



**GMORS®**

# RUBBER PRODUCTS APPLICATIONS

Whatever  
critical environments,  
media or applications are,  
GMORS Sealing Solutions can match you always!

[www.gmors.com](http://www.gmors.com)



# Welcome to GMORS Rubber!

Since 1986, GMORS has served as the leading rubber component manufacturer in Taiwan. Known for continuous innovation and improvement, GMORS products have been approved by landmark certifications and widely applied in Industrial market, Automotive, and other field areas.





- Factory
- Customer

## GMORS Taiwan (R&D Headquarters)

With innovative capability, we create much more possibilities for your rubber components.

Today, GMORS aims to offer the best customer-oriented service, the highest quality products, and the most competitive price for you. Our goal to be your best global partner in rubber components will never change.



## GMORS Thailand

Providing quality manpower, production facilities, measuring equipment, and SAP systems, GMORS Thailand aims to shorten the lead time and to offer high quality products for our customers.



## GMORS China

With the advantage of lower cost, we offer you a solution to balance of cost and quality.



# Applications



## ● Machinery

Machinery-Mechanical application features environments that require lubrication, and is always exposed to a variety of oil or fluid materials. Therefore, sealing components need to be resistant to these media. Additionally, we need to consider the size of sealing components, size of the groove and set aside the space in advance for the volume change, such as designing a pump. Moreover, the sealant can't contain materials that may deteriorate the oil quality or corrode the opponent pieces. Also, we have to take into account the cycle or pressure changes of the mechanical operation. NBR is the commonly used materials; other materials can provide different options, according to the ambient temperature and varied media.



## ● Powertrain

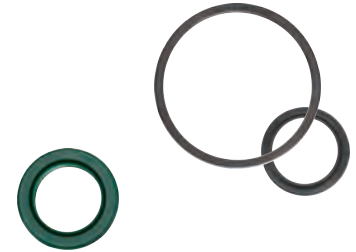
Such application is divided into hydraulic and pneumatic. Hydraulic rubber seals have to stand high pressure, heavy load and fluid lubrication; therefore, materials should have oil, high strength and wear-resistant capabilities. Pneumatic, however, has lower pressure. But it has higher motion speed which requires low friction in order to keep the action smooth and service life. One thing to pay special attention : under dynamic use, material temperature of the contact surface is generally around 10°C higher than the ambient temperature. NBR is the most common material. TPU can perform well in resisting high-strength and wear. For over 120°C high temperature demand, HNBR or FKM can meet the need.

# Applications



## ● Chemical industry

Rubber seals in this application are under harsh conditions such as a wide operation temperature range and corrosive chemicals. Therefore, a single material is hardly to meet all the requirements, we need to choose the materials in accordance to different chemical conditions. EPDM is used in general chemical acid-base, NBR is used in hydrocarbon, and FKM is used in high temperature acid. FFKM is widely used since it is such a high-performance material that can withstand extreme conditions.



## ● Food / Drinking water

In food industry application, rubber products will have indirect and direct contact with food during production and packing process. Therefore, physical property of the material must be clean and the material is not allowed to release harmful substances into food. Common certifications are the USA FDA 177.2600 or the EU regulation 10/2011. For drinking water application, rubber products are mainly certified by international impartial organizations, and some even request not to affect the taste of water or cause the growth of bacteria. GMORS compounds with NSF certificate: the N7041AA (sulfur cured), E7041AA (peroxide cured), E7042AA (peroxide cured, resistant to chloramines), E7051AA (sulfur cured), S7031AB (peroxide cured, resistant to heat) ; compound has WRAS approval : E7053AA (peroxide cured).

# Applications



## ● Fuel / Natural gas

Fuel/Natural gas application involves lots of piping, pumps and valves; therefore, the sealing components inside need to have good elasticity to seal completely. To avoid damage caused by volume expansion, sealing components also need to endure the erosion of fuel. Currently, part or pure raw biofuel brings even greater challenges for material capabilities, which requests a special formula to meet different condition requirements. Some may request to stand a certain level of temperature and pressure requirements. GMORS compounds resistant to fuel/natural gas and certified by UL are V7500AA (FKM), N7060AA (NBR), and F7004BU02 (FVMQ).





## ● Compression Refrigeration System

In the past, R-12 and R-22 refrigerants were used and people used neoprene (CR) to make sealing components. But R-12 and R-22 refrigerants contain more chlorine which easily leads to the destruction of the ozone layer. So now R-410a and R-134a refrigerants are mainly on the market, and the sealing components are made of HNBR. HNBR has the balanced performance on adaptability to temperature range, elastic restoring force and resistance to refrigerants. The latest R744 (CO<sub>2</sub>) and HFO-1234yf refrigerants will also make a contribution to reduce ozone depletion.

# Products



## ● O-Rings, X-Rings & Backup-Rings

O-Rings are the simplest and the most efficient sealing applications, which can be used under both static and dynamic conditions. O-Rings are the most widely used and made of a variety of materials according as different conditions/applications. We supply O-Rings in custom size and standard size such as AS568A, Metric standard, SMS 1586, JIS B2401, etc. Our professional team is here to provide you with sealing solutions you need. In addition to O-Rings, according to a different usage, we also offer X-Rings, Backup-Rings and more to match your want.



## ● Packing

With quality certified by ISO-9002, TS-16949 and other certificates, we also devote to excellent manufacturing technology. Whatever rubber seals you may need, our lab with TAF certification can help develop new compounds especial for you. We are taking good care of your want for the best quality and the most competitive price.

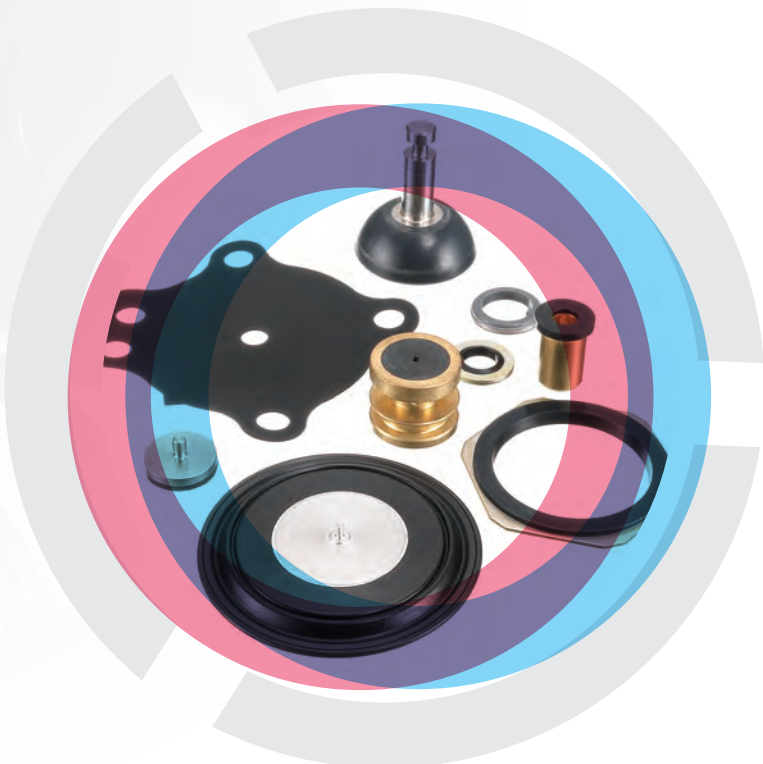


## Hydraulic & Pneumatic

We have diversity of sealing solutions for your hydraulic and pneumatic application. We provide you with rubber seals with stable quality and long service life. As long as you tell us your condition requirements, we will soon be at your service and suggest you the most suitable rubber seals for you.

## Metal Bonding Seals & Fabric Reinforced Diaphragms

We offer all kinds of metal bonding seals and high-performance fabric reinforced diaphragms. With the rubber formulas created by our professional team and plus our excellent manufacturing quality control, we are able to provide the highest quality products for you and to increase the service life of your rubber seals under varied conditions. Let us provide you with the best sealing solutions, and we welcome your inquiries!





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