

Dynafoam® 512G



DYNAFOAM® is a mono-component rubber-modified polyester compound which is physically foamed with nitrogen and which reacts rapidly with the moisture to create, after curing, a semi closed-cell thermoset elastomeric gasket. It is specially designed for “in-situ” automatic application.

DYNAFOAM® is intended for use as a water, dust, air and noise seal because of its semi closed-cell structure. DYNAFOAM® reaches an efficient water seal at only 30% compression.

Its softness and conformability allows DYNAFOAM® to recover large tolerances during assembly and it avoids distortion of thin-wall plastics. Due to its low compression set, it is ideal for semi-permanent (serviceable) seals.

Other key advantages of using DYNAFOAM® are its superior physical properties: semi closed-cell structure preventing water absorption, excellent adhesion properties to a wide range of materials (polymers such as polypropylene, metal and coated surfaces), performance under extreme environmental conditions and resistance to sustained high temperatures.

Its thixotropic behaviour allows 3-dimensional and upside-down applications. DYNAFOAM® holds its shape right out of the nozzle without sagging, even when applied on an incline or upside-down. DYNAFOAM® maintains a 1:1 height-to-width ratio, is usable for high diameter seamless gaskets, and can be extruded on three axes. The desired gasket can be achieved with or without a groove, allowing engineers maximum design flexibility.

Note :The gasket must not be in constant contact with stagnant water. The part should be designed to allow water to flow out.

Robotically Applied Foam-In-Place Gasketing Material

Features / Benefits

- Thixotropic behaviour allowing 3-dimensional and upside-down applications, without groove requirement
- Suitable for transfer moulding application
- Very efficient water seal with only 30% compression
- Low water absorption thanks to the good ratio open cells : closed cells
- Soft, easily compressible foam compensating very high tolerances
- Excellent mechanical properties
- Wide temperature range, allowing automotive underhood applications

Applications

- Automotive HVAC filter housing and air outlets
- Automotive lightings
- Automotive door cassette modules
- Home appliances
- Electrical / Electronic components
- Audio speakers
- Construction elements

DYNAFOAM® can be processed with the conventional extrusion method. By changing the angle of the nozzle and flow of the material, the profile can vary throughout the length of the part. Using Saint-Gobain Performance Plastics's patented Transfer Mould method of application, designers have the versatility to create a custom gasket profile with variable cross-section and that is dimensionally higher than wide. DYNAFOAM® 512G ability to maintain its shape facilitates such custom transfer-moulding operations. This method puts foam-in-place gaskets where other materials cannot be applied.

Designed for automation, DYNAFOAM® enhances productivity in large volume applications and results in significant savings in labour and materials by eliminating the die-cut scrap and by reducing the material inventory. Parts can be handled quickly and easily, eliminating production bottlenecks. Unlike hand-applied gaskets, DYNAFOAM® offers a repeatable process from cycle to cycle and thus quality control is inherent with DYNAFOAM®.

DYNAFOAM® is a non toxic material which does not require special ventilation to meet industry safety standards. DYNAFOAM® is free of cadmium, lead, chrome (VI), mercury and other substances subject to declaration in the International Material Data System list.

Saint-Gobain Performance Plastics is a ISO9001/14001 certified company.

Physical Properties

Property	Unit	Test Method	Value
Density (foamed & cured)	kg/m ³	ASTM D1056	300 - 400
Hardness	Shore OO	ASTM D2240	30 - 45
Force to Compress @ 30%	N/cm linear	ASTM D1667	1.3 - 2.0
Compression Set	%	ASTM D1667	< 20
Deflection after 1 Min.	N/cm linear	ASTM D1667	1.0 - 1.5
Tensile Strength	N/cm ²	DIN 53571	20 - 35
Elongation @ Break	%	DIN 53571	≥ 200
Water Absorption	%	ASTM D1056	< 15
Temperature Range	°C		-40 to +125

Note: Parameters values are not guaranteed and will differ from lot to lot. For specification writing, contact the Application Engineering Department.

Specifications

DYNAFOAM® 512G fulfills the following standard: PSA - B65 4360

Colour:	Dark grey
Packaging:	20 lit pails - net weight 17 kg 200 lit drums - net weight 185 kg
Shelf life:	6 months after production date
Storage & Transport:	30°C maximum - no exposure to sunshine

Saint-Gobain Performance Plastics

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