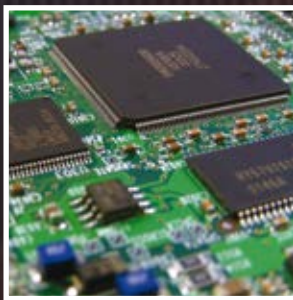




High-performance fluoroelastomers





**Resistant to acid, alkalis, amines and steam.**

**AFLAS® the material of choice for products and systems that have to work in tough environments.**

AFLAS® fluoroelastomer was launched over 30 years ago by AGC. It is based on an alternating copolymer of tetrafluoroethylene and propylene. The unique properties of AFLAS® are:

1. Excellent heat resistance with approx. 200°C continuous service temperature with even higher peaks
2. Excellent chemical resistance to strong acids and bases at high temperatures
3. Excellent steam and hot water resistance
4. Excellent electrical insulation properties with volume resistivity of  $10^{16} \Omega\text{-cm}$

AFLAS® is used worldwide in all kinds of industrial applications where ultimate reliability is required.

## AFLAS® features

### Low Outgassing

Ideal for making precision parts due to its extremely low outgassing level.

### Heat Resistance

Fluoroelastomers have the highest heat resistance of all synthetic rubbers. AFLAS® has outstanding heat resistance.

### Electrical Insulation Properties

AFLAS® exhibits class leading electrical insulation performance comparable to those of silicone rubber and ethylene-propylene rubber.

### Gas Barrier Properties

Compared with other synthetic rubbers AFLAS® has excellent gas barrier properties.

### Low Temperature Properties

At low temperature flexibility is lost but the physical properties are maintained.

### Steam Resistance

AFLAS® is resistant to very hot water and to steam at high temperature.

### Chemical Resistance (non-polar solvents)

AFLAS® will swell in some solvents such as gasoline, hydrocarbon based solvents and chlorine based solvents.

### Chemical Resistance (strong acids/bases)

AFLAS® is well known for its outstanding inherent base resistance; resisting aqueous and non-aqueous acids and bases of high concentration and at high temperature.



## AFLAS® Applications

### O-Rings and Gaskets

Due to its outstanding chemical and heat resistance AFLAS® is used as a sealing material in various applications such as chemical plants, downhole applications and in the Japanese food processing industry.

### Manufacture of Liquid Crystal and Semi-Conductors

AFLAS® is resistant to aqueous caustic soda, ammonia water and alkaline chemicals (such as TMAH and NMP) that are used on liquid crystal and semiconductor manufacturing lines.

### Wire and Cable

AFLAS® has outstanding electrical insulation, heat resistance and mechanical strength enabling manufacture of cables with relatively thin insulation layers for high electrical currents. An example of this type of application is the engine cables in the Shinkansen high speed train.

### Automotive Oil Seals

Engine oils contain amine-based additives. AFLAS® is ideal for use in oil seals that need to resist high temperatures.



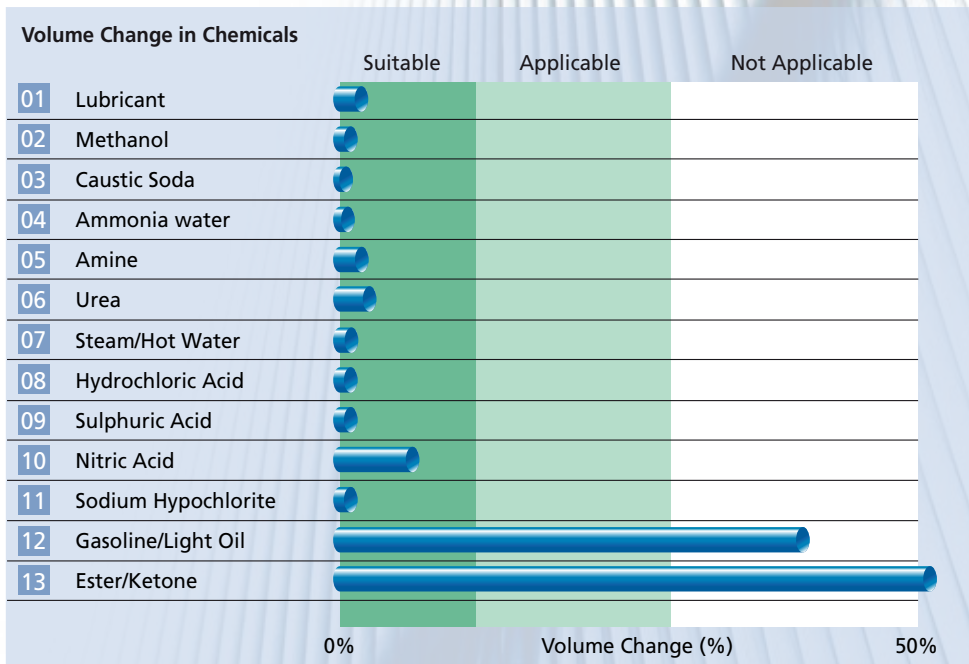
## AFLAS® Grade Range

<b>AFLAS® 150 Series</b>	<b>Standard Grade</b> Excellent chemical resistance and electrical insulation properties. Suitable for extrusion and compression moulding.
<b>AFLAS® 100 Series</b>	<b>High Strength Grade</b> The high molecular weight of AFLAS® 100S gives it its high mechanical strength. The structure is identical to that of AFLAS® 150.
<b>AFLAS® 300 Series</b>	<b>Grade with Improved Processing</b> Translucent white base resin with a special termonomer. AFLAS® 300 can be pigmented, has improved curability and gives a smooth surface finish. Suitable for extrusion.



## AFLAS® Chemical Resistance

AFLAS® shows excellent chemical resistance against acids and bases. AFLAS® excels in extreme conditions at high temperatures and high concentrations in aqueous and non-aqueous environments. This is of increasing importance where longer guarantees of service life are offered.



### Immersion test

AFLAS® keeps its original shape after immersion in various chemicals.

O-ring immersed in 28% ammonia water (25°C for 1000 hours)



AFLAS®



Fluoroelastomer  
(FKM Terpolymer)



Fluoroelastomer  
(FKM Copolymer)

### User Information

Information contained in this publication (and otherwise supplied to users) is based on our general experience and is given in good faith, but we are unable to accept responsibility in respect of factors which are outside our knowledge or control. All conditions, warranties and liabilities of any kind relating to such information, expressed or implied, whether arising under statute, tort or otherwise are excluded to the fullest extent permissible in law. The user is reminded that his legal responsibility may extend beyond compliance with the information provided. Freedom under patents, copyright and registered designs cannot be assumed. AFLAS® grades are general industrial grades. It is the responsibility of the purchaser to check that the specification is appropriate for any individual application. Particular care is required for special applications such as pharmaceutical, medical devices or food. It is advisable to contact the AGC Chemicals sales office for the latest position. Users of AFLAS® are advised to consult the relevant health and safety literature which is available from the AGC Chemicals sales office.

**AGC Chemicals Europe, Ltd.**  
PO Box 4, York House,  
Hillhouse International,  
Thornton Cleveleys,  
Lancashire FY5 4QD, UK  
Tel: +44 (0) 1253 209 560  
www.agcce.com

**AGC Chemicals**  
ASAHI GLASS CO., LTD.  
Shin-Marunouchi Bldg.  
1-5-1, Marunouchi  
Chiyoda-ku  
Tokyo 100-8405  
Japan  
Tel: +81-3-3218-5875  
www.agc.com

**AGC Chemicals Americas, Inc.**  
55 E. Uwchlan Avenue  
Suite 201  
Exton, PA 19341  
USA  
Tel: +1 610-423-4300  
www.agcchem.com

**AGC Chemicals Trading**  
(Shanghai) Co., Ltd  
Room 2701-2705, Metro Plaza  
555 Lou Shan Guan Road  
Chang Ning Ward, Shanghai  
China Post Code: 200051  
Tel: +86-21-6386-2211  
www.agcsh.com

**AGC Chemicals RUS (AGCCR)**  
Russian Federation, 121596  
Moscow, Gorbunova Street 2  
Grand Setun Plaza, Bld. 204, BC  
5th Floor, Block B, Office B 504  
Russia  
Tel: +7 918 555 34 37  
www.agcce.com

**AGC Vidros do Brasil Ltda. - Chemical Division**  
Alameda Ministro Rocha Azevedo, 38, 10° andar  
cj. 1004, Cerqueira Cesar  
São Paulo, SP  
01410-000  
Brazil  
Tel: +55 11 3373-998  
www.agcbrasil.com

**AGC Asia Pacific Pte. Ltd.**  
460 Alexandra Road  
#30-01 PSA Building  
Singapore 119963  
Tel: +65-6273-5656  
www.agc.com

**AGC Chemicals (Thailand) Co., Ltd.**  
24th Floor,  
Bangkok Insurance Building  
25 South Sathorn Road  
Bangkok 10120  
Thailand  
Tel: +66-2-679-1600  
www.acth.co.th