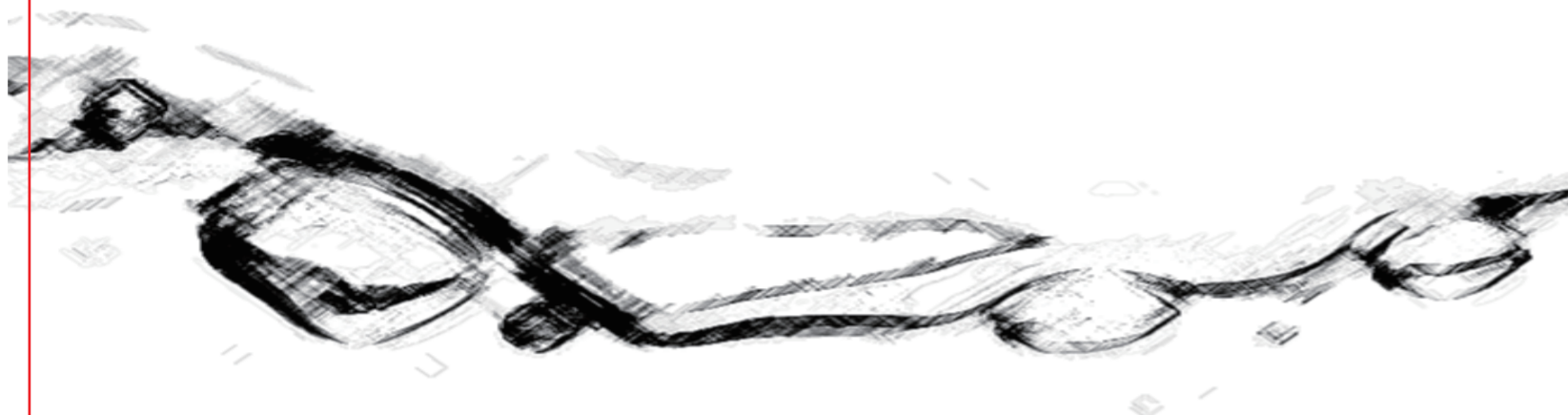


More information, please visit: www.rogerscorp.com/ec



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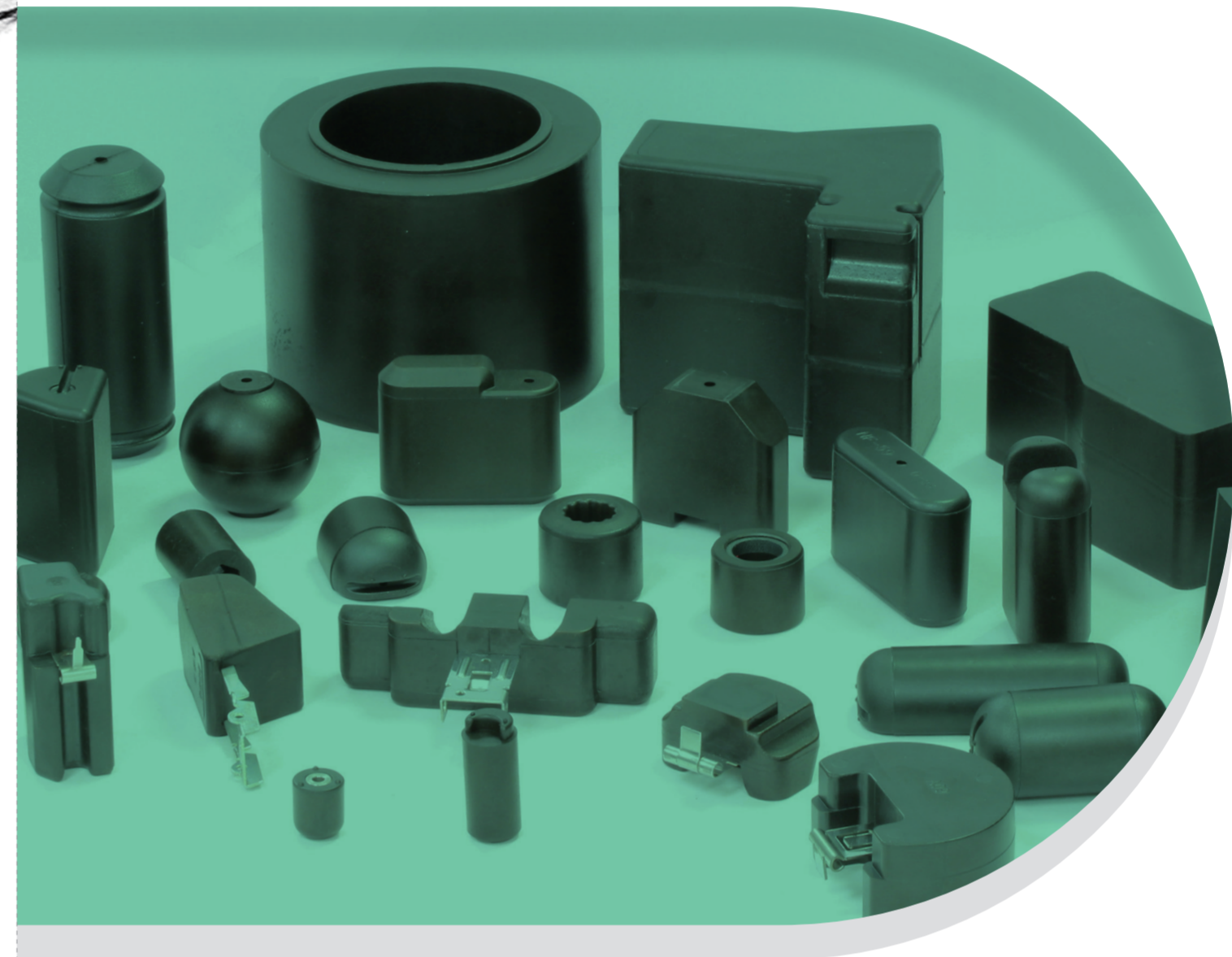
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Nitrophyl® NBR Floats

The information contained in this brochure is intended to assist you in designing with Rogers' Nitrophyl® NBR floats materials. It is not intended to and does not create any warranties, express or implied, including any warranty of merchantability or fitness for a particular purpose. The user should determine the suitability of Rogers' circuit materials for each application.

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About

Rogers Corporation

Rogers Corporation (NYSE:ROG) is a global leader in engineered materials to power, protect, and connect our world.

With more than 180 years of materials science experience, Rogers delivers high-performance solutions that enable clean energy, internet connectivity, advanced transportation and other technologies where reliability is critical. Rogers' delivers Power Electronics Solutions for energy-efficient motor drives, vehicle electrification and alternative energy; High Performance Foams for sealing, vibration management and impact protection in mobile devices, transportation interiors, industrial equipment and performance apparel; and Printed Circuit Materials for wireless infrastructure, automotive safety and radar systems. Headquartered in Connecticut (USA), Rogers operates manufacturing facilities in the United States, China, Germany, Belgium, Hungary, and South Korea, with joint ventures and sales offices worldwide.



About

NITROPHYL® NBR Floats

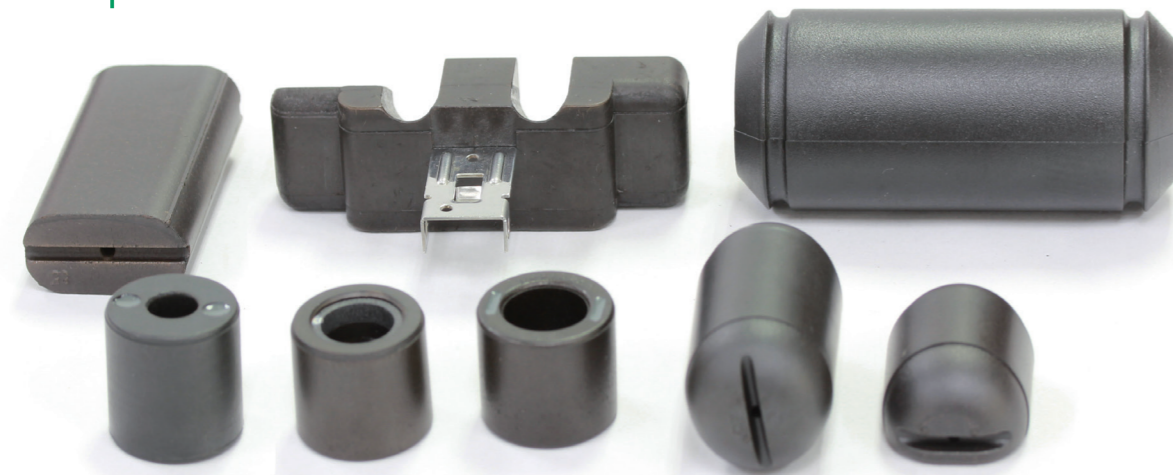
Rogers Floats Division

To be the leading specialty molded material provider for more reliable, more rigid and lighter solutions.

For over 60 years, Rogers Corporation has been the leader in the design and production of liquid level floats where resistance to gasoline, oil, and other hydrocarbons is essential. The key is in our NITROPHYL® NBR (Buna-N) Technology. Rogers' global technical staff is available to provide the right solution for your application.

Unlike hollow-core plastic or metal floats which can fail suddenly, NITROPHYL® NBR floats are made of closed cell foam, giving the float a solid core that improves reliability and lifetime of the float. Nitrophenyl® suitability in different environments.

Properties

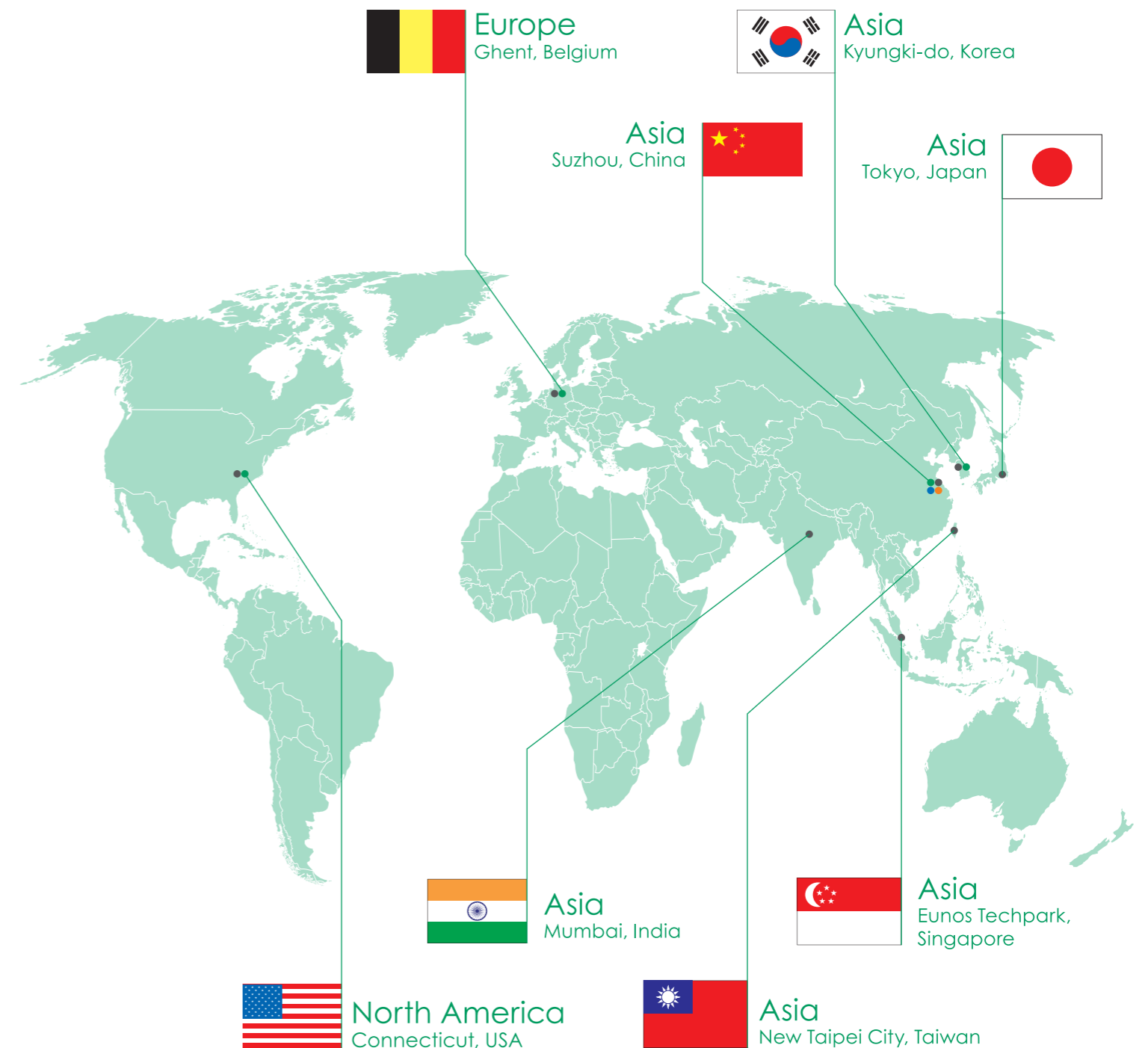


- | | | |
|---|--|---|
| 1 Closed Cell Structure | 5 Operating Temperature
-57°C —180°C | 8 Molded-In Capability
Magnet/Insert |
| 2 Density
0.16~0.64g/cm ³ | 6 Operating Pressure
5MPa | 9 Fuel Resistance
Resistance to gasoline, diesel, oil,
methanol, ethanol and a wide
variety of other chemicals |
| 3 Low Sulfur Content | 7 Environmental Friendly
ROHS and REACH | |
| 4 Hardness
>95 Shore A | | |

Rogers' technical experts can assist in determining the correct formulation, float density, and other design considerations to provide you with a custom solution for your needs.

Rogers Floats Global Network

- Distribution & Technical Support
- Manufacturing Plant
- Headquarter
- Sales Office



Application



Nitrophyl® NBR Floats for Fuel Level Sensing

- The proprietary NBR compound provides excellent resistance to all fuels; Nitrophyl® M was specially designed to provide enhanced resistance to flex fuels
- Low sulfur outgassing which can damage other fuel module components
- Unlike hollow plastic floats, which can catastrophically fail if cracked, Nitrophyl's closed cell structure eliminates possibility of float failure due to surface damage
- Rogers' extensive technical and engineering capabilities provide for wide range of design possibilities, including unique sizes, shapes, and densities.



Nitrophyl® NBR Floats for SCR Applications

- Nitrophyl® is highly resistant to urea/water solutions
- Compared to most plastics, Nitrophyl's excellent low temperature properties ensures a higher level of resistance of cracking under conditions where the urea solution may freeze
- Rogers' manufacturing and engineering experience allows for the production of highly precise, complex custom shapes. Any variety of inserts, including ring magnets and bar magnets, can be easily incorporated into the float design.



Nitrophyl® NBR Floats for Motorcycle Applications

- Accurate measurement of fuel level
- Stable performance in the motorcycle
- Long term performance of the fuel module, eliminating possible corrosion of sensitive fuel module components that can occur with lower quality floats.
- A wide variety of designs to meet any fuel tank requirements, with easy adjustment of float density, size, and geometry
- Professional technical support to solve customer's design or performance issues.



Nitrophyl® NBR Floats for Industrial Applications

- Ensuring the level and quality of fuel in the storage tanks at your local gasoline station
- Measuring oil level inside industrial transformers to prevent damage to the equipment
- Separating liquid from gas in industrial compressors
- Indicating level of fuel in industrial and personal generators.

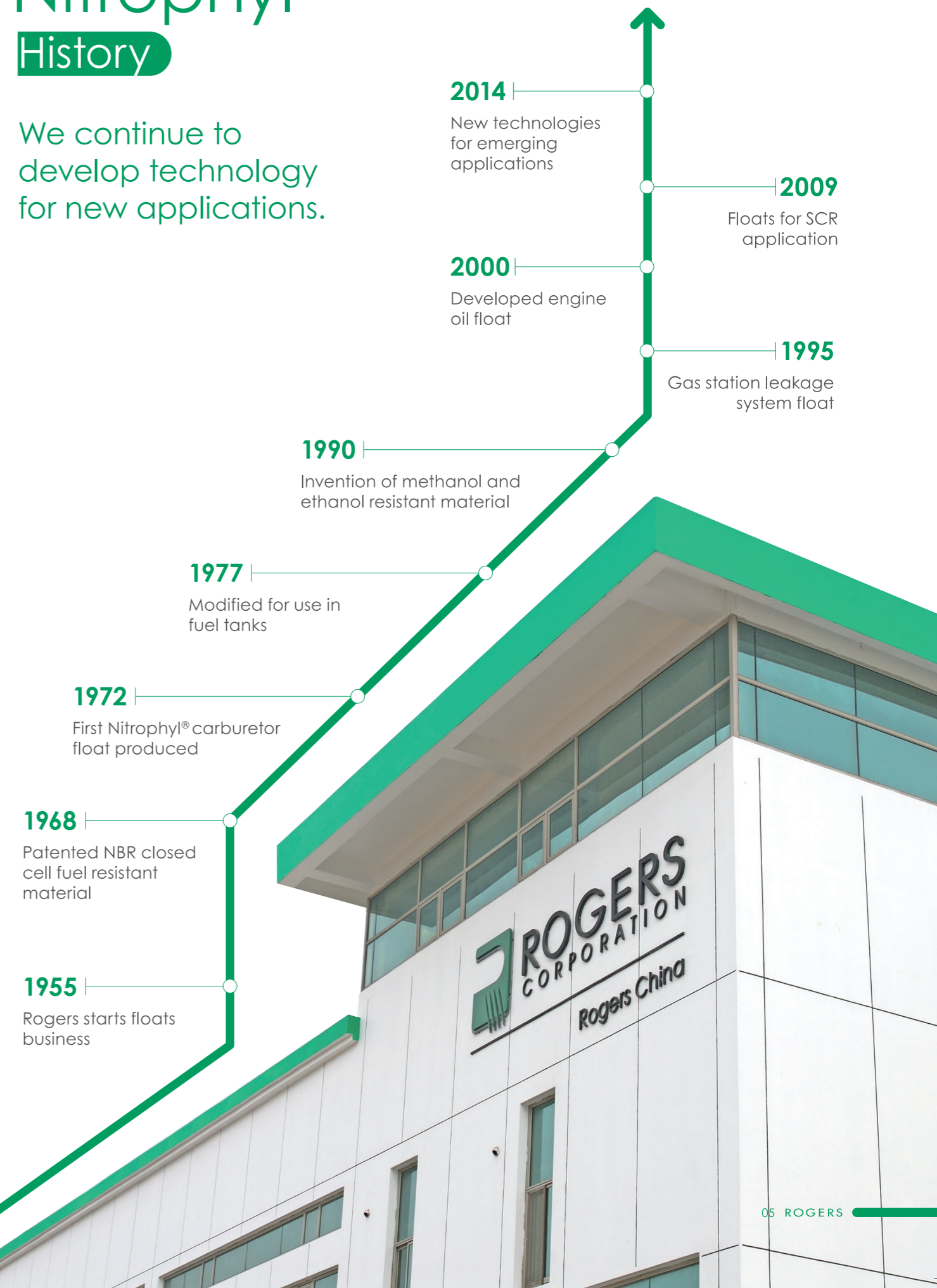


Nitrophyl® NBR Floats for Small Engine Applications

- Inserts, such as hinges for carburetors, can be easily molded into a Nitrophyl® float
- Superior resistance to diesel, gasoline, ethanol, LPG, and other fuels make Nitrophyl® a versatile material for a variety of applications
- Nitrophyl's closed cell structure ensures reliability that the float cannot fill with liquid and unexpectedly fail during use.

Nitrophyl® History

We continue to develop technology for new applications.

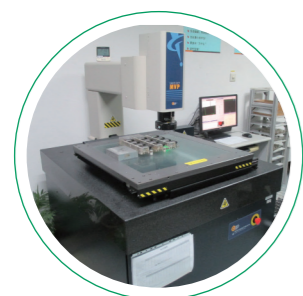


Quality Assurance

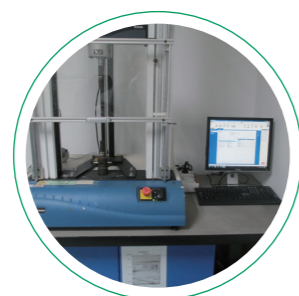
• Robust Process



• Testing Capability



Dimension Test (OGP)



Instron Tensile Tester



Hardness Test



Guass Field Plotter



Mooney & Rheometer Test



Fuel Test



Pressure Test



Salt Spray Test

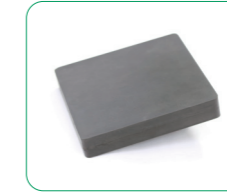
Nitrophyl® Standard Floats List



Series 1



Series 2



Series 3



Series 4



Series 5

Series 1

Reference Number	Outside Diameter (mm)	Length(mm)	Density(g/cm ³)	Inside Diameter (mm)
3044518	22.85	76.20	0.16~0.19	-
3044521	22.85	76.20	0.27~0.30	-
3044516	28.60	34.90	0.16~0.19	-
3044517	28.60	34.90	0.29~0.32	-
1001309	30.50	76.20	0.16~0.19	-
3044522	31.75	49.20	0.16~0.19	-
3044523	31.75	49.20	0.29~0.32	-
3044519	50.80	76.20	0.16~0.19	-
3044520	50.80	76.20	0.29~0.32	-
3044528	30.20	43.65	0.30~0.37	11.90
3044529	28.00	76.20	0.30~0.37	17.15
1001390	97.80	76.20	0.21~0.24	31.75
3044524	22.85	76.20	0.16~0.19	3.43
3044527	27.95	76.20	0.16~0.19	2.79
3044525	30.50	76.20	0.16~0.19	3.42
3044526	30.50	76.20	0.16~0.19	4.32
3044371	30.50	76.20	0.16~0.19	4.76

Series 2

Reference Number	Length x Width (mm)	Thickness (mm)	Inside Diameter(mm)	Density(g/cm ³)
1001348	63.50 x 33.00	15.70	2.79	0.16~0.19
1001445	55.00 x 33.00	15.70	2.79	0.16~0.19

Series 3

Reference Number	Length (mm)	Width(mm)	Thickness(mm)	Density(g/cm ³)
1001494	152.40	152.40	25.40	0.16~0.19
3042913	152.40	152.40	25.40	0.29~0.32

Series 4

Reference Number	Length(mm)	Outside Diameter (mm)	Inside Diameter (mm)	Density (g/cm ³)
3042873	35.00	27.00	2.20	0.16~0.21
1001529	70.00	27.00	2.20	0.24~0.30
1001547	50.00	27.00	2.20	0.22~0.27

Series 5

Reference Number	Outside Diameter(mm)	Inside Diameter(mm)	Length (mm)	Density (g/cm ³)
1001346	25.40	8.60	25.40	0.29~0.32
3001894	25.40	10.00	15.20	0.55~0.61

Culture Behavior

People
Development Plan



Energy Saving
Activities



Quality Skills
Competitions



Golden
Idea Award



Team Building



Continuous Improvement
Competition



Certificates



Rogers Corporation is committed to providing you with the highest quality product in the most environmentally friendly manner:

- No ozone-depleting chemicals are used in the production of NITROPHYL® NBR floats
- NITROPHYL® NBR floats are recyclable with other rubber-type components
- Our packaging is recyclable
- Our manufacturing facilities are ISO-9001 and ISO/TS-16949 registered
- NITROPHYL® NBR floats are REACH and ROHS compliant