Slowly lift using chain. Reading should be 1.00. Always calibrate within 1% ±

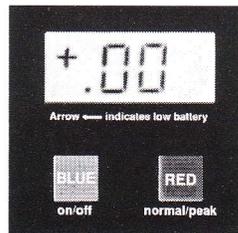
To **decrease reading**, turn shaft to **right** ½ turn and check.

To **increase reading**, turn shaft to **left** ½ turn and check.

TESTING/NORMAL + MODE

Press **ON** button.

Attach monofilament line to shaft and follow procedures on Page 5



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OPERATING PROCEDURES

With newly prepared or clean test sensors in place, set meter gently on surface to be tested. Attach nylon monofilament by placing hook into shaft of instrument. Holding monofilament at its length, with fist of hand doubled, rest palm of hand on surface in direct line with hook (Fig. 1 top of page 6). Control line should be straight and level. Using index finger in ring, slowly curl index finger in towards palm of hand, applying steady pressure until slip meter moves. Note reading of meter. Press reset button 2 times and repeat this process until you have sampled readings in four 90 degree directions. Average the four readings and record this number in the safety log. An unusually high or low reading should be discounted and another reading taken.

Always clean sensors, by sanding and brushing, before and after each test (test rotation) to prevent the accumulation of contaminants which are usually present on floor surfaces.

TESTING DRY SURFACES Loose dirt and other contaminants should be removed or swept free of area being tested. Floor conditions should always be noted in safety log with each test. To determine best condition, test "as is," clean tested area and retest for best condition.

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(Fig. 1)



TESTING WET SURFACES To maintain consistent recordings on wet surfaces, the user needs to be aware that from the moment a testing device is placed on a wet surface the weight of the device starts pressuring the moisture out from under the test sensors. The sooner the test is performed, the more accurate the readings. Floor conditions should always be noted in the safety log. Hold slip meter in one hand, press reset button, attach hook on monofilament line to shaft, place index finger of other hand in ring of line, set meter on surface and proceed with test.

SAFETY LOG The importance of daily entries in the safety log should not be underestimated, particularly in customer or public areas. Should an injured person start litigation and assert negligence, the attorney or plaintiff must prove that negligence did in fact exist. The daily safety log can be useful evidence in defense against negligence.

GAUGE READINGS - ACCEPTED INDUSTRY STANDARDS

As adopted by Underwriters Laboratory (UL) and the American Society of Testing and Materials (ASTM)

.50 COF or above has been traditionally recognized as providing nonhazardous walkway surfaces. *Source: ASTM D 2047 and the Slip and Fall Handbook, Stephen I. Rosen, Hanrow Press.*

The Americans with Disabilities Act (ADA) when passed by Congress in July 1992 Title III noted: For all businesses open to the public. ADA and ATBCB recommends flooring and walkways have a coefficient of friction level .60 or above and .80 for ramps. There are severe penalties for failure to comply and tax benefits for those businesses taking steps to comply.



CONVERSION CHART



Standard Units	Metric Units	Standard Units	Metric Units	Standard Units	Metric Units
.10	.039	.40	.157	.70	.276
.125	.049	.425	.167	.725	.285
.15	.059	.45	.177	.75	.295
.175	.069	.475	.187	.775	.305
.20	.079	.50	.197	.80	.315
.225	.089	.525	.207	.825	.325
.25	.098	.55	.216	.85	.335
.275	.108	.575	.226	.875	.344
.30	.118	.60	.236	.90	.354
.325	.128	.625	.246	.925	.364
.35	.138	.65	.256	.95	.374
.375	.148	.675	.266	.975	.384
				1.00	.394

DATE / /

SAFETY LOG - RECOMMENDED USE

WHERE CHK'D 1

READING	
WET	DRY

CHK'D BY	
----------	--

N
L
O

REMARKS

- Date test being performed.
- Location being tested - area of floor or walkway.
- If testing a dry area, enter final reading under dry.
- If testing a wet area, enter final reading under wet.
- Name or initials of person conducting test.
- Check type of sensor material used, **Neolite**, **Leather** or **Other**. Describe in remarks **Other** type of sensor material used.
- Enter brief comment. Use back of page for additional remarks, and worksheet. Example: date, location checked and comments.

UNDERSTANDING FLOORS

When new, almost all tile floors will have a minimum C.O.F. reading of 0.50 or above in a dry condition and it is seldom that a slip/fall will occur. However, when tile or mineral surfaces are subjected to water or other liquid spills, the C.O.F. can drop dramatically. Because of the presence of grease and oils, a commercial kitchen quarry tile floor may fall below the minimum requirements for a safe floor surface. In other cases where the tile is a glazed ceramic, a wet reading can be as low as 0.15, a hazardous situation. It is for this reason that it becomes imperative to wipe up spills as quickly as possible.

Without a method to test the C.O.F. of a floor surface, there is no way to be certain if a problem exists or, if so, just how serious. The absence of this knowledge can be the cause of expensive litigation, high workers compensation premiums and punitive governmental fines for noncompliance of recent rules and regulations.

FLOOR MAINTENANCE

Improper floor maintenance carries a high cost. The following are some of the conditions which cause a floor to be unsafe. Ineffective employees, management indifference and lack of supervision, the use of mops, the use of low-cost ineffective soaps and detergents and insufficient scrubbing and rinsing.

In the food service industry, most slip/fall injuries occur in the kitchen area. The smell of good cooking is actually grease in the air which eventually settles on the floor. When it's time to clean, the person assigned usually gets a bucket of hot water, adds a greasy detergent and mops. This action mixes the floor grease with the detergent grease and rearranges both on the floor surface. Remopping with rinse water does not completely remove the residue. In time the residue polymerizes on the floor surface and, when later subjected to a spill, becomes hazardous. Sometimes a spill only has to be a few drops of liquid.

Proper floor maintenance would replace the mop with a deck brush, a high quality cleaner/degreaser which contains no slippery emulsifying agents, and adequate rinse water. After rinsing, the residue should be squeegeed to a floor drain or, in the absence of drains, should be picked up with a wet vac.

NON-SLIP SURFACE FLOOR TREATMENTS (not to be confused with floor coatings and finishes with non-slip formulation characteristics or abrasives added)

There are a number of companies that provide a chemical alteration for tile surfaces or concrete which will increase the C.O.F. of a mineral surface. The most important feature of a non-slip treatment is the increase in friction when the floor is subjected to spills and water. When choosing a company to provide this service, choose a company that has a backlog of satisfied customers. Most companies charge about \$1.25 per square foot for a typical installation and guarantee the process for two years or more, depending on the installation and foot traffic.

There are available acrylic finishes that increase the C.O.F. on non-mineral surfaces such as rubber and composition tiles which are popular in supermarkets, etc., where a high sheen is preferred.

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SLIP RESISTANCE CLEANER/DEGREASERS

Commercial kitchens pose the greatest problem for the maintenance of floor safety. Most cleaners on the market contain an abundance of slippery emulsifiers which require tremendous amounts of water in order to rinse. As a result of insufficient rinsing, the residue polymerizes and causes a hazardous condition. A good degreaser should be highly concentrated, contain few emulsifying agents, and require little rinse water. Ironically a good quality degreaser used properly is less costly in use than many less expensive cleaners available.

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ASM 825 SLIP METER KIT

- | | |
|--|-------------------------------|
| 1-ASM 825 Slip Meter (Digital) | 1-Carrying Case |
| 1-Instruction/Info Book | 1-Sensor Cleaning Brush |
| 1-Safety Record Log | 9-Sensor Retainers (3 Sets) |
| 1-Accessory Container | *15-Neolite Sensors (5 Sets) |
| 1-Calibration Chain | *2-Control/Activator Lines |
| 1-Container of Glue | 1- Conversion to Metric Chart |
| 1-Sheet of 400 Grit Wet or Dry Silicon Carbide Paper | |

*Replacements at no charge
(Recommend 9 volt Lithium Battery Replacement)

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SOURCE DIRECTORY

National Safety Council
1121 Spring Lake Drive
Itasca, IL 60143-3201
630-285-1121
www.nsc.org

American Society for Testing and Materials
100 Barr Harbor Drive
West Conshohocken, PA 19428-2959
610-832-9585
www.astm.org

Tile Council of America, Inc.
100 Clemson Research Blvd.
Anderson, SC 29625
864-646-8453
www.tileusa.com

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WARRANTY

One year defective repair/replacement warranty. American Slip Meter will repair or replace any unit which fails due to defects in manufacturing or workmanship within twelve months of date of original invoice. Units returned without prior authorization will not be accepted.

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