

OJSC Plastic (Uzlovaya) steadily provides processors with domestic styrene plastics — ABS and EPS-F. As the first domestic factory which started the ABS synthesis, Plastic maintains strong market positions throughout its history and continues to develop the grade range allowing processors to make competitive products basing on Russian raw materials



Photo OJSC Plastic

# New grades — new opportunities

Today, the share of Uzlovaya plant's ABS plastics in the domestic consumption reached 30 %, while 70 % of domestic ABS plastic is produced from Uzlovaya plant raw materials.

The policy of continuous development allows to follow market trends and to strengthen market position. The change of demand prompted the company to develop new niches, to create a whole range of grades with improved properties. If in 2013 production was oriented

towards automotive industry mostly, in the next two years the engineers developed 5 new grades for the manufacturing of electrical goods and household appliances. By 2017, the new grades prevailed in the OJSC Plastic's nomenclature of materials. This distribution of the assortment corresponds to the current structure of ABS consumption, where up to 50 % of the material falls precisely on the household appliances and electrical goods manufacture.

The pre-requisite of new grades production was the technical modernization of ABS manufacture, which included replacement of extruders, installation of a liquid antioxidant dosing system at the stage of ABS latex synthesis, installation of a new melt filtration system, modification of the process, expansion of the input quality control program, purchase of new generation additives.

Number of measures allowed to increase the gloss of molding grades up to 90 %, increase the heat resistance of ABS-1525, ABS-1515 (molding), ABS-2806 (extrusion), reduce the yellowness index of uncolored plastic below 10 units, increase the polymer rigidity.

In the context of the ABS use for household appliances, particular attention shall be paid to the grades listed in Table 1 with their specifications and

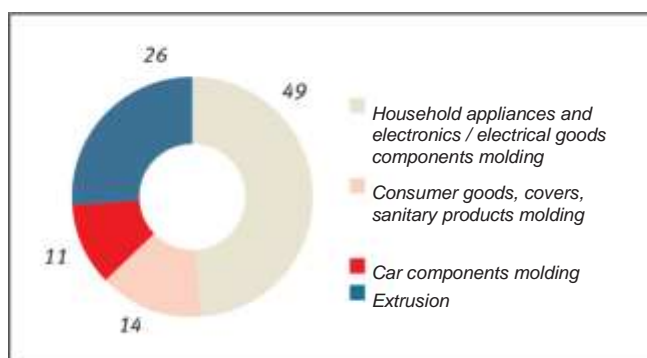
purposes. In addition, the new materials were certified for food contact.

Further directions of OJSC Plastic grade range development include, in particular, development of ABS grades suitable for metallization; ABS weather resistance increase; development of high heat resistant materials for car industry.

The fire resistant ABS grade development is finalized. Its consumer tests were positive, so in the near future the only Russian fire resistant ABS will come on the domestic market. This material will suit for both molding and extrusion.

Along with the grade development, OJSC Plastic engineers actively design up-to-date color palette of materials. During 2016–2017, new color formulations have been developed and introduced into production, including 10 white and 6 gray hues.

Figure 1. ABS consumption structure in Russia, % (Plastic Trade House estimate)





In Russia, the ABS with internal dyeing is produced only at Uzlovaya plant, which is a competitive advantage of these materials. Moreover, the plant's specialists can develop the color themselves according to the customer's requirements and RAL specifications, as they have both equipment and experience necessary.

As a manufacturer of expandable polystyrene, OJSC Plastic also takes steps to improve consumer properties of expandable suspension polystyrene with a surface treatment of particles. The modernization of the EPS-F production line, started in the summer of 2017, will increase its capacity, optimize the process and improve the produced material quality. Improved performance will be achieved through a more

even expanding agent distribution, high stable molecular weight, and reduced residual monomer content in the polymer.

As a result of modernization, the material which meets the most up-to-date requirements of EPS processors will be introduced at the market. OJSC Plastic polystyrene will allow producers to vary the density of expanded polystyrene plates and also to maintain high strength parameters, as well as to improve process conditions stability.


The plant engineers in close cooperation with commercial experts not only improve existing products, but also develop and introduce new materials. The latest OJSC Plastic product is butadiene-styrene modifier of impact and heat resistance of ABS-15F/15P, ABS-20F/20P, ABS-28F/28P grades.

The product is designed to provide impact and heat

The new domestic modifier opens additional

Grade	Specification	Scope of application
ABS-1525	High MFI, gloss, rigidity	Office appliances, electronics components Instrument manufacturers Threads for 3D printing
ABS-1515	High MFI Heat stability Resistance up to 650 °C when tested with a glowing wire High gloss	Electronics / electrical goods components
ABS-1530	High MFI and gloss	Household equipment components Toys Car components

resistance for PVC compositions. The final product retains its anti-impact properties for a long time under any weather conditions due to the UV-stabilizer introducing in the ABS synthesis. Also, ABS modifiers are excellent general purpose processing additives with a wide "processing window", thus different processing modifiers will not be needed.

opportunities in the production of goods for construction and housing and communal services: window profiles, doors, siding, terrace boards, PVC pipes. Currently, the processors test it at their plants. 

**Table 1. Specifications and purposes of the new ABS grades produced by OJSC Plastic (Uzlovaya)**



OJSC Plastic (Uzlovaya)  
Russian manufacturer of styrene plastics

**NEW DEVELOPMENTS**

**CLIENT SERVICE**

**CONVENIENT LOGISTICS**

**COMPETITIVE PRICE**

**We offer an actual range of polymer materials for the market needs!**

**ABS plastic**

- Advanced ABS grades for electrical and household equipment
- for sheets
- for car industry components
- grades certified for food contact

**Expandable polystyrene EPS-F**

6 grades with RoHS certificate for the manufacturing of:

- heat and acoustic insulation mats
- EPS blocks
- panels

**New!**

Modifier of impact and heat resistance for rigid PVC compositions

Scope of application:

- profile
- decking
- siding
- pipe

**We provide technical support from the selection of the material to its implementation in your production and final product manufacturing.**

To order the polymer products please contact the Plastic Trade House:  
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