

## **Rubber-Based Product**



Modern equipment and machinery, along with high level of technical knowledge, has made it possible to prepare and produce all kinds of rubber compounds with the highest quality, lowest price and the shortest time required by FaraFoam Group. At present, the services that can be provided by FaraFoam Group in this field are as follows:

#### **Consultation for formulation**

Presenting new formulations, appropriate solutions to modify formulations and compound mixing conditions with the aim of improving quality and reducing the price.

Mixing pre-prepared rubber compounds

#### $\cdot Production \, of \, rubber \, compounds$

Rubber compounds that can be produced in different hardness are as follows: Structurally stable rubber compounds in the vicinity of fluids such as industrial oils, brake oil and natural gas.

Rubber compounds resistant to acidic, alkaline and corrosive environments Rubber compounds resistant to ozone and oxidation degradation Rubber compound with hardness less than 30 (Shore A) Rubber compounds based on silicone rubber

#### **Production of rubber parts**

Possession of technical knowledge and expertise in the field of formulating and producing various rubber compounds has empowered FaraFoam Group to produce all kinds of rubber parts according to the customer's requirements. Production and supply of anti-seismic, shock-absorber, anti-abrasion rubber parts, etc., in various sizes and shapes with different hardness, is one of the services currently provided by FaraFoam Group (Knowledge based).

#### **Rubber Parts Production**



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## **Mastic & Anti-Corrosion Tapes Based on Butyl Paste**

#### **Seal Fix**

Seal Fix is a butyl rubber-based adhesive tape that is used to seal joints and gaps. Seal Fix is resistant to water and water vapor penetration and is not degraded by radiation. Also, it has very high adhesive strength on cement and metal surfaces, and its physical-mechanical properties do not change against moisture, UV rays, extreme temperature changes, and mechanical stresses. Phenomena such as surface cracking, separation from the surface and reduction of adhesion in the long term are common phenomena in sealing mastics. But the viscoelastic and anti-penetration nature of Seal Fix adhesive paste leads to long-term stable physical and chemical structure.



#### 3-ply Anti-Corrosion Tape

This product is an alternative of 3-Ply cold applied tapes manufactured by Denso Company that utilized to prevent corrosion in pipelines and underground structures. This product is based on made up of butyl rubber and PE film as an interface inserted between of two flat layers of butyl based compounds which are different in terms of thickness and adhesion strength. Anticorrosion tapes resist against the mechanical stresses and sever weather conditions and due to their impermeable essence in the exposure of water and its vapors, diluted salts and aqueous mediums.

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#### MastiX

This product is based on butyl rubber that can be expanded during the thermal cure process up to 900% and change into a foamy rubber part. Mastix possesses porous and flexible structure and resists against severe weather condition alterations and dimensional expansion-contraction. Also this product can be utilized in order to sealing seams and irregular spaces between joints.



## **Butyl Adhesive**

#### **Butyl adhesive**

Butyl adhesive utilized for automotive industries is a type of sealant paste with high adhesion strength that is used without the need for a curing process. This sealant adhesive can be used for:

·Sealing of foam insulation and waterproof PE based films installed on the back of the car door panels

 $\cdot$  Sealing of various areas of internal car structure, high adhesion strength and extraordinary bonding to metal and polymer parts of the car

·Reducing the noise caused by the impact of metal plates in the car structure

#### **Pro Butyl Sealant**



Eco Butyl Sealant

It is an economic adhesive-sealant with properties similar to butyl HV 578-79 (KÖMMERLING Co., Germany), which is used for sealing waterproof insulations of cars door panels.







#### **Nano Butyl Sealant**

This sealant is similar to Pro Butyl Sealant, with the difference that it is reinforced with nano-scale particles. Benefiting from nano technology and adding nanoscale particles lead to the improvement of some properties such as resistance to collapsing.



# **Butyl Adhesive**

#### Butyl Adhesive for Double Glazed Windows

Butyl glass adhesive-sealant is used to adhere the aluminum spacer to the glass in a wide temperature range. The unique formulation of this product leads to the acceleration of the production process and a significant reduction in temperature and operational pressure. The nature of this adhesive is such that factors such as the type of butyl injection device, operating conditions (temperature and pressure) have a direct effect on the performance of the butyl sealant. For this reason, each customer's need for butyl adhesive is according to the conditions of a specific device.

Therefore, FaraFoam Group has designed the production system in such a way that it is able to make changes in the properties of butyl adhesive of double glazed windows according to the needs of customers.



#### **Hot Melt Butyl Adhesive**

Hot melt butyl adhesive does not contain solvents or fillers and is equivalent to HotverA+ (Fenzi Co., Italy). This product possessed high adhesion strength to metal, glass and polymer surfaces and leads to a significant reduction in the amount of leakage of gaseous fluids and water vapor. The uses of butyl hot melt glue are:



- As an alternative to polysulfide sealants for secondary sealing of double glazed windows in cold regions
- In order to produce pressure sensitive and nondryable adhesive tapes, it is laminated on various substrates such as aluminum foil, PVC and polyethylene films.



## **Adhesive Tapes**

#### **Black Fix**



This product is a flexible sealing tape with high adhesion and tensile strength that is able to prevent fluid leakage in tanks and low-pressure pipelines. The carrier of this tape is based on PVC causing higher resistance to UV radiation and mechanical stresses.

#### **Magic Fix**

Magic Fix is a self-adhesive, vapor barrier and weatherproof tape, used in petrochemical installations. Magic Fix is a thin layer of butyl rubber adhesive faced with a 23  $\mu$ m aluminum strengthened by a 23  $\mu$ m transparent Polyester for excellent puncture and tear resistance. Mafic Fix is used for insulating the pipelines as an anti-corrosion protective in petrochemical industries. Also this this type of adhesive can be used protection of heat insulators installed on oil and gas transmission pipes. Sealing of roof tiles, expansion-contraction joints and air-ducts are the other usages of this tape.



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#### **Wire Fix**

Wire Fix tape is used to bundle wires in the automotive industry and consists of a thin layer of pressuresensitive adhesive laminated on a non-woven fabric. This product possessed high tensile strength and abrasion resistance, and has the ability to selfextinguish according to automotive standards. Despite the average initial adhesion, this fabric tape is able to create strong and stable bonding, which leads to the wire harness not unraveling in the long term.





Cover Fix is a PE-based cover tape that can be installed as protective layer against splashing construction paints, dusts and water.

# **Moisture Curable Mastics**

#### One Component Polyurethane Mastic

Single component moisture-curable mastics are based on polyurethane with a medium degree of hardness, which has high mechanical resistance. This mastic is used for sealing horizontal and vertical joints without the need for primer and activator. Moisture-curable polyurethane mastics are used as a windshield sealer in the automotive industry and wagon manufacturing due to its high adhesion strength to painted metal plates and glass, structural stability against continuous dynamic stresses, and unique rheological properties. Polyurethane mastics are also used in various industries for sealing all types of joints where strong bonding, high mechanical strength and the ability to be cured in open air are required. Applications of single component polyurethane mastics are: As a sealer around the glass of vehicles

- Sealing horizontal and vertical cracks for waterproofing

- Sealing of all concretes, painted parts, metal, polyester, glass, PVC and ceramic tiles



## **Sealant Adhesive Sealer & Sealing Mastics**

#### **Hemming Sealant-Adhesive**



This one-component adhesive product is based on epoxy resin and does not contain solvents. Hemming is an adhesive-sealant possessing high mechanical strength, which is used in the automotive industry in the body shop for edged areas or parts where high adhesion strength is required, such as hoods and car doors. This glue does not dry at ambient temperature and its curing process takes place in the paint salon and at the stage of painting the car body at high temperature.

#### **Body Sealing Mastic**

This sealant-adhesive mastic is solvent-free, viscous and rubber-based, possessing high abrasion resistance and does not undergo physical rupture due to high-speed water spraying without the need for spontaneous gel formation and pre-curing. The use of up-to-date technical knowledge in the production of this mastic has led to the minimum amount of bubbling and swelling during mastic application and during the baking process. Also, its elastic nature after the baking process at high temperature causes to stability against tension and non-separation from the surface against changes in temperature and pressure. This sealer is applied in the body salon and is used for sealing and reducing noise.



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## **Sealant Adhesive Sealer & Sealing Mastics**

#### **Under-body Coating (Plastisol)**



The bottom surface of cars is exposed to all kinds of physical and chemical stresses such as splashing water, mud, sand and pebbles, which are caused by impact and wear caused by the aforementioned factors, corrosion and destruction. This coating layer is a thixotropic mixture based on PVC polymer and is applied by spraying in the paint salon. After the curing and drying process at high temperature, a thin and uniform layer appears, which prevents corrosion against the stresses applied to the lower surface of the car.

It is also used for moisture, vibration and sound insulation due to its favorable structural nature. High mechanical strength, color acceptability and excellent adhesion to all kinds of surfaces, good fluidity, uniformity and no bubbling are other properties of this product, which is applied in different areas such as under the mudguard, pedals, rear and front bumpers, as well as car door frames. With the use of nanotechnology in this product, some of the product's features such as rheological properties and mechanical strength after aging have also been improved.

#### **Seam Sealer**

The most important feature of this mastic is high resistance to moisture, salt and water. Also, this mastic has a very high resistance against corrosion caused by acidic and alkaline fluids. Seam sealer is applied manually in different areas of the car, and its drying process takes place through baking at high temperature.



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# **Acoustic Product**

#### **Vibro Damping Sheets**



One of the most effective ways to make the car room acoustic, is to install vibration absorbing mats. Currently, sound and vibration dampers include a layer of butyl rubber-based adhesive laminated on aluminum foil. Butyl adhesive paste is able to absorb the energy generated from the vibrations caused by the environment and the internal structure of the car and return it to the environment in the form of heat energy. This product can be used as a sound and vibration absorber in various parts of passenger and off-road vehicles. The unique features of this product are: Absorption of vibrations in a wide frequency range High adhesion strength to metal car surfaces No separation from the surface in a wide temperature range

#### **Foam Insulation for Cars Doors Panels**



This product prevents the penetration of water into the car and is connected to the metal body of the car using a special sealant. The foamy nature of insulations of cars Door panels leads to sound level reduction, vibration absorption and minimizes heat exchange with the environment.

#### Egg Box PU Foam

Aquatic foams are made of open-cell polyurethane foam, one side of which has a uniform coating of very strong adhesive, which is protected by a silicone paper coating. Egg comb foam is a widely used product that is used in different industries to absorb sound, vibration and impact.

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#### **Elastomeric Insulation Foams**

This product is a type of synthetic rubber with a closed cell foam structure, which has a flexible and viscoelastic nature and has a very high resistance against the penetration of moisture, water vapor, UV radiation and mechanical stresses. The conductivity coefficient of elastomeric insulation is very low, and for this reason, it has been considered as foam thermal insulation.



## Foam Insulation and Sponge Filters

### **Production & Supply of various Types of PU Sponge**

This product has different degrees of porosity according to the type of application. The application of this product can be seen in various industries and is not exclusive to one industry. The common

uses of this product are:

Industrial treatment plants

To produce automotive catalysts

To grow flowers and plants in hydroponic farms

Filtration in wind industries (air compressor, oxygen generator, etc.)

#### Production of all kinds of foam parts, sound & thermal insulation

All kinds of foam parts and adhesive back foams Acoustic foams Rebound foam Silent foams (roll/sheet) Gaseous polyethylene foams (self-adhesive and plain) Elastomeric insulations (self-adhesive and plain/with aluminum coating/tubular insulation)



