



**JSC «IZHEVSK PLASTIC
PLANT»**

HISTORY

JSC «Izhevsk Plastic Plant» was established by the resolution of the USSR Government in 1972 within the Ministry of chemical industry as a companion plant of Izhevsk automobile factory. Practically every car, manufactured by Izhevsk automobile factory, from the moment of our establishment, was equipped with different units, manufactured by us.

Nowadays «Izhevsk Plastic Plant» is one the biggest plastics processing plant in Russia. Quality Management System is certified with ISO 9001:2000



GOODS OF JSC «IPP»

Equipment of our plant provides a grate range of production for different spheres of industry:

- Blown pieces,
- Huge molding pieces,
- Urethane foam fillings,
- Heat-insulating materials based on expended polyolefine ,
- Pieces made out of polyurethane elastomers,
- Polyethylene films of different types.

Company's expected future development

- Directors of our plant, as one of the strategic approach, set a goal to expand the assortment for automobile industry.
- Today our plant is working on production assimilation of irradiation crosslinked polypropylene foams. Polypropylene foams in contrast to PE- foams have a wider temperature range from -40 up to +120 C°, what makes polypropylene foams are more suitable for automobile industry.

Global conception of JSC «IPP» in working out of car components.

- Maximum weight lowering of the product
- Saving functionality
- Increasing level of comfortable in the car
- Adaptability when assembly
- Saving the cost

This conception includes working out of car components with unique heat-, sound insulation characteristics, improved outside appearance and tactile attractiveness (soft touch), improved operational characteristics.

This is achieved by changing monolithic materials to expended materials in traditional car components, by adding new functional elements to the car construction, and also by using simple and optimal car components producing technology — moulding. Changing properties of expended and accessory (coating) materials one can reach demanded durable, tactile, heat-, sound insulating parameters of the product. The possibility of laminating with different types of materials gives unlimited feasibility for design approaches. Having high molding properties Isolon® make it possible to produce pieces with complicated space forms, with equal distribution of foam, high quality and surface evenness.

JSC «IPP» offers moulded pieces on the base of PE-foam and PP-foam Isolon®, including foams laminated with decorative films and nonwoven materials. Pieces of interior are manufactured from the material of «sandwich» type, which consists of 3 layers:

- 1) **Carcase base-layer** — polymeric material, textile waste quilts with impregnation, special cardboard and so on;
- 2) **Foam materials** — crosslinked PE-foam and PP-foam Isolon®;
- 3) **Decorative layer** with demanded texture — PVC film, PVC/ABS, TPE (thermoplastic polyolefine elastomer), textile material on the base of polyester or polypropylene fibre.

Pieces of industrial use are manufactured with 1 layer (only from foam materials) or with 2 layers — foam material laminated with functional layer (ex: sound insulating textile) or with decorative film.

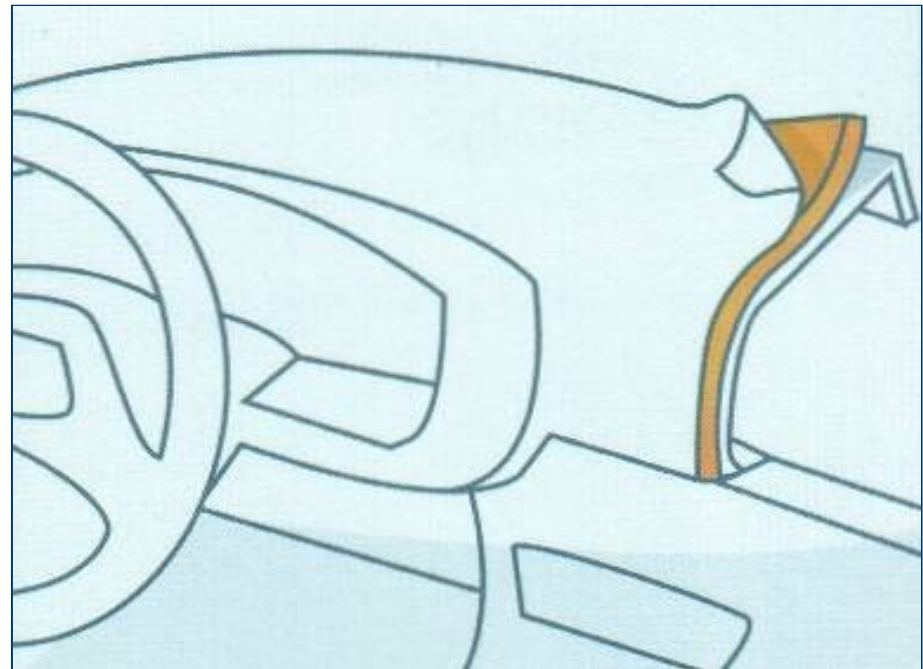
Facia panel, pieces of facia panel

Facia panel and its pieces, in this particular case, are made of casted or moulded hard polymeric carcass. The surface of this carcass is covered with layer of foam material and decorative PVC or TPE film of needed texture.

Features of the product

- Weight reduction up to 50%
- Obtaining the needed softness and texture of the surface
- Surface heat tolerance up to 140°C
- Additional heat-, sound insulating features

For the carcass manufacturing it is possible to use cheap polymeric materials which doesn't require special characteristics (scrub resistance, quality of the surface, raised fluidity).

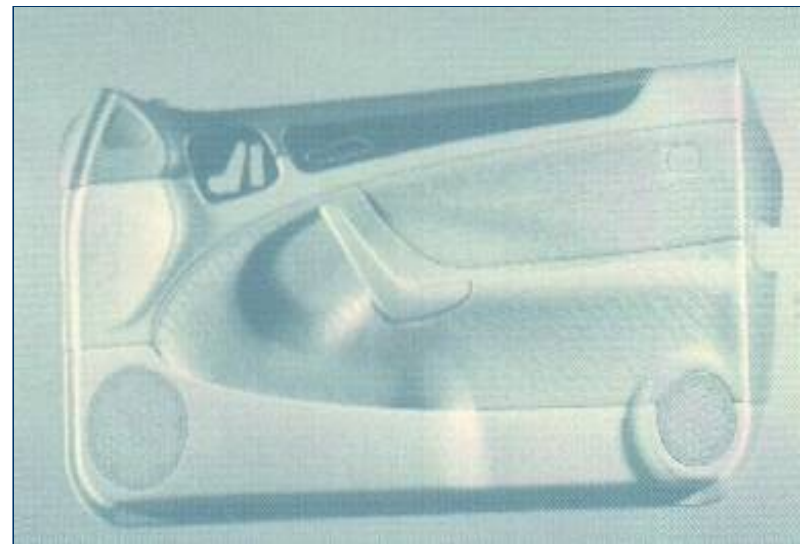
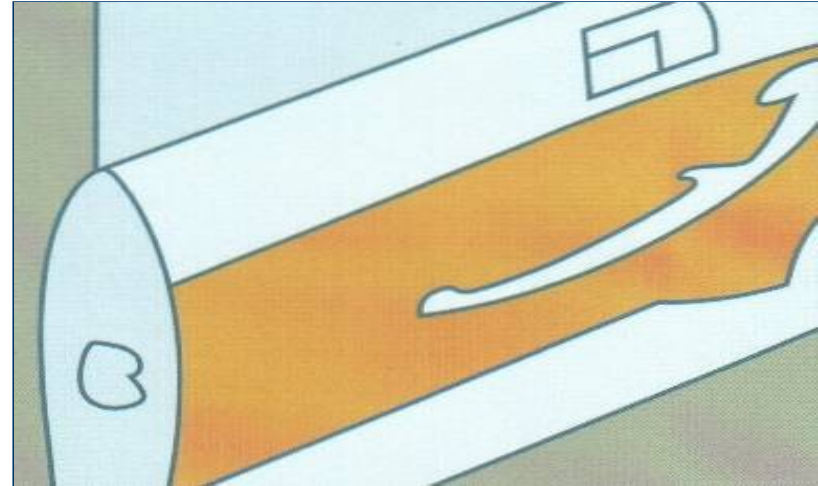


Door panel, door inserts

Door panels (door inserts) are made of «sandwich» type material, which consists of hard moulded carcass layer, supporting the shape of the piece (polymeric material or special cardboard or impregnated textile residues), the layer of foam and facing layer — PVC, TPE, PVC/ABS or textile material (polyester or polypropylene).

Features of the product

- Weight reduction up to 50%
- Soft surface with «soft touch» effect, manifold possibilities of surface softness and texture.
- High heat-, sound insulating qualities, sound comfort when opening/closing the car door and car exploitation.
- Simplified assembly by pieces flexibility.
- Foam heat resistance up to 140°C, absence of water absorption and volatile evolution.



Facing the car ceiling and functional block between front seats

- The material structure, functionality and properties of the functional block facing are the same as facing the door panes. Using the foam material reduces the weight, creates additional heat insulation and sound comfort.
- The material structure, functionality and properties of the car ceiling facing are the same as facing the door panes. It is a profitable alternative to expensive polyurethane foams with nearly full absence of water absorption and environmental friendliness.



Back surface of the squab facing



Also consists of «sandwich» type material the same as above mentioned.

Features of the product:

- Weight reduction.
- Surface of high quality and needed texture and softness.
- Possibility of manufacturing the facing of complicated space forms, and also with different inserts.

Rest for arms and sunscreens



Pieces consist of hard casted polymeric carcass, covered with foam material layer and decorative PVC film or thermoplastic polyolefine (TPE) with needed texture.

Features of the product:

- Weight reduction with the high carcass stability
- Surface of high quality and needed softness and texture

Stealth shelf, facing of baggage compartment



The material structure, functionality and properties are the same as facing the door panes. Using the «sandwich» type material with foam material layer helps in getting higher heat-, sound insulation of the car cabin from the baggage compartment, reduces the weight with saving structural rigidity.

Features of the product:

- Reduced weight and structural rigidity
- Surface of high quality and needed texture and softness
- Additional heat-, sound insulating properties.

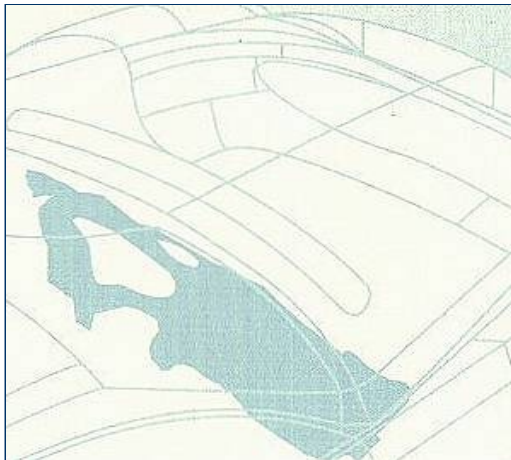
Other interior pieces with «soft touch» effect

The material structure, functionality and properties are the same as door panes.

Using of different small moulded facing pieces in the car cabin (different pillars, coupling elements of interior and so on), which have «sandwich» structure with soft texture instead of pressure casted pieces with hard finished surface will help to rise the the comfort level of car cabins, will have a positive effect on sound properties, and also will reduce the necessity of using of expensive casted polymers, which have high surface quality requirements.

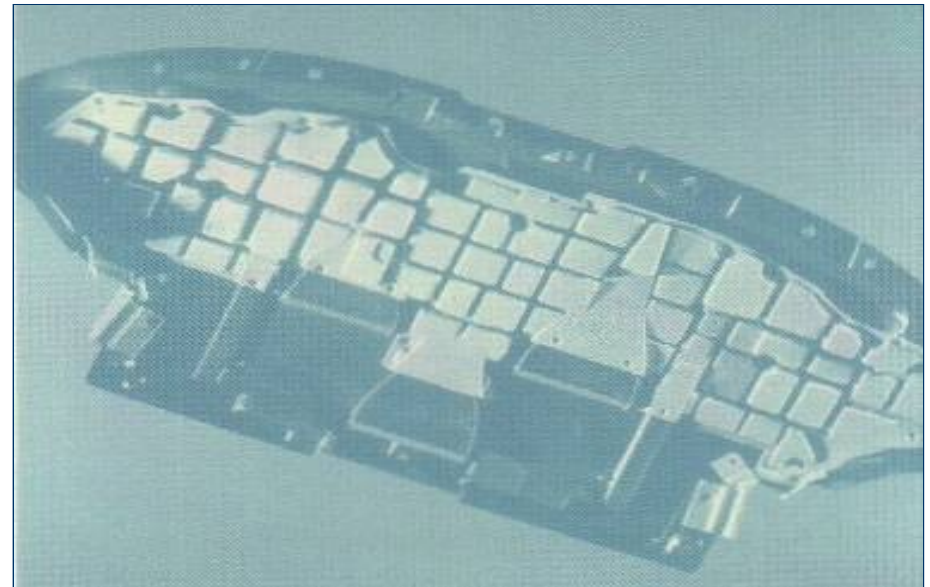
External / internal insulating panels of engine compartment/car cabin (sound-, heat-, vibration isolation)

One layer piece, made of foam material or two layer piece — foam material laminated with textile pad for better sound insulation. Also the piece can be laminated with reflecting layer for better heat insulation.



Sound insulating plate under engine compartment (on floor pan)

The piece consists of protection carcass layer (polymer, reinforced with fiberglass), laminated with foam material. Such plate essentially reduces noise of running engine and additionally protects floor pan under engine compartment.



Sound-, vibration isolating engine cover

One layer piece, made of foam material or two, layer piece made of foam material laminated with textile pad for better sound insulation. The piece essentially reduces the noise of running engine.



Features of the product:

- Lightweight
- High heat-, sound and vibration insulating properties, stability of engine thermal rate, free starting of engine in cold temperature circumstances.
- Simplified assembly by pieces flexibility.
- Foam heat resistance up to 140°C, required Fire Resistance Rating, absence of water absorption.

Motor hood facing (sound-, heat insulation)

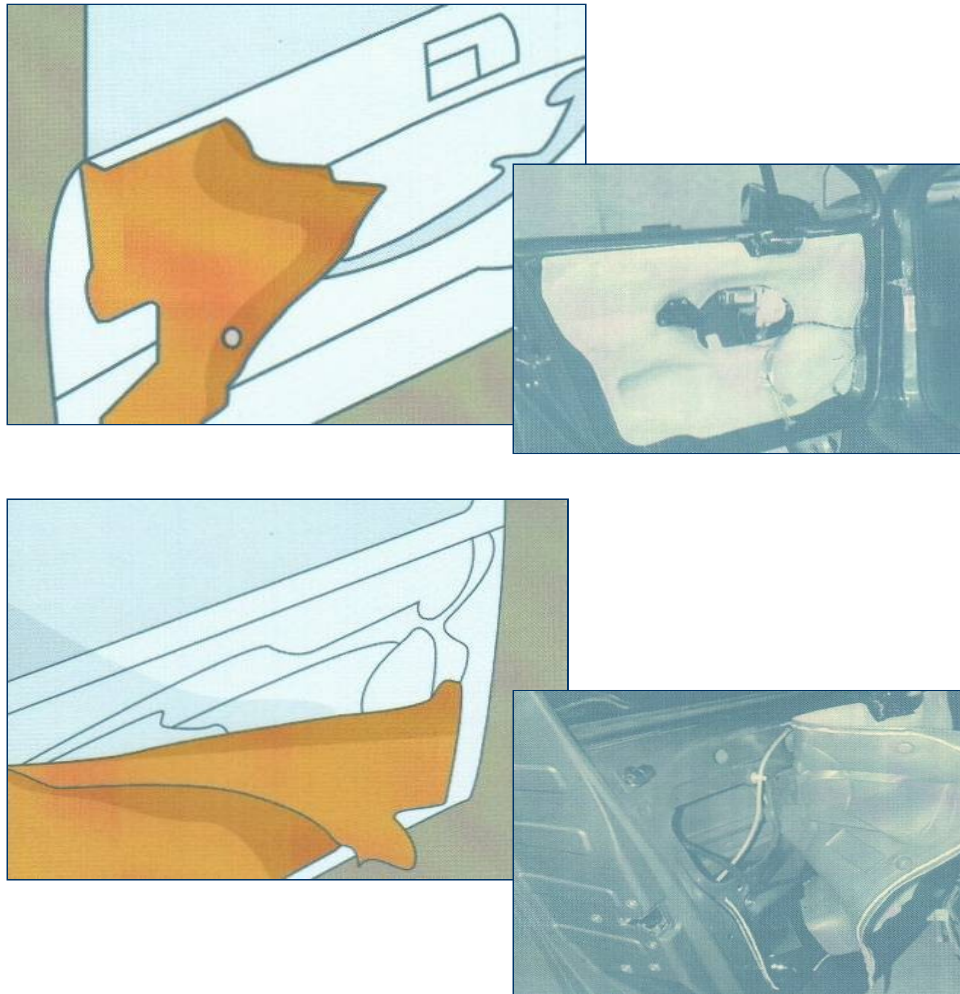
One layer piece, made of foam material or two - three layer piece made of foam material laminated with textile pad for better sound insulation and reflected foil - for heat insulation.



Features of the product:

- Lightweight
- High heat-, sound and vibration insulating properties, stability of engine thermal rate, free starting of engine in cold temperature circumstances.
- Simplified assembly by pieces flexibility.
- Foam heat resistance up to 140°C, required Fire Resistance Rating, absence of water absorption.

Inside door space insertions (heat-, sound insulation, sealing for water protection)



One layer piece, made of foam material or two, layer piece made of foam material laminated with textile pad for better sound insulation.

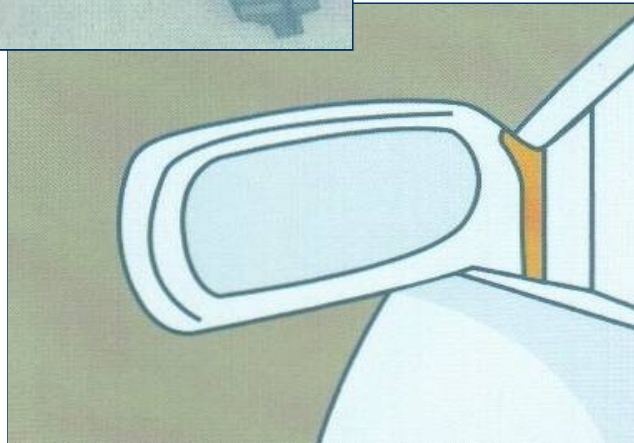
Features of the product:

- Light weight
- High heat-, and sound insulation properties, sound comfort when opening/ closing the door and automobile exploitation
- Positive seal water protection of inside door space
 - Simplified assembly by pieces flexibility.
- Foam heat resistance up to 140°C, absence of water absorption and volatile evolution.

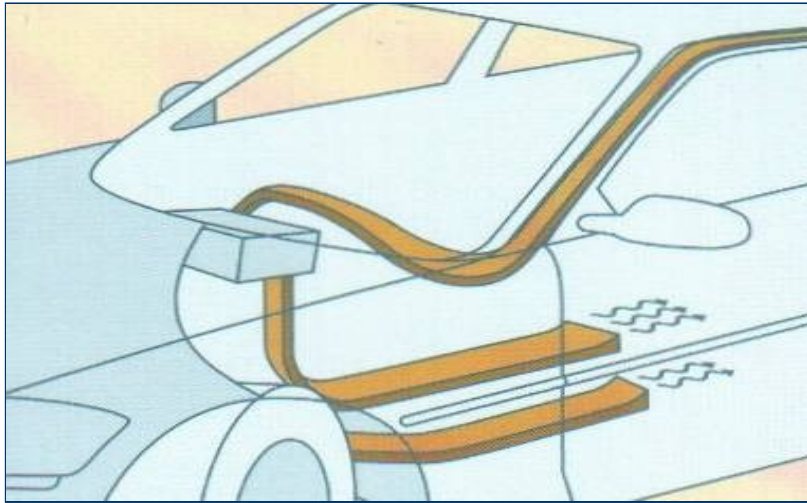
Pads and seals (cut out and press-moulded): pads for speaker fastening, mirror seals, viewing seal elements and so on.,



One layer pieces cut out or shaped of foam material in accordance with design requirements . Changing properties of foam material gives the opportunity of pieces manufacture with different hard (flexible), heat-, vibration isolation properties.



Air pipes, ventilation system



One layer pieces, made of foam with high hardness. One of the samples of conception realization in changing of monolithic materials to foamed materials, as result — the piece weight essentially reduces . And more over there are distinct advantages.

Features of the product:

- Very light weight
- Increased adjustable heat insulating properties
- Simplified construction adaptability by the flexibility of the pieces
- Foam heat resistance up to 140°C, low-temperature resistance, absence of water absorption and volatile evaluation

Safety belts box

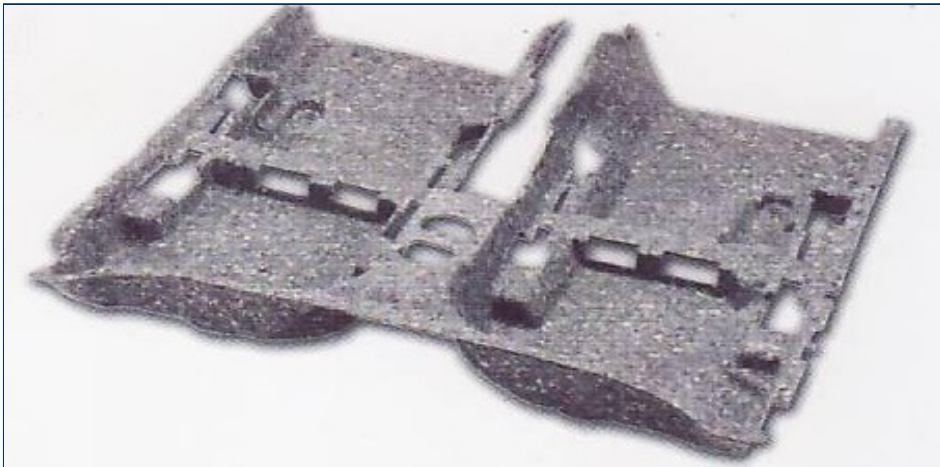
Two or three layer piece: hard foam material + decorative film or shaped carcass + foam material + decorative film.

Features of the product:

- Light weight saving the needed carcass rigidity
- Soft surface with «soft touch effect», manifold possibilities of surface softness and texture.

Heat-, sound-, vibration isolation inserts under floor covering

1-2 layer product: a) foam material or b) foam material + textile pad (for improved sound insulation)

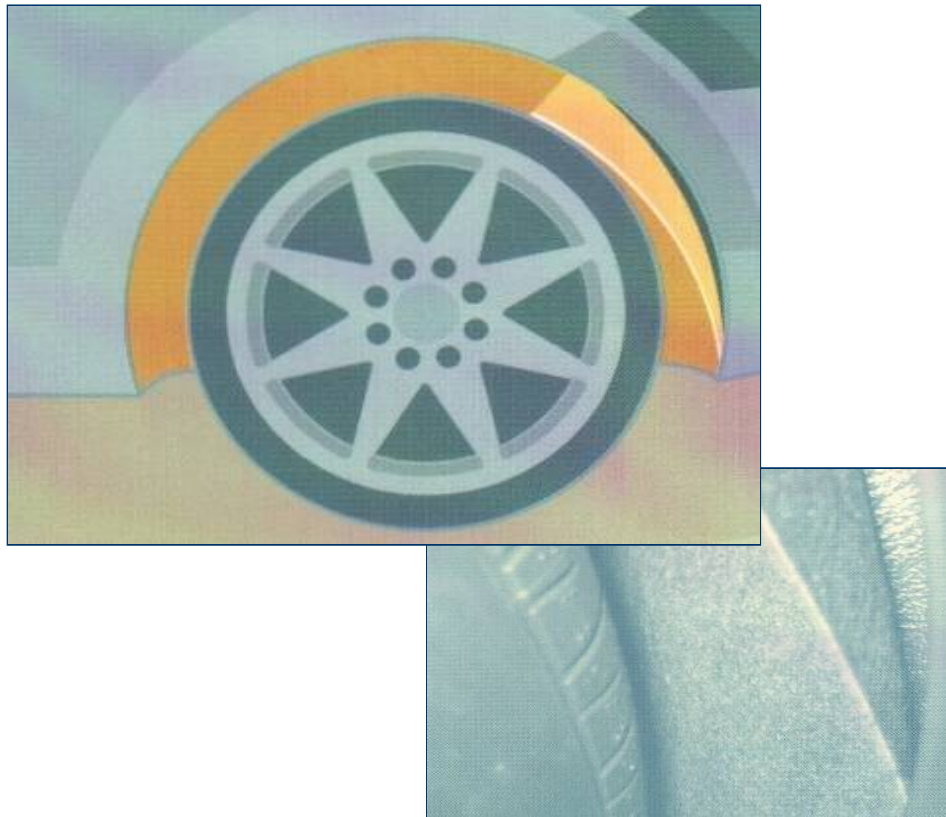


Features of the product:

- Light weight
- Increased heat-, sound, vibration isolating properties, sound comfort
- Simplified and fast assembly by the flexibility by flexibility of the product
- Absence of water absorption and volatile evaluation

Wheel arch protection

Two-layer product: foam material + textile material. Using of this product instead of monolithic casted or moulded protectors essentially reduces the weight and has a number of advantages.



Features of the product:

- Light weight
- High heat-, sound insulation properties, additional sound reduction by the «soft» gravel impacts
- Lowering of spatter
- High wear resistance and impact viscosity
- High- and low temperature resistance
- Simplified and fast assembly by the flexibility of the product
- Absence of water absorption, barrier properties of foam material, additional corrosion protection

Heat-resistant, water-proof, vibration-isolating material Isolon



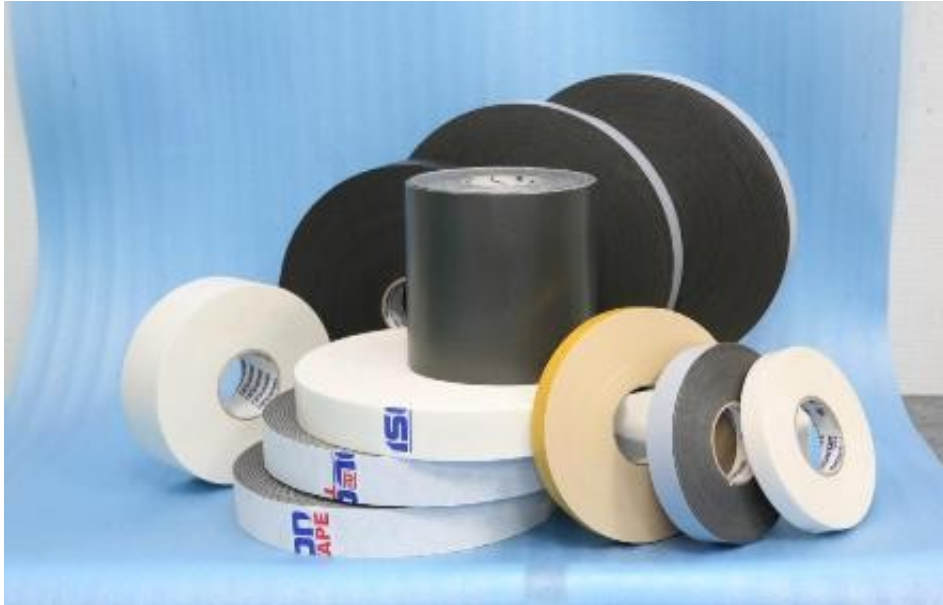
JSC «Izhevsk Plastic Plant» is the biggest in Russia and CIS producer of irradiation cross-linked polyolefines. Trade mark Isolon® is well known not only in Russia but also out of the Country. Isolon® is a flexible, closed cell, expanded polyolefine (polyethylene, EVA) delivered in sheets and rolls with the density range 33 to 200 kg/m³. Thanks to unique combination of heat-, water-, vapour-, vibration-isolating qualities the material is widely used practically in every sphere of industry. The material is widely used as intermediate material between carcass and facing elements when assembly car cabins, as blank-plugs for water-, heat-, vibration-isolating.

Isolon® can be easily mechanically treated, including cutting, chipping out, die-stamping and pressing. Isolon® has certificate of conformance, hygienic certificate, fire certificate and shipping register certificate.



For today it is possible at customers will to cover Isolon® with special materials such as different films, nonwoven fabrics, foils. Also we can produce Isolon® with fire-retarding agents.

Sticky tapes **ISOLONTAPE**



In 2006 our plant started to produce sticky tapes on the base of Isolone with trade mark Isolontape. Hot Melt layer on PE-foam significantly reduces time of mounting.

Molding pieces

Huge molding pieces such as bumpers, dash panel frames are manufactured on molding complete units «Manesmann Demag» Germany. Equipment capability allows to produce pieces with the weight up to 7 kilogramme. High quality of the production, low prices in comparison with analogue metallic pieces gave a wide range of usage of plastic goods both in Russia and foreign industry



BLOWN PIECES

With help of extrusion blown equipment, which is at Izhevsk Plastic Plant's disposal, we manufacture different hollow products such as washer and coolant expansion reservoirs, different types of air delivery pipes and so on. Blown pieces are light, durable, long lived, chemical-resistant, health and environment secure.



Urethane foam

Elastic urethane foam, produced by heating formation method, is the most technologically producible type of foam plastics. Urethane foam pieces have a high wear resistance, effective sound-absorbing, good amortization, air permeable, age-resistant, cold tolerance, heat-resistant and environment secure qualities. On the Italian equipment «Gallino» our plant produces car seats fillings for autos (VAZ 2104) by Izhevsk automobile factory.



Our business partners

- Today Isolon is used by Russian carmakers such as GAZ (as antivibration pads), AVTOVAZ (heat-isolating of car cabins), «Volzhanin» (heat-, sound insulation of the ceiling of bus cabin), RUE MAZ (heat-, sound insulation of car cabins), Automobile factory «Ural» (heat-, sound insulation of car cabins), ELAZ (heat-, sound insulation of the floor of car cabins)
- On the base of Isolon a number of companies such as LLC «Standartplast» (Ivanovo city) manufacture multy-layer materials which are used as heat-, sound insulators of engine compartments, car cabins, baggage sections, wheelarches. The production of «Standartplast» company is used practically by all Russian car makers as antivibration pads and heat-, soud insulating materials.
- A number of companies (LLC «RS-Treid» , LLC «Avtocomfort») use Isolon as heat-, sound insulating material when tuning the car.

Hope for longterm and mutually profitable co-
operation!

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