



Global EPDM Market Report: 2027

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Executive Summary

EPDM rubber has a saturated chain of the polymethylene type, and is manufactured by using three types dienes such as Dicyclopentadiene (DCPD), Ethylidene Norbornene (ENB), and Vinyl Norbornene (VNB). Due to such chemical compositions, EPDM shows the following mentioned properties:

- Highly resistant to solvents, tearing, high temperatures, and abrasions
- High elasticity both at high, and low temperatures
- Shows good resistance towards diluted ketones, acids, and alkaline
- Possess excellent electrical insulating properties

EPDM rubber is manufactured by using solution polymerization, slurry (suspension), and gas-phase polymerization processes. Mostly Ziegler-Natta catalyst (includes transition metals Titanium and Vanadium) is used in EPDM manufacturing process. However, currently, metallocene catalyst (includes transition metals Zirconium, Titanium, and Hydrogen fluoride) has been attracting the industry's attention in EPDM manufacturing process. Additionally, Ethylene Propylene Diene Monomer is designed based on different criteria such as Mooney Viscosity, ethylene/propylene ratio, diene content, and oil content.

Due to distinctive physical, chemical, and thermal properties, Ethylene Propylene Diene Monomer (EPDM) is widely used in different industries such as automotive, building and construction, wires and cables, heating, ventilation, and air conditioning (HVAC), and others. Globally, automotive industry accounts for 40 percent overall consumption of EPDM polymer. Moreover, the various growth drivers for EPDM include increased used in thermoplastic modification and substitute product for thermoplastic olefins (TPO), and growth of automobile and construction industries. Additionally, EPDM membrane is fully recyclable. Hence, EPDM is very much environmental friendly. Due to eco-friendly nature, every year EPDM accounts for over one billion sq. ft. of new roofing in the US.

Currently, ecological sustainability is a fundamental criterion in the selection of petrochemical products. In order to fulfill this criteria, KELTAN-Eco produces EPDM from bio-based feedstock. Keltan Eco-EPDM rubber contains around 70 percent of ethylene obtained from sugarcane. Also, EPDM includes saturated bonds in its principal chain and can absorb more radiation energy without cracking

polymeric chain. Due to this property, EPDM will be increasingly used as cable insulation and shielding (in electron accelerators) materials in the nuclear applications.

On the contrary, EPDM polymer is not compatible with oils, gasoline, kerosene, aromatic and aliphatic hydrocarbons, halogenated solvents, and concentrated acids which make it unsuitable for applications involving oil, cooking grease, jet fuel and other related areas. Also, fluctuating crude oil prices may negatively impact EPDM polymer growth as petroleum based products are required for EPDM production. Presently, the focus of automobile sector has been shifting to the electric vehicles. In new energy automotive (electric car, hybrid car) the V-belts (EPDM is used in V-belts) are seldom used. Hence, decrease use of EPDM in the automobile industry might affect the demand.

The global EPDM revenue is expected to reach \$4.8 billion by 2027 at a compound annual growth rate of 5.2 percent between 2016 and 2027. The expected growth is going to occur due to increasing demand in Asia Pacific automobile and construction industries. Also, the flourishing growth of electrical industries in the Asia Pacific region will contribute to the favorable growth of EPDM market. The flourishing growth of electrical industries in this region is majorly driven by Chinese electrical parts manufacturing market.

Globally, in 2016, EPDM market growth rate in Asia Pacific region (China, India and Rest of Asia) was highest due to increasing automobile production. Likewise, the growth rate of EPDM market in the Latin America and Middle East regions was promising due to the rising demand of rubber and plastic components especially in electrical and plastic modification applications. In 2016, the US, Western Europe, and Rest of Asia (excluding China, India, Korea and Japan) contributed over 70 percent of the global annual EPDM capacity.

In India, there is no local production of EPDM occurs. Hence, India's entire EPDM demand is met through import from the other countries. India imports EPDM from various countries such as the US, Thailand, China, Japan, and Republic of Korea. Between 2012 and 2017, import of EPDM by India grew over 64 percent due to increased automobile sales, greater application in wiring and cable insulation industry, and increased demand in packaging industry. However, in 2015, Asia's EPDM market was oversupplied following

the start-up of new EPDM plants in China and South Korea. Hence, EPDM import by India was less in 2015 due to oversupply and customer's weak buying sentiment. Additionally, between 2012 and 2017, India's total EPDM capacity was 50 kilotons.

It has been observed that maximum patents are published in 2016 and 2017. State Grid Corp China is the most active assignee during these years. Majority of the patents/patent applications of State Grid Corp China are focused on the products such as wires and cables made from EPDM.

The top priority country observed is China with a filing of 3577 patents, which indicates most innovations are originating in the China. Interestingly, countries like Italy, Spain, and Australia are also active in the domain.

Major players in EPDM sector are from the US, and Asia Pacific regions. List of key players in the EPDM industry includes John Manville Inc., Lanxess AG, Dow Elastomers, Carlisle Companies Inc., Firestone Building Products, JSR Corporation, SK Global Chemical, ExxonMobil Chemical Company, SABIC, Kumho Polychem, PetroChina Co, Lion Elastomers, Mitsui Chemicals, and Jilin Xingyun Chemical. EPDM Products/grades from the key players are provided below:

- Lanxess AG: Buna EP, Keltan, Rhenogran
- Dow Elastomers: Nordel
- Carlisle Companies: Carlisle SynTec, Versico, WeatherBond, and Accella
- ExxonMobil Chemical Company: Vistalon
- Mitsui Chemicals Inc.: Mitsui EPT
- Lion Elastomers: Royalene, RoyalEdge, Trilene, and Royaltherm

Key Questions Answered

The report provides detailed market analysis of global EPDM market. It covers various key points and details are provided below:

- Applications of EPDM
- Global EPDM Market by Value

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