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)

User Information
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AFLAS® features

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

**Electrical Insulation Properties**
AFLAS® has excellent electrical insulation properties comparable to those of silicone rubber and ethylene-propylene rubber. These electrical properties are much enhanced compared to those of other fluoroelastomers.

**Gas Barrier Properties**
Compared with other synthetic rubbers, AFLAS® has excellent gas barrier properties.

**Chemical Resistance (strong acids/bases)**
AFLAS® resists aqueous and non-aqueous acids and bases of high concentration and at high temperatures. Compared to all fluoroelastomers its base resistance is particularly good.

**Chemical Resistance (non-polar solvents)**
AFLAS® undergoes a relatively large volume change in gasoline, hydrocarbon-based solvents and chlorine based solvents.

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

**Low Temperature Properties**
At low temperatures flexibility is lost but the physical properties are maintained.

**Steam Resistance**
AFLAS® is resistant to very hot water and to steam at high temperatures.
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 Japanese 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

<table>
<thead>
<tr>
<th>Grade</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Standard Grade</td>
<td>Excellent chemical resistance and electrical insulation properties. Suitable for extrusion and compression moulding.</td>
</tr>
<tr>
<td>High Strength Grade</td>
<td>The high molecular weight of AFLAS® 100S gives it its high mechanical strength. The structure is identical to that of AFLAS® 150.</td>
</tr>
<tr>
<td>Improved Processability Grade</td>
<td>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.</td>
</tr>
</tbody>
</table>
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.

**Volume Change in Chemicals**

<table>
<thead>
<tr>
<th>Volume Change (%)</th>
<th>Suitable</th>
<th>Applicable</th>
<th>Not Applicable</th>
</tr>
</thead>
<tbody>
<tr>
<td>0%</td>
<td><img src="image" alt="Suitable" /></td>
<td><img src="image" alt="Applicable" /></td>
<td><img src="image" alt="Not Applicable" /></td>
</tr>
<tr>
<td>50%</td>
<td><img src="image" alt="Suitable" /></td>
<td><img src="image" alt="Applicable" /></td>
<td><img src="image" alt="Not Applicable" /></td>
</tr>
</tbody>
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