



EA MLA Signatory
Český institut pro akreditaci, o.p.s.
(Czech Accreditation Institute)
Hájkova 2747/22, Žižkov, 130 00 Praha 3

issues

according to section 16 of Act No. 22/1997 Coll., on technical requirements for products and on changes and amendments to some Acts, as amended

CERTIFICATE OF ACCREDITATION

No. 74/2026

ORLEN Unipetrol RPA s.r.o. - POLYMER INSTITUTE BRNO, odštěpný závod
with registered office Tkalcovská 36/2, Zábřovice, 602 00 Brno
Company Registration No. 27597075

for the Testing Laboratory No. **1380**
Testing Laboratory for Mechanical, Physical and Chemical Properties of Plastics

Scope of accreditation:

Testing of mechanical, physical and chemical properties of plastics and elastomers, including semiproducts and products of them, testing of burning behaviour to the extent as specified in the appendix to this Certificate.

This Certificate of Accreditation is a proof of accreditation issued on the basis of assessment of fulfillment of the accreditation criteria in accordance with

ČSN EN ISO/IEC 17025:2018

In its activities performed within the scope and for the period of validity of this Certificate, the abovementioned Accredited Body is entitled to refer to this Certificate, provided that the accreditation is not suspended and the Accredited Body meets the specified accreditation requirements in accordance with the relevant regulations applicable to the activity of an accredited conformity assessment body.

This Certificate of Accreditation replaces, to the full extent, Certificate No.: 684/2024 of 17/12/2024, and/or any administrative acts building upon it.

The Certificate of Accreditation is valid until: **13/02/2031**

Prague: 13/02/2026



Signed in the Czech original:
Zdeňka Drdová on 13/02/2026

Jan Velíšek
Director of the Department
of Testing and Calibration Laboratories
Czech Accreditation Institute

This translation of the Czech original has been issued by: Eliška Frycová

**The Appendix is an integral part of
Certificate of Accreditation No: 74/2026 of 13/02/2026**

Accredited entity according to ČSN EN ISO/IEC 17025:2018:

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CAB number 1380, Testing Laboratory for Mechanical, Physical and Chemical Properties of
Plastics
Tkalcovská 36/2, Zábrdovice, 602 00 Brno

The laboratory applies a flexible approach to the scope of accreditation.

*The current list of activities carried out within the flexible scope is available on the laboratory's website
<https://www.orlenpolymer.cz/cs/NabidkaSluzeb/Akreditovane-zkousky/Stranky/default.aspx> in the form of the „List of activities within the flexible scope of accreditation“.*

The laboratory provides opinions and interprets of the test results.

Tests:

| Ordinal number ¹ | Test procedure / method name | Test procedure / method identification ² | Tested subject | Degrees of freedom ³ |
|-----------------------------|--|---|----------------------|---------------------------------|
| 1 | Determination of tensile properties | ČSN EN ISO 527-1; ČSN EN ISO 527-2; ČSN EN ISO 527-3; ČSN EN ISO 6259-1 | Plastics, elastomers | - |
| 2 | Determination of flexural properties | ČSN EN ISO 178 | Plastics | - |
| 3 | Determination of impact strength by Charpy method | ČSN EN ISO 179-1; ČSN EN ISO 179-2 | Plastics | - |
| 4 | Determination of impact strength by Izod method | ČSN EN ISO 180 | Plastics | - |
| 5 | Determination of properties at multiaxial impact loading | ČSN EN ISO 6603-1; ČSN EN ISO 6603-2 | Plastics | - |
| 6 | Determination of Shore hardness | ČSN EN ISO 868 | Plastics, elastomers | - |
| 7 | Determination of hardness by ball indentation | ČSN EN ISO 2039-1 | Plastics | - |
| 8 | Determination of temperature of deflection under load | ČSN EN ISO 75-1; ČSN EN ISO 75-2 | Plastics | - |
| 9 | Determination of Vicat softening temperature (VST) | ČSN EN ISO 306 | Plastics, elastomers | - |
| 10 | Determination of density by immersion method | ČSN EN ISO 1183-1, cl. 5.1, method A | Plastics, elastomers | - |
| 11 | Determination of melting and crystallization temperature and enthalpy, glass transition temperature and including kinetics of crystallization by differential scanning calorimetry (DSC) | ČSN EN ISO 11357-1; ČSN EN ISO 11357-2; ČSN EN ISO 11357-3; ČSN EN ISO 11357-7 | Plastics, elastomers | A, D |

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| Ordinal number ¹ | Test procedure / method name | Test procedure / method identification ² | Tested subject | Degrees of freedom ³ |
|-----------------------------|--|---|---|---------------------------------|
| 12 | Determination of ash content (content of glass and mineral binder) by gravimetry | ČSN EN ISO 3451-1; ČSN EN ISO 3451-4; ČSN EN ISO 1172 | Plastics | A, D |
| 13 | Determination of water content (moisture) by coulometric Karl Fischer titration | ČSN EN ISO 15512, method B2; ČSN ISO 760 | Plastics | - |
| 14 | Determination of organic carbon emissions by gas chromatography (GC/FID/MS) | PV 3341; VDA 277:1995 | Plastics, elastomers, textiles, leather, vehicle interior parts | A, D |
| 15 | Determination of Rockwell hardness | ČSN EN ISO 2039-2 | Plastics | - |
| 16 | Determination of burning behaviour | ČSN ISO 3795; DIN 75200 | Plastics, vehicle interior parts | A, D |
| 17 | Determination of the melt mass-flow rate (MFR) and the melt volume-flow rate (MVR) | ČSN EN ISO 1133-1; ČSN EN ISO 1133-2 | Plastics, elastomers | - |
| 18 | Determination of formaldehyde emissions by spectrophotometry | PV 3925, method B; VDA 275 | Plastics, elastomers, textiles, vehicle interior parts | - |
| 19 | Determination of viscosity number by capillary viscometer | ČSN EN ISO 1628-1; ISO 1628-4; ČSN EN ISO 1628-5; ČSN EN ISO 307 | Plastics | - |
| 20 | Determination of overall migration into evaporable food simulants - gravimetric method, total immersion method | ČSN EN 1186-1; ČSN EN 1186-3, cl. 4.1.2 | Plastics | A, D |
| 21 | Determination of overall migration in vegetable oils by gravimetric method, total immersion method | ČSN EN 1186-1; ČSN EN 1186-2, cl. 4.4.2.2 | Plastics | A, D |
| 22 | Determination of oxidation induction time (OIT) by differential scanning calorimetry | ČSN EN ISO 11357-1; ČSN EN ISO 11357-6 | Plastics | - |

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| Ordinal number ¹ | Test procedure / method name | Test procedure / method identification ² | Tested subject | Degrees of freedom ³ |
|-----------------------------|--|--|---|---------------------------------|
| 23 | Determination of the content of glass fibres, carbon black and inorganic fillers by thermogravimetry | ČSN EN ISO 11358-1 | Plastics, elastomers | A, D |
| 24 | Odour test | PV 3900; VDA 270 | Plastics, elastomers, textiles, leather, vehicle interior parts | - |
| 25 | Determination of component damage at elevated or reduced temperatures without load | PP 38 (DIN 53497, cl. 4.2, method B) | Plastics, elastomers | D |
| 26 | Detection of defects by microscopic evaluation of microtome sections | PP 39 | Plastics, elastomers, vehicle parts | - |
| 27 | Fogging test | PV 3015; DIN 75201 | Plastics, elastomers, textiles, leather, vehicle interior parts | - |
| 28 | Determination of strain hardening modulus (SHT) | ČSN ISO 18488 | Plastics, elastomers | - |
| 29 | Identification of polymer types and polymer additive types by FTIR method | PP 43 (ASTM E1252-98; ASTM E334-01; ASTM E573-01) | Polymers, polymer additives | A, D |
| 30 | Determination of technical cleanliness by gravimetry | ISO 16232, excl. cl. 7.5, 9.3, 9.4; VDA 19.1, excl. cl. 6.5, 8.3, 8.4 | Components of vehicles | D |
| 31 | Determination of technical cleanliness by microscopy | ISO 16232, excl. cl. 7.5, 9.3, 9.4; VDA 19.1, excl. cl. 6.5, 8.3, 8.4 | Components of vehicles | D |
| 32 | Determination of elements (Ba, Co, Cu, Fe, Li, Mn, Zn) by ICP-OES method | PP 46 (ČSN EN ISO 11885) | Technological waters, process waters, plastic rinse waters, plastic leachates, sample digests, food simulants, plastics | A, B, D |

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|-----------------------------|---|---|--|---------------------------------|
| 33 | Determination of resistance to slow crack growth under cyclic loading | ČSN ISO 18489 | Thermoplastic materials for piping systems | - |

¹ asterisk at the ordinal number identifies the tests, which the Laboratory is qualified to carry out outside the permanent laboratory premises

² if the document identifying the calibration procedure is dated, only these specific procedures are used. If the document identifying the calibration procedure is not dated, the latest edition of the specified procedure is used (including any changes)

³ degrees of freedom: A – Flexibility concerning materials/products (subject of the test), B – Flexibility concerning components/parameters/characteristics, C – Flexibility concerning the performance of the method, D – Flexibility concerning the method

The laboratory can modify the test procedures with the specified degree(s) of freedom in the scope of accreditation while maintaining the principle of measurement. If no degree of freedom is specified, the laboratory cannot apply a flexible approach to the scope of accreditation for the test

Explanatory notes:

| | |
|---------|--|
| ASTM | American standard (American Society for Testing and Materials) |
| DIN | German standard (Deutsches Institut für Normung e.V.) |
| DSC | Differential scanning calorimetry |
| FID | Flame-Ionization Detector |
| FTIR | Fourier Transformation Infrared Spectrometry |
| GC | Gas Chromatography |
| ICP-OES | Inductively Coupled Plasma Optical Emission Spectroscopy |
| MS | Mass Detector |
| PP | Working procedure of UNIPETROL RPA, s.r.o. – POLYMER INSTITUTE BRNO, branch |
| PV | Volkswagen standard |
| SHT | Strain-Hardening Modulus |
| VDA | German Association of the Automotive Industry (Verband der Automobilindustrie) |

"This document is an appendix to the certificate of accreditation. In case of any discrepancies between the English and Czech versions, the Czech version shall prevail, both for the certificate appendix and the certificate itself. "