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ASTM F1292 AND DENSITY TESTING

Customer: AQUA TILE

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Introduction to the test:

Test Method Conducted –

ASTM F1292 Standard Specification for Impact Attenuation of surfacing materials within the use zone of playground equipment.

General Principle –

The middle of the surface material. Each panel for testing is acclimated for a minimum of 24 hours in each respective condition. NIST Traceable temperature sensors are inserted onto the sample to ensure the correct temperature is achieved through the matrix. Testing is commenced within one minute of removal from the acclimation chambers. The specimen is impacted at a specified velocity with a missile of given mass of 10.1 lbs. and geometry. A transducer mounted in the missile monitors the acceleration time history of the impact, which is recorded with the aid of an oscilloscope or other recording device. The head-form was dropped at the requested height. The GMAX values, HIC (head impact criteria) are recorded for three drops. The second and third drops are averaged. Testing was conducted at three temperatures as listed on the results. The maximum criterion for passing a specified drop height is 200 GMAX or 1.000 HIC.

Equipment	Accelerometer Calibration	Accelerometer Manufacturer and Type	Laboratory Conditions
GC Fall-Tech	3-28-23	PCB Model 356B20	70° F and 50% RH
	Specimen Size Tested	Infill Total Weight	Infill Type
	4.0 Square Feet	None	None

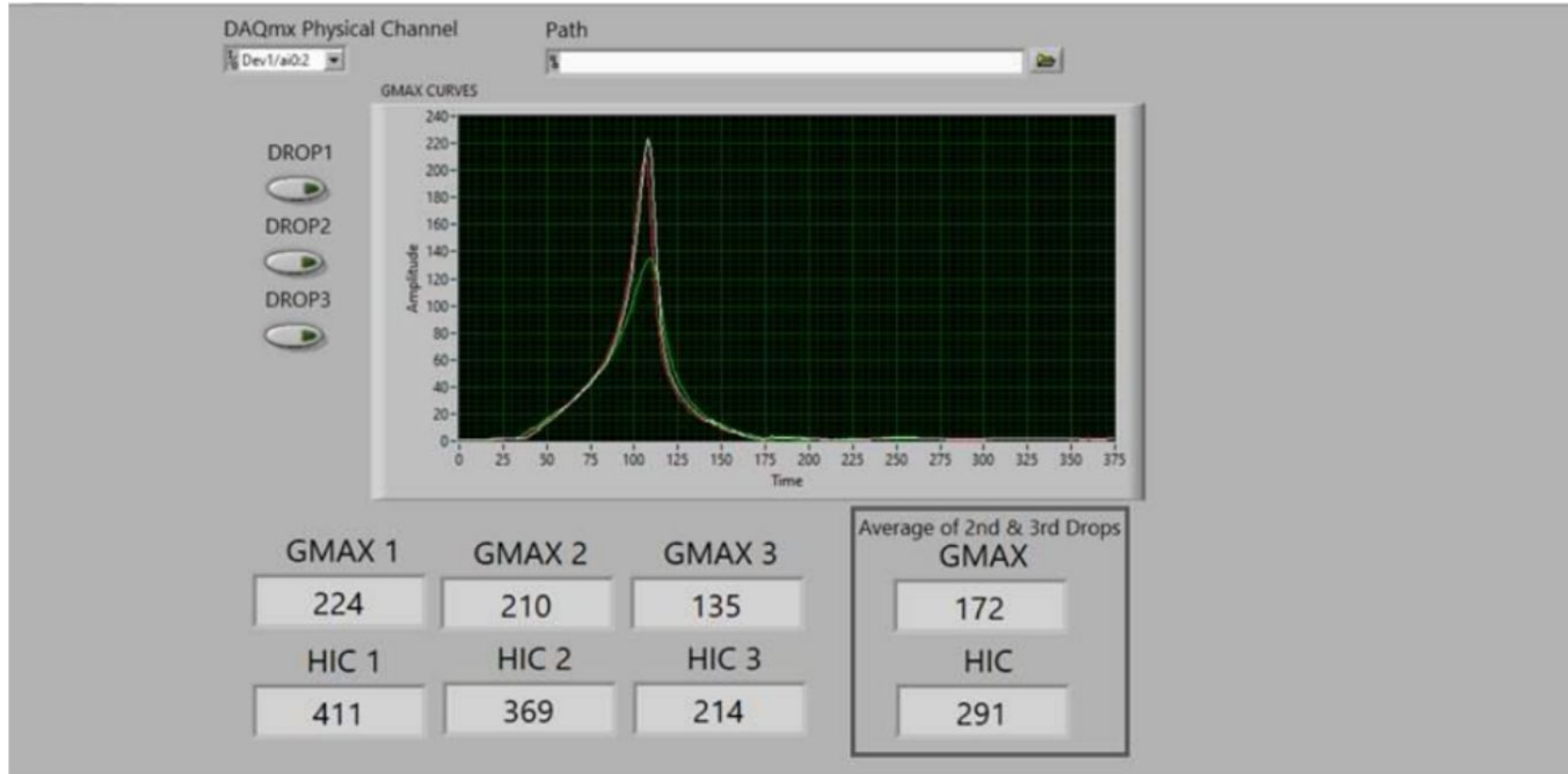
Test Results -

Tested at 25° F	Drop 1	Drop 2	Drop 3	Avg. of Drops 2 and 3
GMAX	234	201	195	198
HIC	420	358	297	328

Tested at 72° F	Drop 1	Drop 2	Drop 3	Avg. of Drops 2 and 3
GMAX	211	187	200	194
HIC	372	286	302	294

Tested at 120° F	Drop 1	Drop 2	Drop 3	Avg. of Drops 2 and 3
GMAX	224	210	135	172
HIC	411	369	214	291

****Submitted samples subjected to a theoretical drop height of 9 inches.**



Comments – The tested assembly meets the criterion of performance of the determined least favorable impact position at a 9 inch fall height according to ASTM F1292-22. The determined least favorable impact position was at the seam of the material

General Principle –

The samples were tested in accordance with the ASTM D3754 section A, to determine the density of the submitted cushion.

Test results –

Test Description	Method	Results
Density	ASTM D3574(A)	10.1 lbs/ft3



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