

# Racing Surfaces Testing Laboratory

2 Summer Street  
Orono, ME 04473  
207.866.1046



## LABORATORY TEST METHOD FOR MOISTURE DETERMINATION OF SYNTHETIC MATERIAL (ASTM D2216)

- 1) If it is not necessary to know the moisture content of the material, steps 3, 6, and 10 can be skipped.
- 2) Check that the **sample tin** is clean and free from holes.
- 3) Record the weight of the pan under “weight of container” using a **scale accurate to  $\pm 0.1\text{g}$** .



- 4) If there are any holes in the bag the sample was received in, or if it is not completely sealed, make a note of that on the data sheet.

- 5) Scoop at least 200g of material into the pan. The material depth should not exceed 1.5". Typically, the material mass should not exceed 800 grams per sample tin (8" by 4") to satisfy this condition.

- 6) Record the weight of the pan and wet material under “weight of container & wet sample.”



- 7) Put an **index card** in the sample tin which says the sample identifier and the date the sample was put in the oven. If it is necessary to know the moisture content of the material, write moisture on the index card.

- 8) Dry the sample for 48 hr in a temperature controlled **oven** at  $38 \pm 2^\circ\text{C}$ . A vacuum oven may be used to facilitate drying. If the vacuum oven is used the vacuum should not exceed 5 mm Hg during drying.



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9) If sample initial moisture is known, drying times may be reduced. Some high compaction synthetic track material may not be dry in 48 hours. If the weight of the material does not change after 2 hours of drying, it is dry.

10) Remove the index card from the pan, being careful to keep all the material in the pan. Record the weight of the pan and the dry material under "weight of container & dry sample." Cross out the word moisture on the index card to show that the material can now be used for other tests.

Revision No.	Date	Revision By	Description
1.0	17-MAR-2009	R. Beaumont	Created and issued procedure
1.1	31-MAY-2012	M. Segee	Clarified steps, included step to check pan for holes.
1.2	2-JUL-2013	M. Segee	Cell labels from data sheet, information about sample labeling
1.3	26-FEB-2014	H. Babbitt	Reformatted to fit standard