

PROCEDURE FOR TESTING GLASS FABRICATED ACCORDING TO TECHNOLOGY #1 (99% of Automotive Glass)



| | TEST # 2 | TEST # 3 | TEST # 4 | TEST # 5 | TEST # 6 | TEST # 7 | TEST # 8 |
|---|--|---|--|---|---|---|--|
| SAMPLE SIZE Minimum 30 terminals | CLIMATIC TEMPERATURE WITH HUMIDITY ISO 6270-2 TEMPERED PLATES TEMPERED BACKLIGHTS LAMINATED WINDSHIELDS | CONSTANT CLIMATIC TEST ECE/TRANS/WP.29 TEMPERED PLATES TEMPERED BACKLIGHTS LAMINATED WINDSHIELDS | HIGH TEMPERATURE EXPOSURE ECE/TRANS/WP.29 TEMPERED PLATES TEMPERED BACKLIGHTS LAMINATED WINDSHIELDS | RESISTANCE TO TEMPERATURE CHANGE ISO 16750-4 TEMPERED PLATES TEMPERED BACKLIGHTS LAMINATED WINDSHIELDS | HUMIDITY/TEMP CYCLE ISO 16750-4 IEC 60068-2-38 TEMPERED PLATES TEMPERED BACKLIGHTS LAMINATED WINDSHIELDS | VIBRATION TEST BASED ON GM STANDARD TEMPEED PLATES | CONSTANT CLIMATIC HUMIDITY EN 61215 TEMPERED BACKLIGHTS |
| TEMPERATURE | 40° C +/- 3° C | 49° C TO 52° C | 100° C (CIRCULATING AIR) | -40° C TO 90° C | -10° C TO 65° C | | 85° C |
| HUMIDITY | 100% (THERE MUST BE CONDENSATION ON TEST SPECIMENS) | 95% TO 99% (NO CONDENSATION ON TEST SPECIMENS) | NONE SPECIFIED | NONE SPECIFIED | 90% TO 96% HUMIDITY | | 85% RELATIVE HUMIDITY |
| TOTAL TIME | 240 HOURS (10 DAYS) | 336 HOURS (TWO WEEKS) | 2 HOURS / 500 HOURS | 60 HOURS | 240 HOURS | | 336 HOURS |
| TEMPERATURE CYCLE | N/A | N/A | N/A | -40° C TO 90° C - 6 HOUR CYCLE | -10° C TO 65° C | | |
| NUMBER OF CYCLES | 1 | 1 | 1 | 10 | 10 | | 1 |
| ACCEPTANCE CRITERIA | 25 KG AVE LOAD / 150 N MIN. | 25 KG AVE LOAD / 150 N MIN. | VISUAL / PULL TEST | VISUAL | 25 KG AVE LOAD | | VISUAL/ PULL TEST |
| RESULTS | ALLOY | | | | | | |
| TEMPERED PLATES LEAD FREE | 49141-32-13-02 49141-32-13-65 | | ALL PASSED 680357 / 22360 (500 hrs) | ALL PASSED 6707771-1 / 21328 ALL PASSED 670587-6 / 21140 | ALL PASSED 6707771-2 / 21483 | ALL PASSED 22360 ALL PASSED 22360 | |
| TEMPERED PLATES LEADED | PB | | ALL PASSED 680357 / 22360 (500 hrs) | 12% FAILED 670587-1 / 21140 | ALL PASSED 21483 | ALL PASSED 22360 | ALL PASSED 22984/PENDING |
| TEMPERED BACKLIGHTS LEAD FREE | 49141-32-13- ALL PASSED 680116-2C, 21720_A 49141-32-13- ALL PASSED 680116-2C, 21720_A | ALL PASSED 680116-1B, 21720_A ALL PASSED 680116-1B, 21720_A | ALL PASSED PENDING | ALL PASSED 680116-3C, 21720_A ALL PASSED 680116-3C, 21720_A | | | ALL PASSED 22984/PENDING ALL PASSED 22984/PENDING |
| TEMPERED BACKLIGHTS LEADED** | PB | ALL PASSED 680116-2C, 21720_A | ALL PASSED 680116-1B, 21720_A | ALL PASSED PENDING | ONE FAILED 680116-3C, 21720_A | | |
| LAMINATED WINDSHIELDS LEAD FREE** | 49141-32-13- ALL PASSED 680381 / 21974 49141-32-13- ALL PASSED 680381 / 21974 | ALL PASSED 680381 / 21974 ALL PASSED 680381 / 21974 | ALL PASSED 680381 / 21974 ALL PASSED 680381 / 21974 | ALL PASSED 680381 / 21974 ALL PASSED 680381 / 21974 | ALL PASSED 680381 / 21974 ALL PASSED 680381 / 21974 | | |
| LAMINATED WINDSHIELDS LEADED** | PB | N/A | N/A | ALL FAILED 680381 / 21974 | | | |

**The laminated windshield test were conducted consecutively on the same glass. The resistance to temperature change was first, the climatic temperature with humidity was second, and the constant climatic was third. The glass was examined visually after each test and pulled to a minimum of 150 N after all three tests.
The glass with the leaded parts failed the first test and did not continue.