

LOTRIČ METROLOGY

TESTING OF PLASTIC AND RUBBER PRODUCTS



WE MEASURE. YOU GROW.

USING INTERNATIONALLY COMPARABLE TESTING TO OBTAIN RESULTS ABOUT TECHNICAL PROPERTIES OF PRODUCTS.

YOUR WORD HAS WEIGHT. IN ORDER FOR THE PRODUCTS AND RAW MATERIALS TO MEET SPECIFICATIONS, LOTRIČ METROLOGY OFFERS A COMPLETE RANGE OF TESTING. THEIR SERVICE IS USED BY LEADING MANUFACTURERS OF POLYMERS IN SLOVENIA.

We offer:

- optimisation of processes and reducing costs – up to 90 % – with testing from granulate to product;
- reduction of complaints by regular control of batches;
- confirmation of granulate specifications by control of raw material;
- guaranteed expert support throughout the life cycle of your product;
- guarantee of trustworthy results on which you can base your expert and business decisions.



OVERVIEW OF METHODS ON POLYMERS

DIMENSIONS, ANGLE AND ROUGHNESS	
Measurements of surface roughness	ISO 4288
Measurements on coordinate measuring machine (CMM)	ISO 1101
Microscopic measurements	
Confirming dimensional and geometric characteristics and tolerances according to drawing	ISO 14253-1, -2
Sample preparation for measurements	

MECHANICAL PROPERTIES	
Impact strength	ISO 179*, ISO 180, DIN 53435
Charpy, Izod, Dynstat	
Ehb: hammer test	
IK test	IEC 62262
Tensile strength	ISO 527-1*, DIN 53504
Flexural strength	ISO 178*
Tear strength	ISO 34-1, ASTM D 624, DIN 53283
Compressive properties	ISO 604, ISO 815, ISO 294-4
Hardness (Rockwell)	ISO 2039-2
Hardness (Shore A and D)	ISO 868
Preparation of multipurpose test specimens	ISO 3167

FORCE, TORQUE AND PRESSURE	
Standard and nonstandard measurement of forces	
Torque measurement	
Tightness of pressure and vacuum systems	
Mechanical aging	

RHEOLOGICAL PROPERTIES	
Density	ISO 1183
Melt mass-flow rate and melt volume-flow rate	ISO 1133-1*
Viscosity of polycarbonate	ISO 1628-4
Viscosity number of polyamide	ISO 307

THERMAL PROPERTIES	
Vicat softening point	ISO 306
Thermogravimetry (TGA)	ISO 11358
DSC – glass transition temperature	ISO 11357-2*
DSC – determination of melting temperature	ISO 11357-3*

BURNING BEHAVIOUR	
Flame resistance	UL 94, TL1011
Glow wire test	EN 60695-2-11*
Burn rate	ISO 3795, FMVSS 302, DIN 75200, TL1010*

TECHNICAL CLEANLINESS	
Particle mass	ISO 16232, VDA 19
Determination of largest particle	
Particle size classifications	
Determination of metal and non-metal particles	

ENVIRONMENTAL TESTING AND ACCELERATED AGEING	
Temperature and relative humidity	
Cyclic climatic tests	
Accelerated heat ageing	ASTM D3045, ISO 188
Cold	EN 60068-2-1*
Dry heat	EN 60068-2-2*
Damp heat, cyclic	IEC 60068-2-30*
Constant condensation	ISO 6270-2*
Industrial climate (SO ₂)	DIN 50018*
UV light	IEC 60068-2-5

RESISTANCE AND EMISSION	
Water absorption	ISO 62
Resistance to wear by abrasive wheels	DIN 53754, ISO 9352
Resistance to liquids (water, oil, brake fluid, graphite, organic solvents, acids, detergents, petroleum products)	
Odour test	VDA 270
Fogging test	DIN 75201, ISO 6452

ELECTRICAL PROPERTIES	
Surface and volume resistivity	IEC 60093
Electric strength	IEC 60243-1
Comparative tracking index (CTI)	IEC 60112

IDENTIFICATION OF POLYMERS, CONTENT OF FILLERS AND ADDITIVES	
IR identification	DIN 51451
Content of inorganic residue (fillers, glass fibres)	ISO 3451

RoHS	
Content of elements Cr ⁶⁺ , Cd, Hg, Pb, PBB, PBDE	EN 15205, IEC 62321

INGRESS PROTECTION (IP) TESTING	
Protection against dripping water, sprayed water and splashed water	IP X1-4
Effect of immersion	IP X7-8

We perform the tests according to numerous other standard and non-standard procedures, which are tailored to your requirements and/or the requirements of your customers.

*Accredited testing methods. Read more about the accredited procedures in the accreditation documents no. LP-004 and no. LP-099 (<http://www.slo-akreditacija.si>).

EXPERTS OPINION



WE DO NOT DOUBT THE RELIABILITY OF THEIR RESULTS

We cooperate with LOTRIČ laboratory in the field of testing and analysis of physical properties of samples. They occasionally perform mechanical testing such as tensile strength, microscopic testing of surfaces and breaks as well as environmental testing. Our products are certified by our partners which confirms that they meet standard requirements and are suitable for the market. LOTRIČ Metrology group are known for their amazing expertise in issuing certificates, counselling, and issuing statements while also being very responsive and competitively priced. They ensure accreditation of their services by regular inter-laboratory comparison therefore we do not doubt their results and never feel the need to verify their results.

Miha Mežnar, head of laboratory at ITW METALFLEX d. o. o.

ITW Metalflex



SPEED AND PROXIMITY MATTER

We cooperate with LOTRIČ Metrology in the area of polymer testing, mostly doing analysis of raw materials. In some cases the raw materials need to be checked to eliminate other causes in case of problems during production. The inconsistencies found in raw material can then be used as a basis for claiming warranty. The proximity of the laboratory and their fast response time help to conduct the analysis in the shortest time possible. Immediately after testing we are informed of the results by electronically signed certificates, sent via e-mail.

Boštjan Šifrar, CEO of Sibo G. d. o. o.

