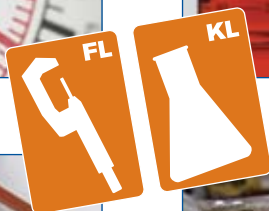


CENTRAL LABORATORY



To Excellence by Proficiency



Savatech, d.o.o.

PRESENTATION

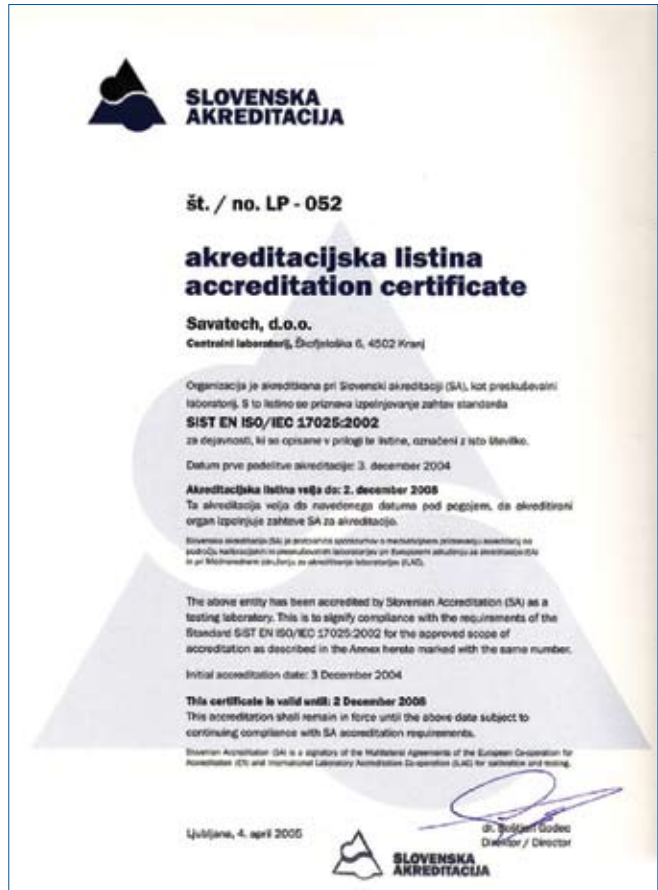
Central Laboratory of R & D Institute, an integral part of Savatech's programme Elastomers, is a modern institution performing laboratory work in the field of physics, chemistry and technology of polymers, elastomers in particular, as well as in associated areas of interest. It consists of **Physics Laboratory**, with the prototype and armature laboratory units, and **Chemistry Laboratory**.



Testings and analyses are performed in compliance with national and international standards (DIN, ASTM, BS, ISO) or by internal methods, the laboratory service being offered at competitive price and prompt response. Development and/or introduction of methods on particular wishes or suggestions by clients are also possible.

Apart from result interpretation, the laboratory personnel is always ready to advise the service users the best way to achieve their desired goal.

Besides, the laboratory is qualified for production of some low-series special products upon order.



Its competence is formally proven by the acquired quality certificate in accordance with the standard SIST EN ISO/IEC 17025.

SERVICES OF PHYSICS LABORATORY

Physical testing of uncrosslinked polymers and their compounds

- Determination of viscosity
- Determination of dynamic mechanical properties
- Determination of viscoelastic properties
- Determination of vulcanization properties of rubber compounds



Physical testing of crosslinked polymers and compounds (vulcanizates)

- Static testing of vulcanized rubber: Determination of hardness (Shore and IRHD), density, compression and tension set, dimensional stability and stiffness
- Dynamic testing of vulcanized rubber: Determination of moduli of elasticity, tensile strength and deformation at break, dynamic mechanical properties, tearing properties
- Special testing of vulcanized rubber: Determination of thermal conductivity, electric resistivity, gas permeability, abrasion resistance
- Ageing testing of vulcanized rubber: Determination of effects due to thermal and UV/visible light ageing, ozone action, mechanical ageing by bending or stretching, low temperature bending



SERVICES OF PHYSICS LABORATORY

Physical testing of armatures

- Testing of one-dimensional metal armatures: Determination of tensile strength, rigidity and adhesion to rubber compounds and vulcanized rubber
- Testing of one-dimensional textile armatures: Determination of construction, tensile strength, thermal shrinkage, dynamic duration and adhesion to rubber compounds and vulcanized rubber
- Testing of two-dimensional textile armatures: Determination of construction, tensile strength, hydrophilic characteristics, abrasion resistance and adhesion to rubber compounds and vulcanized rubber



Services of prototype unit

- Mixing of rubber compounds on double-roll mill and in internal laboratory mixer
- Mixing of various materials in dry-mixer or kneader and milling in cutter or centrifugal mill
- Vulcanization of rubber compounds in laboratory presses, hot air and/or UHF oven
- Manufacture of low-series products by agreement



SERVICES OF CHEMISTRY LABORATORY

Testings and analyses of rubbers and other polymeric materials

- Identification and/or determination of chemical structure of polymeric and individual non-polymeric components
- Quantitative determination of structural units in some rubbers
- Quantitative determination of total organic and inorganic additives
- Characterization of thermal properties and transitions
- Testings and analyses of polymer solutions: Determination of non-volatile matter content and that of total organic and inorganic additives with their identification



Testings and analyses of additives in rubber compounds

- Identification and/or chemical characterization
- Determination of some physico-chemical properties of oils
- Determination of thermal properties of solid additives: melting point and enthalpy, crystalline state transitions, softening point
- Determination of some chemical properties of softeners: paraffinic, naphthenic and aromatic hydrocarbons content in mineral oils, acid and base number, iodine number, content of water, nitrogen, sulphur and chlorine
- Analyses/characterization of carbon black: Determination of iodine number and oil absorption number, DBP absorption number, pH value, content of water, ash, sulphur and extract
- Analyses of white fillers and other metal oxides: pH value, sieve residue, ignition loss and volatile matter content, soluble and insoluble matter in acids, type and content of organic additives
- Testings and analyses of sulphur: Determination of total and insoluble sulphur content, content of oil, ash, acidic impurities, thermal properties
- Testings and analyses of solvents: Qualitative and semi-quantitative determination of solvent mixture components, refractive index, content of water and non-volatile impurities



SERVICES OF CHEMISTRY LABORATORY

Analyses of rubber compounds and vulcanizates

- Reconstruction of composition:
Identification and quantitative determination of rubbers and other polymers, qualitative and semi-quantitative determination of individual organic and inorganic additives, determination of total and elemental sulphur content, content of chlorine, bromine and nitrogen
- Identification of surface substances, impurities and inhomogeneities
- Testings for determination of crosslinking degree
- Testings of resistance to various liquid media
- Testings of products for medical and food use



Water analyses

- Analyses and measurements of physico-chemical properties of technological waters: hardness, alkalinity, pH value, electroconductivity, content of organic matter, silicon, ammonia, hydrazine, iron, phosphates and chlorides
- Analyses and measurements of some properties of waste waters: chemical oxygen demand, content of suspended and dissolved matter, nitrates and nitrites, fats and oils



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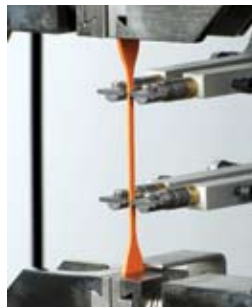
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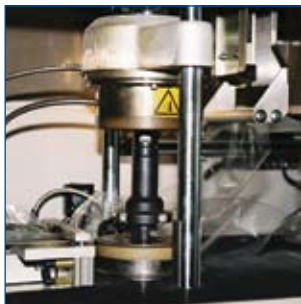
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