The Appendix is an integral part of
Certificate of Accreditation No. 520/2023 of 03/10/2023

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

ORLEN Unipetrol RPA, s.r.o. - POLYMER INSTITUTE BRNO, odštěpný závod
CAB number 1380, Testing Laboratory for Mechanical, Physical and Chemical Properties of Plastics
Tkalcovská 36/2, Zábrdovice, 602 00 Brno

The laboratory provides opinions and interprets test results.

Tests:

Ordinal number[1]	Test procedure / method name	Test procedure / method identification [2]	Subject of the test	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	Reserved			-
4	Determination of impact strength by Charpy method	ČSN EN ISO 179-1; ČSN EN ISO 179-2	Plastics	-
5	Determination of impact strength by Izod method	ČSN EN ISO 180	Plastics	-
6	Determination of properties at multiaxial impact loading	ČSN EN ISO 6603-1; ČSN EN ISO 6603-2	Plastics	-
7	Determination of indentation hardness by means of a durometer (Shore hardness)	ČSN EN ISO 868	Plastics, elastomers	-
8	Determination of hardness – ball indentation method	ČSN EN ISO 2039-1	Plastics	-
9	Determination of temperature of deflection under load	ČSN EN ISO 75-1; ČSN EN ISO 75-2	Plastics	-
10	Determination of Vicat softening temperature (VST)	ČSN EN ISO 306	Plastics, elastomers	-
11	Reserved			
12	Determination of density by immersion method	ČSN EN ISO 1183-1, cl. 5.1, method A	Plastics, elastomers	-
13	Determination of resistance to slow propagation of crack (PENT)	ISO 16241	Plastics	-
14	Determination of environmental stress cracking by full-notch creep test (FNCT)	ISO 16770; ASTM D5397	Plastics	-

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Ordinal number[1]	Test procedure / method name	Test procedure / method identification [2]	Subject of the test	Degrees of freedom[3]
15	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	-
16-17	Reserved			
18	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	-
19	Determination of water content (moisture) - Karl Fischer method	ČSN EN ISO 15512 method B2; ČSN ISO 760	Plastics	-
20	Determination of the sum of emissions of organic compounds by gas chromatography (GC/FID, GC/MS)	PV 3341; VDA 277	Plastics, elastomers, textiles, vehicle interior parts	-
21	Determination of hardness – Rockwell hardness	ČSN EN ISO 2039-2	Plastics	-
22	Determination of burning behaviour	ČSN ISO 3795; DIN 75200	Plastics, vehicle interior parts	-
23	Reserved			
24	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	-
25	Determination of formaldehyde emissions	PV 3925; VDA 275	Plastics, elastomers, textiles, vehicle interior parts	-
26	Determination of viscosity number by capillary viscometer	ČSN EN ISO 1628-1; ČSN EN ISO 1628-4; ČSN EN ISO 1628-5; ČSN EN ISO 307	Plastics	-
27	Determination of total migration of plastics in evaporable food simulants - total immersion method	ČSN EN 1186-1; ČSN EN 1186-3	Plastics	-

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Ordinal number[1]	Test procedure / method name	Test procedure / method identification [2]	Subject of the test	Degrees of freedom[3]
28	Determination of total migration of plastics in vegetable oils - method of total immersion in olive oil	ČSN EN 1186-1; ČSN EN 1186-2	Plastics	-
29-31	Reserved			
32	Determination of oxidation induction time (OIT) by differential scanning calorimetry	ČSN EN ISO 11357-1;; ČSN EN ISO 11357-6	Plastics	-
33	Determination of the content of glass fibres, soot and inorganic fillers by gravimetry	ČSN EN ISO 11358-1	Plastics, elastomers	
34	Reserved			-
35	Determination of odour of components	PV 3900; VDA 270	Plastics, elastomers, textiles, vehicle interior parts	-
36-37	Reserved			
38	Determination of component damage at elevated or reduced temperatures without load	PP 38 (DIN 53497, cl. 4.2, method B)	Plastics, elastomers	-
39	Detection of defects by microscopic evaluation of microtome sections	PP 39	Plastics, elastomers	-
40	Fogging test	PV 3015; DIN 75201	Plastics, elastomers, textiles, vehicle interior parts	-
41	Reserved			
42	Determination of strain hardening modulus (SHT)	ČSN ISO 18488	Plastics, elastomers	-
43	Identification by FTIR method	PP 43	Polymers	-

[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] the laboratory does not apply a flexible approach to the scope of accreditation

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Explanatory notes:

PENT:	Pennsylvania Notch Test
FNCT:	Full-notch Creep Test
DSC:	Differential scanning calorimetry
DIN:	German standard (Deutsches Institut für Normung e.V.)
VDA:	German Association of the Automotive Industry (Verband der Automobilindustrie)
ASTM:	American standard (American Society for Testing and Materials)
PV:	Volkswagen standard
PP:	Working procedure of UNIPETROL RPA, s.r.o. – POLYMER INSTITUTE BRNO, branch
GC:	Gas Chromatography
HPLC:	Liquid chromatography
FID:	Flame-Ionization Detector
MS:	Mass Detector
FTIR:	Fourier Transformation Infrared Spectrometry
SHT:	Strain-Hardening Modulus