

**The Appendix is an integral part of the
Certificate of Accreditation No. 99/2017 of 21/02/2017**

Accredited entity according to ČSN EN ISO/IEC 17025:2005:

IKATES, s.r.o.

Laboratory for glass and building products testing
Tolstého 186, 415 03 Teplice, Czech Republic

The laboratory is qualified to update standards identifying the test procedures.

Laboratory uses flexible approach to the scope of accreditation detailed in the Appendix.

A current list of activities carried out within the flexible scope is available in the laboratory at the laboratory manager.

The laboratory provides expert opinions and interpretation of test results.

Test:

| Ord. No. | Test procedure/method name | Test procedure/method identification | Tested object |
|----------|--|--|---|
| 1.1 | Detection and measurement of faults, appearance evaluation | ZP 05009 (ČSN 70 0550) | Glass products, glass fibres insulation materials |
| 1.2 | | ČSN 70 1304, art. 21 | |
| 1.3 | | ČSN 70 1550, art. 34 | |
| 1.4 | | ZP 06001 (ČSN 70 1621, art. 27) | |
| 1.5 | | reserved | |
| 1.6 | | ČSN 70 3200, art. 29 | |
| 1.7 | | ČSN 70 8005, art. 5.2 ČSN EN 12875-2 ES:1869/2006, art.. 4.1; 4.3; 4.4 | |
| 1.8 | | ZP 05008 (ČSN 70 8026+Z1, art. 4.2, 4.4) | |
| 1.9 | | ZP 05010 (ČSN 70 9052, art. 29 ÷ 31) | |
| 1.10 | | reserved | |
| 1.11 | | ČSN EN ISO 12543-6, art. 4 | |
| 1.12 | | ČSN EN 572-2 ÷ -7, art. 5.2 | |
| 1.13 | | ČSN EN 572-8, art. 6.2, Annex A | |
| 1.14 | | ČSN EN 1036-1, art. 7.2 FprEN 16477-1, art.6.2.1 | |
| 1.15 | | ČSN EN 1051-1, art. 7.1 | |
| 1.16 | | ČSN EN 1096-1, art. 8.2, 8.3 ČSN EN 15755-1, chap.7 | |
| 1.17 | | ČSN EN 1748-1-1, art. 7.1 | |
| 1.18 | | ČSN EN 1748-2-1, art. 7.1 | |
| 1.19 | | ČSN EN 14178-1, art. 7.1 | |
| 1.20 | | PD PN 001/70/83, art. 19 b, c, d | |
| 1.21 | | PD PN 70 1591, art. 12 | |
| 1.22 | | PD TP 11111/98, art. 3.1 | |

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| Serial No. | The exact name of test procedure/method | Identification of test procedure/method | Test item |
|------------|---|--|---|
| 2.1 | Determination of dimensions, squareness and deformation | ČSN 70 0562+Z1 | Glass products, glass fibres insulation materials |
| 2.2 | | ČSN 70 1304, art. 22 ÷ 24 | |
| 2.3 | | ČSN 70 1550, art. 35 ÷ 43 | |
| 2.4 | | ZP 06001 (ČSN 70 1621, art. 28, 29) | |
| 2.5 | | reserved | |
| 2.6 | | ČSN 70 8005, art. 5.3 ES:1869/2006, art.4.2.1 | |
| 2.7 | | ZP 05008 (ČSN 70 8026+Z1, art. 4.3) | |
| 2.8 | | ZP 05010 (ČSN 70 9052, art. 25 ÷ 28) | |
| 2.9 | | reserved | |
| 2.10 | | ČSN EN ISO 12543-5, art. 4 | |
| 2.11 | | ČSN EN 81-1+A3, art. 5.3.1.1 | |
| 2.12 | | ČSN EN 572-2 ÷ -7, art. 4.1, 4.2 | |
| 2.13 | | ČSN EN 572-8, art. 5.2, 5.3 | |
| 2.14 | | ČSN EN 1036-1, art. 5.1, 5.2 | |
| 2.15 | | ČSN EN 1051-1, art. 5.3.1 | |
| 2.16 | | ČSN EN 1279-1, art. 5.3 | |
| 2.17 | | ČSN EN 1604 | |
| 2.18 | | ČSN EN 1748-1-1, art. 6.2, 6.3 | |
| 2.19 | | ČSN EN 1748-2-1, art. 6.2, 6.3 | |
| 2.20 | | ČSN EN 1863-1, art. 6 | |
| 2.21 | | ČSN EN 12150-1, art. 6 | |
| 2.22 | | ČSN EN 12337-1, art. 6 | |
| 2.23 | | ČSN EN 13024-1, art. 6 | |
| 2.24 | | reserved | |
| 2.25 | | ČSN EN 14178-1, art. 6.1, 6.3 | |
| 2.26 | | ČSN EN 14179-1, art. 8 | |
| 2.27 | | ČSN EN 14321-1, art. 6 | |
| 2.28 | | ČSN EN 29008 | |
| 2.29 | | ČSN EN 29009 | |
| 2.30 | | PD PN 001/70/83, art. 19 a | |
| 2.31 | PD PN 70 1591, art. 13 ÷ 15 | | |
| 2.32 | PD TP 11111/98, art. 3.2 ÷ 3.5 | | |
| 2.33 | ZP 99006, p. 2.2 ÷ 2.4, 2.6 (procedure acc. to Glaverbel a.s.) | | |
| 3.1 | Determination of water absorption | ČSN EN 1609, method A | Insulating materials |
| 3.2 | | ČSN EN 12087, method 1A, 1B, 2A, 2B | |
| 4.1 | Determination of dew point temperature | ZP 06001 (ČSN 70 1621, art. 30 ÷ 33) | Insulating glass units |

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| Serial No. | The exact name of test procedure/method | Identification of test procedure/method | Test item |
|------------|---|---|---|
| 4.2 | | ČSN EN 1279-2, art. 6.1, Annex A | |
| 5.1 | Determination of adhesion | ČSN ISO 2409 | Paints, varnishes and other coatings on glass, films for application on glass |
| 6.1 | Determination of light and solar characteristics, color measurement | ČSN 01 1718, chapter IVA, VI IWA 8, Annex A | Glass products, organic materials products substituting the glass (acrylates, polycarbonates etc.), paints and coatings |
| 6.2 | | ČSN 70 0591 + amdt. a art. 2 | |
| 6.3 | | ČSN EN 410, art. 5.2- 5.6 | |
| 6.4 | | ISO 3538, art. 5.1 | |
| 6.5 | | ISO 9050, art. 3.3-3.9 ČSN EN ISO 13468-2 ISO 13837 | |
| 6.6 | | PD ECE 43R, Annex 3, art. 9.1 | |
| 7.1 | Determination of mass | ZP 06006 (ČSN 70 0553) ES:1869/2006; art. 4.2.2 | Glass products |
| 7.2 | | ČSN EN 1051-1, art. 5.4.1 | |
| 7.3 | | ZP 99005 ZP 10001 (ČSN 70 0153, method B) | |
| 8.1 | Climatic and corrosion tests, tests of watertightness | reserved | Glass products, paints and coatings, organic materials products substituting the glass |
| 8.2 | | reserved | |
| 8.3 | | ČSN 70 0593, art. 4 PD ECE 43R, Annex 3, art.6 | |
| 8.4 | | Reserved | |
| 8.5 | | ČSN EN 1036-1, Annex A FprEN 16477-1; art.8.1.4 | |
| 8.6 | | ČSN EN 1096-2, art. 5-10, Annexes B, C | |
| 8.7 | | ČSN EN 1279-2, art. 5, 6.2.2, Annexes B, D | |
| 8.8 | | ČSN EN ISO 12543-4, art. 6 | |
| 8.9 | | ČSN EN 60068-2-2, part B, section 1 and 2 | |
| 8.10 | | ISO 3917, art. 7 | |
| 8.11 | | Reserved | |
| 8.12 | | PD PN 70 1591, art. 18 | |
| 8.13 | | ČSN EN 1279-6, art.B.4, Annex G | |
| 9.1 | Tests for light fastness and resistance to radiation | ČSN 70 0593, art. 2 | Glass products, paints and coatings, organic materials products substituting the glass |
| 9.2 | | ČSN EN 1096-3, art. 5-9, Annex C1 | |
| 9.3 | | reserved | |
| 9.4 | | ČSN EN ISO 12543-4, art. 7, method A | |
| 9.5 | | PD ECE 43R, Annex 3, art. 6 | |

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|------------|--|--|--|
| 10.1 | Tests of resistance to sudden temperature change, thermal shock endurance and resistance to high temperature | ČSN 70 0593, art. 3 PD ECE 43R, Annex 3, art.5, 8 | Glass products, paints and coatings, organic materials products substituting the glass |
| 10.2 | | ČSN ISO 718 ČSN EN 1183, method B ČSN P CEN/TS 12983-2, Annex F ES:1869/2006; art.6.3 | |
| 10.3 | | ISO 3917, art. 6 | |
| 10.4 | | ČSN EN ISO 7459 ČSN EN 1183, method A | |
| 10.5 | | ČSN EN ISO 12543-4, art. 5 ČSN EN 12875-4,5 ČSN EN 15284 FprEN 16477-1; art. 8.1.3 ES:1869/2006; art.8 | |
| 10.6 | | BS 3193, Annex C | |
| 10.7 | | PD PN 70 1591, art. 17 | |
| 10.8 | | PD TP 11111/98, art. 3.17 | |
| 11.1 | | Tests of resistance to impact and attack, fragmentation tests | |
| 11.2 | ČSN EN 81-1+A3, Annex J | | |
| 11.3 | ČSN EN 356 | | |
| 11.4 | ČSN EN 1863-1, art. 8 | | |
| 11.5 | ČSN EN 12150-1+Rev.1, art. 8 | | |
| 11.6 | ČSN EN 12600 ČSN EN 13049 | | |
| 11.7 | ČSN EN 13024-1, art. 8.3, 8.4 | | |
| 11.8 | reserved | | |
| 11.9 | ČSN EN 14179-1, art. 10.3, 10.4 | | |
| 11.10 | ČSN EN 14321-1, art. 8.3, 8.4 | | |
| 11.11 | reserved | | |
| 11.12 | BS 3193, Annexes B, D ČSN EN 12980 | | |
| 11.13 | BS 6206 | | |
| 11.14 | ANSI Z 97.1, art. 4.1 | | |
| 11.15 | PD PN 70 1591, art. 16 | | |
| 11.16 | PD TP 11111/98, art. 3.6, 3.8 | | |
| 11.17 | PD ECE 43R, Annex 3, art. 1, 2.1 | | |
| 11.18 | ČSN EN 1063 ČSN EN 1523 | | |
| 12.1 | Determination of compressive strength, tensile strength and bending strength | reserved | Glass products |
| 12.2 | | ČSN EN 1288-1,-3,-5 | |
| 12.3 | | ČSN EN 1051-1, art. 6.1, Annex A, B | |
| 12.4 | | reserved | |
| 12.5 | | ČSN EN ISO 8113 | |
| 12.6 | | ČSN EN 1279-4, art.5.1 | |

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| Serial No. | The exact name of test procedure/method | Identification of test procedure/method | Test item |
|------------|---|---|------------------------|
| 13.1 | Determination of gas concentration and gas leakage rate | ZP 00001 | Insulating glass units |
| 13.2 | | ZP-SOP 09018 (ČSN EN 1279-3, art.5) | |
| 14.1 | Determination of thermal properties | ČSN EN 674 | Glass products |
| 14.2 | | reserved | |
| 14.3 | | reserved | |
| 14.4 | | ČSN EN 673 | |
| 15.1 | Test of resistance to abrasion | ČSN EN 1096-2, art. 7, 8, 9 Annex E | Glass products |
| 16.1 | Determination of the internal stress | ČSN 70 0534 ASTM C148-14 | Glass products |

Explanatory Note:

- ANSI - Standard issued by American National Standard Institute
- BS - Standard issued by British Standard Institute
- ČSN - Czechoslovak state / Czech technical standard (ÚNMZ / ČSNI)
- ECE - Regulation of UNECE
- EN - Standard issued by European Committee for Standardization (CEN)
- ISO - International standard issued by International Organization for Standardization (ISO)
- IWA - International Workshop Agreement issued by ISO
- PD - external document adopted into the internal system of normative regulations
- PN - company standard
- TP - technical specification (MORA a.s.)
- ZP - test procedure (internal test procedure IKATES, s.r.o.)

Appendix:

Flexible scope of accreditation

| Ordinal numbers of tests |
|--|
| 1.1, 1.2, 1.3, 1.4, 1.6, 1.7, 1.8, 1.9, 1.11, 1.12, 1.13, 1.14, 1.15, 1.16, 1.17, 1.18, 1.19, 1.20, 1.21, 1.22 |
| 2.1, 2.2, 2.3, 2.4, 2.5, 2.6, 2.7, 2.8, 2.10, 2.11, 2.12, 2.13, 2.14, 2.15, 2.16, 2.17, 2.18, 2.19, 2.20, 2.21, 2.22, 2.23, 2.25, 2.26, 2.27, 2.28, 2.29, 2.30, 2.31, 2.32, 2.33 |
| 3.1, 3.2, 4.1, 4.2, 5.1, 6.1, 6.2, 6.3, 6.4, 6.5, 6.6, 7.1, 7.2, 7.3, 8.3, 8.5, 8.6, 8.7, 8.8, 8.9, 8.10, 8.12, 8.13 |
| 9.1, 9.2, 9.4, 9.5, 10.1, 10.2, 10.3, 10.4, 10.5, 10.6, 10.7, 10.8 |
| 11.2, 11.3, 11.4, 11.5, 11.6, 11.7, 11.9, 11.10, 11.12, 11.13, 11.14, 11.15, 16.16, 11.17, 11.18 |
| 12.2, 12.3, 12.5, 12.6, 13.1, 13.2, 14.1, 14.4, 15.1, 16.1 |

The Laboratory is allowed to modify the test methods listed in the Annex within the specified scope of accreditation provided the measuring principle is observed

The flexible approach to the scope of accreditation cannot be applied to the tests not included in the Annex.