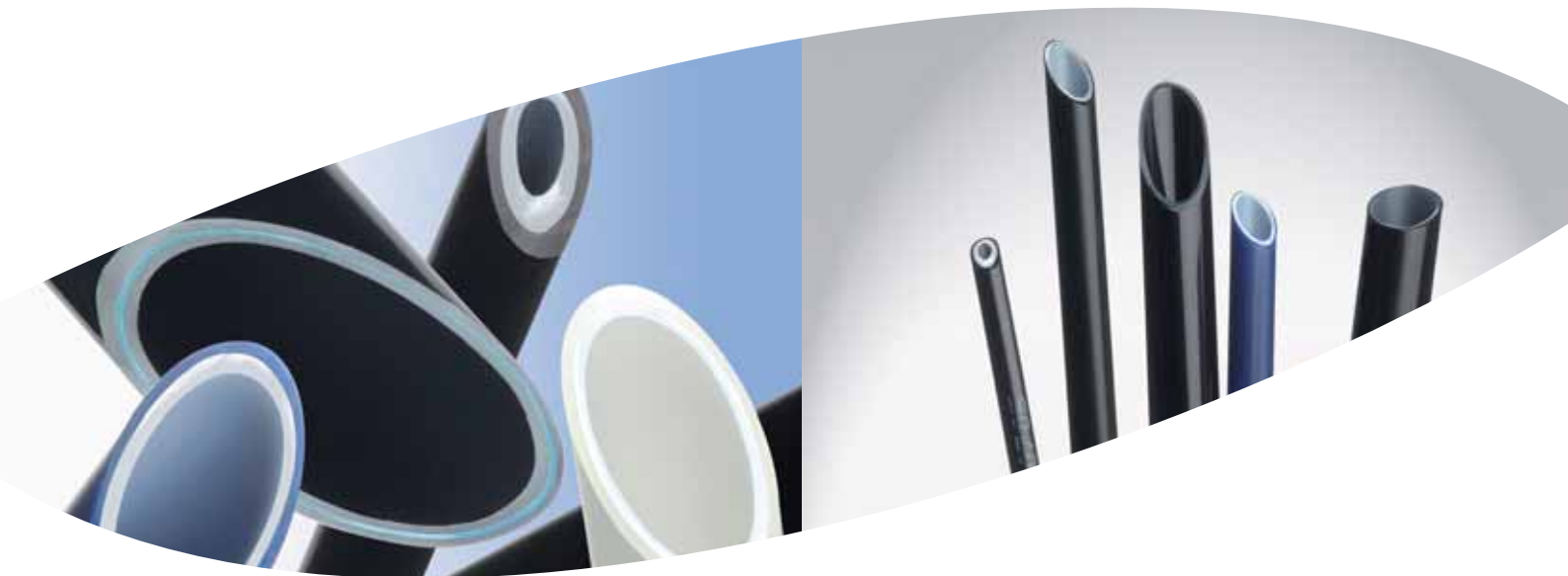


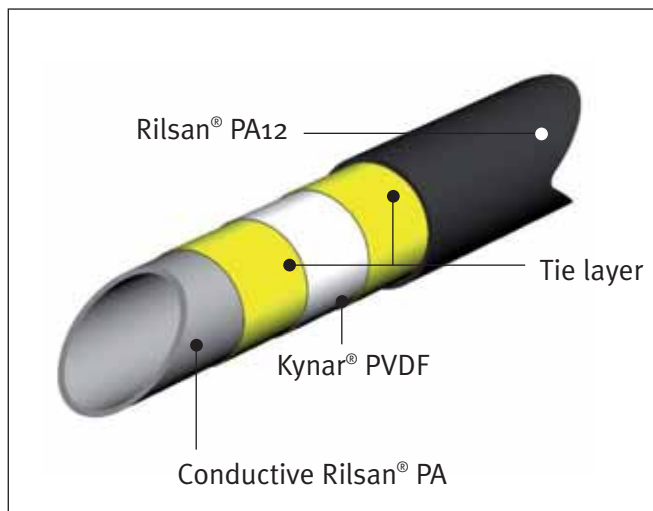
RILPERM® 5011 MULTI-LAYER FUEL LINES DELIVER CONDUCTIVITY AND EXCELLENT BARRIER FOR LOW PERMEATION FUEL LINES



Arkema's multi-layer fuel line technology Rilperm® 5011

is designed to meet North American OEM conductive fuel line specifications and provides excellent fuel barrier for low permeation automotive fuel system applications, especially for fuel blends containing high levels of ethanol (flexfuel).

Rilperm® 5011 contains a patented conductive PA12 innerlayer which reduces the potential of spark ignition in a fuel system, resulting in an increase in passenger safety. The combination of high performance polyamide Rilsan® PA12 with highly chemical resistant Kynar® PVDF guarantees durability and resistance to aggressive engine environment and aggressive Biofuel attack, both flexfuel and biodiesel.



Part Description: Rilperm® 5011 conductive five-layer fuel line

Resin featured: Conductive Rilsan® PA12, Rilsan® PA12, Tie layer, Kynar®

Key performances:

- Low permeation in fuel blends with high ethanol content (up to 100%)
- Excellent resistance to Flexfuel
- Conductivity according to SAE J1645
- Durability at high temperatures
- Outperforms monolayer and EVOH based constructs at high ethanol levels
- Lower cost than ETFE/PA12
- Excellent aging resistance in biodiesel
- Reliability
- Burst strength
- Easy processability

Sample applications: Conductive low permeation fuel lines, conductive flex fuel and biodiesel lines

Values Delivered: Rilperm® 5011 technology delivers excellent Biofuel resistance combined with conductivity opening the way to further metal and rubber replacement.

Approval: Approvals at North American and European OEM upon request.

Our worldwide sales network can assist you in opening up new markets.

Sales offices:

Asia:

- Kuala Lumpur
- Manilla
- Taipei
- Beijing
- Seoul
- Shanghai
- Tokyo
- Kyoto
- Ho Chi Minh City
- Bangkok
- Singapore
- Melbourne
- Jakarta
- Mumbai

Europe:

- Paris
- Birmingham
- Düsseldorf
- Amsterdam
- Milan
- Copenhagen
- Barcelona
- Zürich
- Moscow
- Praha
- Warsaw

Customers service:

Arkema SA

420, rue d'Estienne d'Orves
92700 Colombes (France)
Tel: (+33) (0)1 49 00 80 80
Fax: (+33) (0)1 49 00 83 96

Arkema Inc.

2000 Market Street
Philadelphia
PA 19103-3222
USA
Tel : (+1) 800 628 33 91
Fax : (+1) 215 419 74 97

Arkema Quimica Ltda (Brasil)

Avenida Ibirapuera 2.033
4º Andar
Bairro : Moema
04029-901 SAO PAULO
BRASIL
Tel : (+55) 11 21 48 85 60
Fax : (+55) 11 50 51 47 80

Arkema (China)

Unit 1901-1902, Block B
Jianwai SOHO
N°39, East Third Ring Road
Chaoyang District
Beijing 100 022
P. R. CHINA
Tel : (+86) 10 5869 5620 ext. 390
Fax : (+86) 10 5869 5637

Arkema K.K (Japan)

Technical Polymers
Fukoku Seimei Bldg. 15F
2-2-2 Uchisaiwaicho
Chiyoda-ku
Tokyo 100-0011
JAPAN
Tel : (+81) 75 326 75 03
Fax : (+81) 75 326 75 24

Arkema (Korea)

11 F, Oriental Chemical
Building
50, Sogong-dong, Jung-gu
Seoul, 100-718, KOREA
Tel : (+82) 2 37 03 68 21
Fax : (+82) 2 37 03 68 91

Arkema Pte Ltd (Singapore)

#01-01A, the alpha,
Science Park 2
10 Science Park Road
117 684 SINGAPORE
Tel : (+65) 6419 9199
Fax : (+65) 6419 9001

For other regions in Asia, please contact:

Tel : (+81) 75 326 74 95
Fax : (+81) 75 326 75 24



With global brands like Rilsan®, Pebax® and Platamid®, unique products like Rilsan® PA11 and leading capacities in Rilsan® PA11 and 12, Arkema's Technical Polymers Division differentiates itself in the industry by providing its customers with global coverage and superior regional service from production and research facilities in Europe, Asia, and the USA.

A world-class chemical concern, Arkema combines three strategically related, integrated businesses: Vinyl Products, Industrial Chemicals and Performance Products. With operations in more than 40 countries and 17 000 employees, the company reported revenue of €5.7 billion in 2006. Leveraging six research centers in France, the United States and Japan and internationally recognized brands, Arkema holds leadership positions in each of its principal markets.

The statements, technical information and recommendations contained herein are believed to be accurate as of the date hereof. Since the conditions and methods of use of the product and of the information referred to herein are beyond our control, Arkema expressly disclaims any and all liability as to any results obtained or arising from any use of the product or reliance on such information; NO WARRANTY OF FITNESS FOR ANY PARTICULAR PURPOSE, WARRANTY OF MERCHANTABILITY OR ANY OTHER WARRANTY, EXPRESS OR IMPLIED, IS MADE CONCERNING THE GOODS DESCRIBED OR THE INFORMATION PROVIDED HEREIN. The information provided herein relates only to the specific product designated and may not be applicable when such product is used in combination with other materials or in any process. The user should thoroughly test any application before commercialization. Nothing contained herein constitutes a license to practice under any patent and it should not be construed as an inducement to infringe any patent and the user is advised to take appropriate steps to be sure that any proposed use of the product will not result in patent infringement.
See MSDS for Health & Safety Considerations

The information contained in this document is based on trials carried out by our Research Centres and data selected from the literature, but shall in no event be held to constitute or imply any warranty, undertaking, express or implied commitment from our part. Our formal specifications define the limit of our commitment. No liability whatsoever can be accepted by Arkema with regard to the handling, processing or use of the product or products concerned which must in all cases be employed in accordance with all relevant laws and/or regulations in force in the country or countries concerned.



420, rue d'Estienne d'Orves
92700 Colombes (France)
Tel: +33 (0)1 49 00 80 80
Fax: +33 (0)1 49 00 83 96
Mail: info.functional-polyofins@arkema.com
www.arkema.com

www.rilsan.com
www.rilperm.com
info.rilsan@arkema.com