



SIBUR POLYLAB RECEIVES ACCREDITATION

Laboratory test certificates now carry the Combined ILAC MRA Mark.

RusAccreditation has issued a state accreditation document to the test laboratory at the SIBUR PolyLab research centre. This accredited status testifies to the laboratory's technical expertise in research and confirms the accuracy and reliability of its results. As RusAccreditation is a signatory to the International Laboratory Accreditation Cooperation Mutual Recognition Arrangement (ILAC MRA), the laboratory's test certificates may now feature the internationally-recognised Combined ILAC MRA Mark, meaning they will carry more weight abroad.

AS RUSACCREDITATION IS A SIGNATORY TO THE INTERNATIONAL LABORATORY ACCREDITATION COOPERATION MUTUAL RECOGNITION ARRANGEMENT (ILAC MRA), THE LABORATORY'S TEST CERTIFICATES MAY NOW FEATURE THE INTERNATIONALLY-RECOGNISED COMBINED ILAC MRA MARK, MEANING THEY WILL CARRY MORE WEIGHT ABROAD

SIBUR PolyLab managed to obtain the accreditation in just one year, even though the process usually takes three years for new R&D centres. This was made possible thanks to the consistent efforts of the research centre team: it arranged for the training of its employees in polymer material research at leading R&D centres and successfully implemented a quality management system in accordance with the accreditation requirements of the Russian Ministry of Economic Development and GOST ISO/IEC 17025.

The testing laboratory has 15 employees, five of whom have a PhD in chemical science, and two more are postgraduates studying for their doctorate on the job. The laboratory staff have a proven track record in plastic testing but constantly seek to hone their skills by taking internships, upskilling and advanced training courses at leading Russian and foreign R&D centres that specialise in plastic testing, such as NORNER AS (Norway), NIOST (Tomsk, Russia) and others. On top of this, all employees took a special training course on the specifics of working at an accredited laboratory.

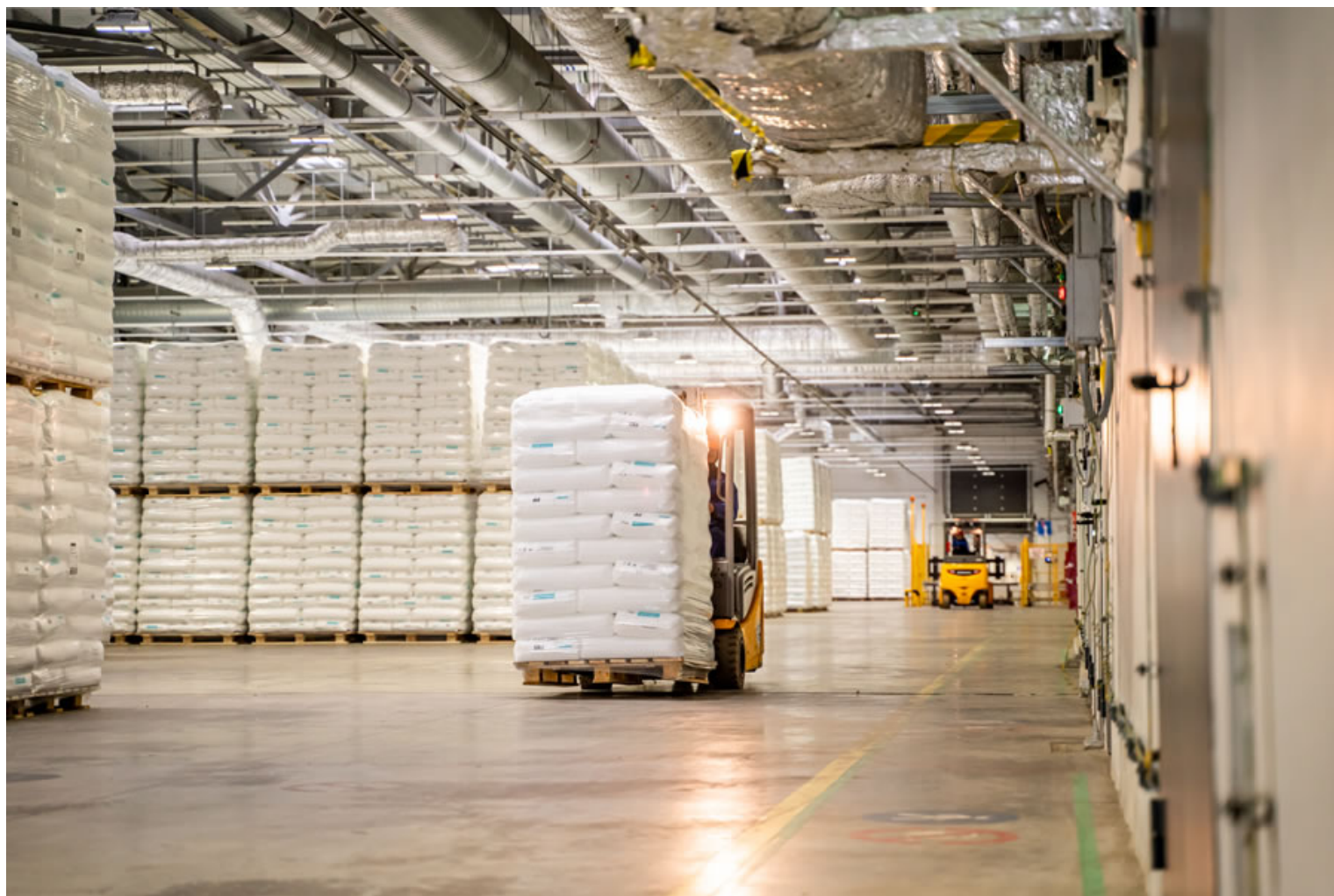
SIBUR PolyLab's test laboratory is fitted with more than 100 pieces of cutting-edge research equipment from the world's leading manufacturers, covering the most in-demand areas of polymer testing, which can be roughly split into three sections. The first section, physical and chemical research, is focused to the thermal and dynamic mechanical properties of polymers, including the composition and stability of polymer materials. Optical and scanning electron microscopies help the team to study the morphology of materials and to find defects in finished products, while the x-ray spectroscopy instrument allows them to determine the elemental composition of the

surface of samples. This information is extremely useful for both the analysis of defects and the development of new grades. The SIBUR PolyLab research lab also has gas, liquid and gel-penetrating chromatography in its arsenal, supported by preparative analysis tools.

THE LABORATORY IS FITTED WITH EQUIPMENT DESIGNED TO TEST THE PHYSICAL AND PHYSICO-MECHANICAL PROPERTIES OF POLYMERS, AND CAN ALSO CONDUCT A WIDE RANGE OF TESTS ON FINISHED POLYMER PRODUCTS

Secondly, the basic testing section of the laboratory is equipped with the tools designed to verify the physical and physico-mechanical properties of polymers. This field of research investigates the behaviour of plastics when subject to mechanical forces or under other external influences (heating, stretching, friction, etc.) to find out their thermal, tensile, deformation, rheological and other properties, in turn allowing the scope of their future technical application to be established.

The research lab at SIBUR PolyLab is unique in that it can also conduct a wide range of tests on finished polymer products (the third section), which, when combined with the physico-chemical and basic tests, forms the full testing cycle from polymer pellet to end product. The centre is equipped with machines that can test pipes for resistance to internal hydrostatic pressure, rapid crack propagation and impacts, while also testing the tightness of pipe connections. These tests help to determine the quality of polymer pipes and by extrapolating the results for the duration of the pipe's service life, the team can determine whether they are suitable for use in construction, utility systems and gas transportation. In addition to studying pipes, the laboratory also tests a range of consumer properties of finished products, rigid packaging and films.



The SIBUR PolyLab laboratory features cutting-edge, high-tech equipment.

LABORATORY STAFF ACTIVELY COLLABORATES WITH PARTNERS TO GIVE ADVICE ON THE POLYMER TESTING PROCESS, RESEARCH AND TESTING EQUIPMENT, AND WHICH ANALYTICAL METHODS TO SELECT

The research carried out at the test laboratory provides analytical support to SIBUR's production processes, while also underpinning product quality improvements, homologation of new grades, and recycling projects. In addition, the SIBUR PolyLab laboratory develops reference samples and organises interlaboratory comparisons across SIBUR production sites to ensure that their methods of testing polymer products are accurate.

Alongside providing analytical support for SIBUR's projects, the laboratory staff actively collaborates with partners to give advice on the polymer testing process, research and testing equipment, which analytical methods to select, and laboratory accreditation. They also run webinars on polymer testing and research.

"Research quality is the most important indicator of the test laboratory's performance. State accreditation of the facility's research will help SIBUR's clients and partners develop new high quality products with a reduced time to market," says Konstantin Vernigorov, CEO of SIBUR PolyLab. "Given the rapidly evolving consumer preferences and manufacturer priorities, we plan to expand the range of certified research going forward."

In 2021, SIBUR PolyLab intends to extend the scope of accreditation by adding new research methodologies for a variety of processing industries relevant for SIBUR's customers and partners.