



*product information*

## AFLAS<sup>®</sup> 300S Latex

### DESCRIPTION

AFLAS 300S Latex is an alternating tetrafluoroethylene–propylene copolymer with a cure site monomer in an aqueous suspension. It is used as an elastomeric surface treatment of various substrates such as metals, ceramics, plastics, other elastomers, textiles, and paper. The incorporated cure site monomer allows this material to be cured using either peroxide systems or electron beam irradiation. Classified by ASTM D 1418-01 as FEPM.

### MATERIAL FEATURES

- **Heat Resistance\***: Mechanical properties of AFLAS do not deteriorate even when used for prolonged exposure to 200°C. AFLAS can be used continuously for 2 to 3 months at 230°C and for 10-30 days at 260°C.
- **Chemical Resistance**: Parts fabricated from AFLAS compounds perform well in the amine and base-rich environments commonly found in sour oil and gas exploration, completion and production. In automotive and heavy equipment applications, AFLAS stands up well to attack from amine-containing additives in oils and transmission fluids.
- **Steam Resistance\***: Unaffected by extended exposure to 200°C steam.
- **Electrical Properties**: Excellent volume resistivity (greater than  $10^{16}$  Ω-cm) unmatched by other fluoroelastomers.
- **Radiation Resistance\***: Stable up to 2000 kGy of gamma ray radiation.

\*Application design may vary results.

### END USER BENEFITS

- Improved flexibility
- Excellent thermal and chemical stability

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**TYPICAL APPLICATIONS**

- Coating additives
- Surface modified parts
- And more...

**PROCESSING RECOMMENDATIONS**

- AFLAS 300S Latex contains residual amounts of materials used in polymerization including tertiary butyl alcohol. Use in well ventilated work areas.
- AFLAS 300S Latex can be diluted with water; however, the user should test the stability (suspension, etc.) of the diluted latex prior to use.
- Other additives can be added to the latex; again, the user should test the stability (suspension, etc.) of the latex prior to use.
- Treat hydrophobic substrate surfaces with primers, coupling agents, or other agents prior to application of the latex.
- AFLAS 300S Latex may become coagulated by impact or by exposure to freezing temperatures.
- To prevent contamination, do not mix used AFLAS 300S Latex with fresh latex.

If at any time you have questions or concerns about a specific application, please contact your account manager for assistance.

**AFLAS 300S LATEX TYPICAL PROPERTIES**

Property	Units	AFLAS 300S LATEX
Appearance		White, milky liquid
Solids	%	30-40 weight
pH	%	3-10
Specific Gravity		1.05-1.20
Particle Size		50-200 nanometers

NOTE: The data listed here represents typical values for the stated grades of AFLAS® fluoroelastomers. This information should be used as a guide only and not to establish specification limits or design criteria. AGC Chemicals Americas assumes no obligation or liability for any advice furnished by us or for results obtained with respect to this product. All such advice is provided free of charge and the buyer assumes sole responsibility for results obtained in reliance thereon.

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**HANDLING PRECAUTIONS**

AFLAS Fluoroelastomers are stable at normal conditions and are not regulated by the U.S Department of Transportation. Avoid temperatures above 400°C. Fluoroelastomers can react with molten alkali metals and finely divided magnesium and aluminum at temperatures above 425°C. Thermal decomposition of this product at temperatures above 400°C will generate hydrogen fluoride, which is corrosive. No polymerization will occur under normal processing conditions.

The shelf life of AFLAS Fluoroelastomers can be guaranteed by AGC Chemicals for 6 months after date of delivery for unopened packages. However the properties are not impacted by storage time. Storage and handling facilities should be designed to minimize exposure to extreme temperatures and dusty environments.

Wear protective gear and avoid tobacco use at all times when handling fluoroelastomers. Consult your Material Safety Data Sheet for safe handling details or contact your AGC Chemicals Technical Representative for clarification.

**APPLICATION EXAMPLE**

AFLAS 300S latex can be applied as a thin coating onto substrates. The recommended substrate is pretreated iron phosphate.

**Cure package for AFLAS 300S latex (weight ratio)**

<b>Component A</b>	<b>AFLAS 300S Latex</b>	100
	<b>Component B</b>	
	Ethyl Acetate	5.8
	Triton X100	1.6
	TAIC*(liquid)	1.3
	Perkadox 14S(solid)	0.3

The formulation of pigments and/or fillers should be determined depending on the application. The mixture of A and B should be consumed within one day. But the pot-life is also dependent on formulation of pigments and fillers. The procedure for non-filler is listed as follows:

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Procedure

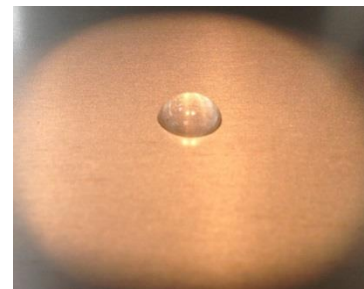
- 1) Make component B.
- 2) Mix A and B well before using.
- 3) Substrate should be degreased by agent like a solvent.
- 4) Apply the mixture of A and B to the substrate by coater, applicator. Thickness should be less than 0.01 mm as dried.
- 5) Dry it at room temperature. Make sure to ventilate all evaporative solvents.
- 6) Cure it in the oven above 170C for less than 5 minutes to allow it to be cured.



Trouble shooting

It is not suitable for straight steel, aluminum or copper because of poor adhesion.

If the dried coated thickness is more than 0.01mm, it may cause cracks during drying because of shrinkage of the AFLAS 300S. It can be improved by filler loading depending on desired formulation.



\* Triallylisocyanurate

Perkadox<sup>®</sup> is a registered trademark of Akzo Nobel Chemicals, B.V.

Triton<sup>™</sup> is a registered trademark of The Dow Chemical Company

**For more information and samples contact**

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