

MECHANICAL TESTING TO ANSI/BIFMA X 5.1-2002 Compared against 2011 Final Association Ballot

| <u>ANSI/BIFMA X 5.1-2011</u> | <u>Comparison</u> | <u>Conclusion</u> | <u>Micom Laboratories</u> |
|--|---|-------------------------|---|
| 5. Back strength test (Type 1) | Excludes backrest height less than 200 mm (7.9 in.). Specifies backrest at its back stop position. | Same | <p>A 15 000 sq. feet test laboratory specialized in Furniture testing.</p> <p>Tests offered:</p> <ul style="list-style-type: none"> - BIFMA - GSA Intensive Use Chair - CAL 133 (new) - ASTM material testing - Climatic chambers - Packaging (ISTA) - CGSB <p>Accredited by:</p> <p>Standards Council of Canada, CGSB, ISTA</p> <p>Location:</p> <p>Montréal, Canada</p> <p>Contact us:</p> <p>1-888-996-4266</p> <p>www.micomlab.com</p> |
| 6. Back strength test (Type 2 & 3) | New: test not applicable for samples with backrest height less than 200 mm (7.9 in.). | Same | |
| 7. Base test | Stems inserted in the base are now required for support: The stress distribution will be changed considerably | Testing required | |
| 8. Drop test | For chairs "with lockable seat angles", this includes tilter chairs, the drop test needs to be done now with the seat unlocked; this will make the test much easier to pass. New test set up requirement for chairs with long stem glides. Generally speaking it will not impact the test outcome for most of the chairs. | No testing required | |
| 9. Swivel cycling test | Load on sample while testing changes from 102 Kg to 113 Kg (225 to 250 lbs) | Testing required | |
| 10. Tilt mechanism test | Same as before | Same | |
| 11.2. Seating impact test | The drop height was increased from 25mm to 30 mm (1" to 1.2") which yields a higher impact force on the seat. Same test bag mass as before with some slight modification to the bag (metal ring on the top part). | Testing required | |
| 11.4. Front Corner Load-Ease Test - Cyclic | Same as before | Same | |
| 12.3. Rear Stability test | New test completely different from the previous version. Similar to ISO 21015. The test is now performed using a stack of disks rather than a monolithic mass. For type III chairs the test forces applied to the highest disk varies with seat height. Results to date seems to demonstrate that the test is more difficult to comply with than before for type I and II chairs. | Testing required | |
| 12.4. Front Stability | Same as before | Same | |

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| 13. Arm strength test - Vertical | Only pull down is now allowed; no push down. The forces were reduced from 200 to 169 lbf (functional) and from 300 to 253 lbf (proof) | If your testing was done at Micom you don't need to re-test . If it was done somewhere else you should verify how your testing was done as pushing instead of pulling gives tests outcomes that can be quite different |
| 14. Arm strength test - Horizontal | Same test, same requirements, figure #14 improved. | Same |
| 15. Backrest durability (Type 1) | Minor changes for specific applications i.e.: width of bridging device... Excludes backrest height less than 200 mm (7.9 in.). Specifies backrest at its back stop position. For most chairs the test is the same. | Same |
| 16. Backrest durability (Type 2 & 3) | Minor changes for specific applications i.e.: width of bridging device... Excludes backrest height less than 200 mm (7.9 in.). Specifies backrest at its back stop position. For most chairs the test is the same. | Same |
| 17. Caster/chair base durability test | Load increased from 225 lbs to 250 lbs. Excludes chairs with glide/casters combination | Testing required |
| 18. Leg strength test - front application & side application | Proof load from 125 to 113 lbs for face application and 115 to 113 lbs for side application | No testing required |
| 19. Footrest Static Load Test | New test: Introduction of a functional force of twice 100 lbs Proof load of 300 lbs. Applies only to chairs that can have their seat height adjust to 24" or higher. | Testing required |
| 20. Footrest durability cyclic | Additional deflection parameters introduced for the first 500 cycles. Test # changed from 19 to 20. | Testing required |
| 21. Arm durability test | Minor changes of no significance for the test outcome. Test # changed from 20 to 21. | Same |
| 22. Out Stop Tests for Chairs with Manually Adjustable Seat Depth | Load on seat changes from 154 lbs to 163 lbs. Test # changed from 21 to 22. | Testing required |
| 23. Tablet Arm Static Load Test | Same load but now applied for 1 minute instead of 5 minutes | No testing required |
| 24. Tablet Arm Load Ease Test - Cyclic | Same as before | Same |

More questions about this standard?

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