

Cryogenic Freezing Test - UNOFFICIAL TEST RESULTS

This test was performed by J'Lynn's cousin and is not an "official" test.

He cryogenically froze a 9212 board to –100 degrees Fahrenheit, hit it with a sledge hammer and it broke into several pieces. He then froze another board to –80 degrees, hit it again and a small piece broke off a corner. When he froze a board to –60 degrees and hit it with a sledge hammer, the Rumber board remained intact. These tests are not "official" and we **do not** warranty our boards under extreme cold conditions



Cryogenic Freezing

700 S. Price Road
 Pampa, Tx
 888-665-0089
 cryotemp.com

Date	Test Board	Time In	Time Out	# of throws	Broken	F Temp.	Description of break
7/7/2009	1	11:00					
7/8/2009			8:15	3	Yes	-110	Broke in half on third throw
7/7/2009	4	11:00					
7/8/2009			8:15	5	Yes	-110	Broke small piece off of corner only
7/8/2009	2	11:25					
7/9/2009			9:21	5	No	-90	Broke in half on fifth throw
7/8/2009	4	11:25					
7/9/2009			9:21	5	No	-90	No further damage
7/9/2009	3	13:20					
7/10/2009			9:30	5	No	-77	No damage
7/9/2009	4	13:20					
7/10/2009			9:30	2	Yes	-77	Block broke in half on second throw
7/10/2009	3	14:00					
7/11/2009			11:00		No	-60	No damage
7/10/2009	4	14:00					
7/11/2009			11:00	1	Yes	-60	This half piece broke on the first throw

Conclusion: Cryo-Temp, Inc. does not have a means of measuring amount of pressure applied to a specific block. I took extreme measures and removed each mentioned block and literally slammed it on the ground. The theory was if drill pipe was dropped on the block it would certainly do more damage than what I could do. It was very interesting that BLOCK #3 never broke. I have the test pieces if further evaluation needs to be done by Rumber.

Shawn Clifton

Test Boards

1	2 1/2" x 3" x 12"
2	2 1/2" x 3 3/4" x 12"
3	2 1/2" x 3 3/4" x 12"
4	2 1/2" x 12" x 12"