AFLAS® FLUOROELASTOMERS

AFLAS® applications

Coating Applications

DESCRIPTION

AFLAS® SPL-FKM Fluoroelastomers are terpolymers of tetrafluoroethylene, propylene and vinylidenefluoride. This combination gives AFLAS SPL-FKM Fluoroelastomers unique properties over not only conventional TFE-P type polymer but also FKM-type fluoroelastomers in demanding coating applications. AFLAS SPL-FKM Fluoroelastomers display outstanding resistance to heat, acids & bases, many solvents, oils, and automotive fluids. Classified by ASTM D 1418-01 as type IV FKM.

MATERIAL FEATURES

- **Heat Resistance*:** Mechanical properties of AFLAS do not deteriorate even when used for prolonged exposure to 200°C (392°F). AFLAS can be used at maximum peak exposure at 230°C (446°F).
- **Chemical Resistance**: Parts fabricated from AFLAS SPL-FKM compounds perform well in the amine and base-rich environments compare to conventional type of FKMs. Those chemicals are commonly found in automotive fluids and oils. In automotive and heavy equipment applications, AFLAS SPL-FKM stands up well to attack from amine-containing additives in oils and transmission fluids than conventional FKMs.
- **Fluids Resistance:** Excellent resistance to chemical attack by various types of fluids.
- **Low temperature flexibility:** Improved cold temperature performance (Tg = -13°C, TR-10 = -8°C)

*Part size and design may vary results.

END USER BENEFITS

- Long service use in harsh environments
- Can be applied in thin coating onto substrate like 30-150 microns.
- Preferred material for automotive gasket which is exposed to oils having amine compounds as anti-oxidants.
- Excellent high temperature durability.
- Corrosion resistance
- Excellent adhesion to stainless steel

TYPICAL APPLICATIONS

- Screen printing Coating
- Spray coating
- Rubber coated Gaskets & seals and more…

AGC

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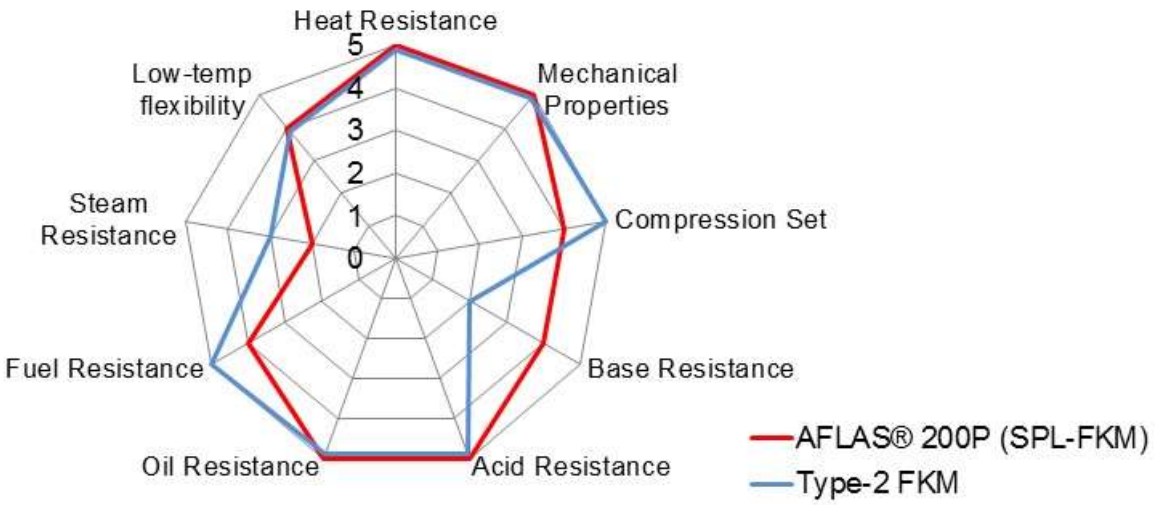
AFLAS® applications

PERFORMANCE COMPARISON

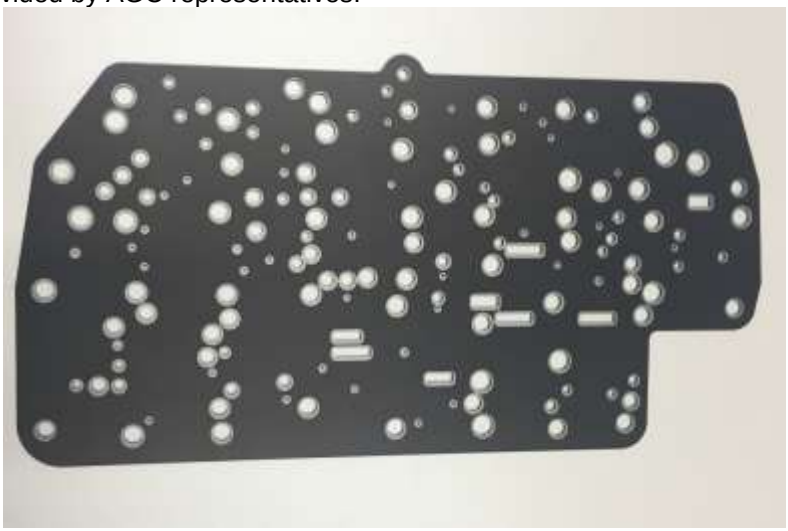


AFLAS GRADES SUITABLE FOR COATING

AFLAS 200P(SPL-FKM) is well suited for products to be used in extremely severe, high-temperature, environments such as engine for automotive because of outstanding heat and chemical resistance.

AFLAS COATING APPLICATION

The recipe will be provided by AGC representatives.



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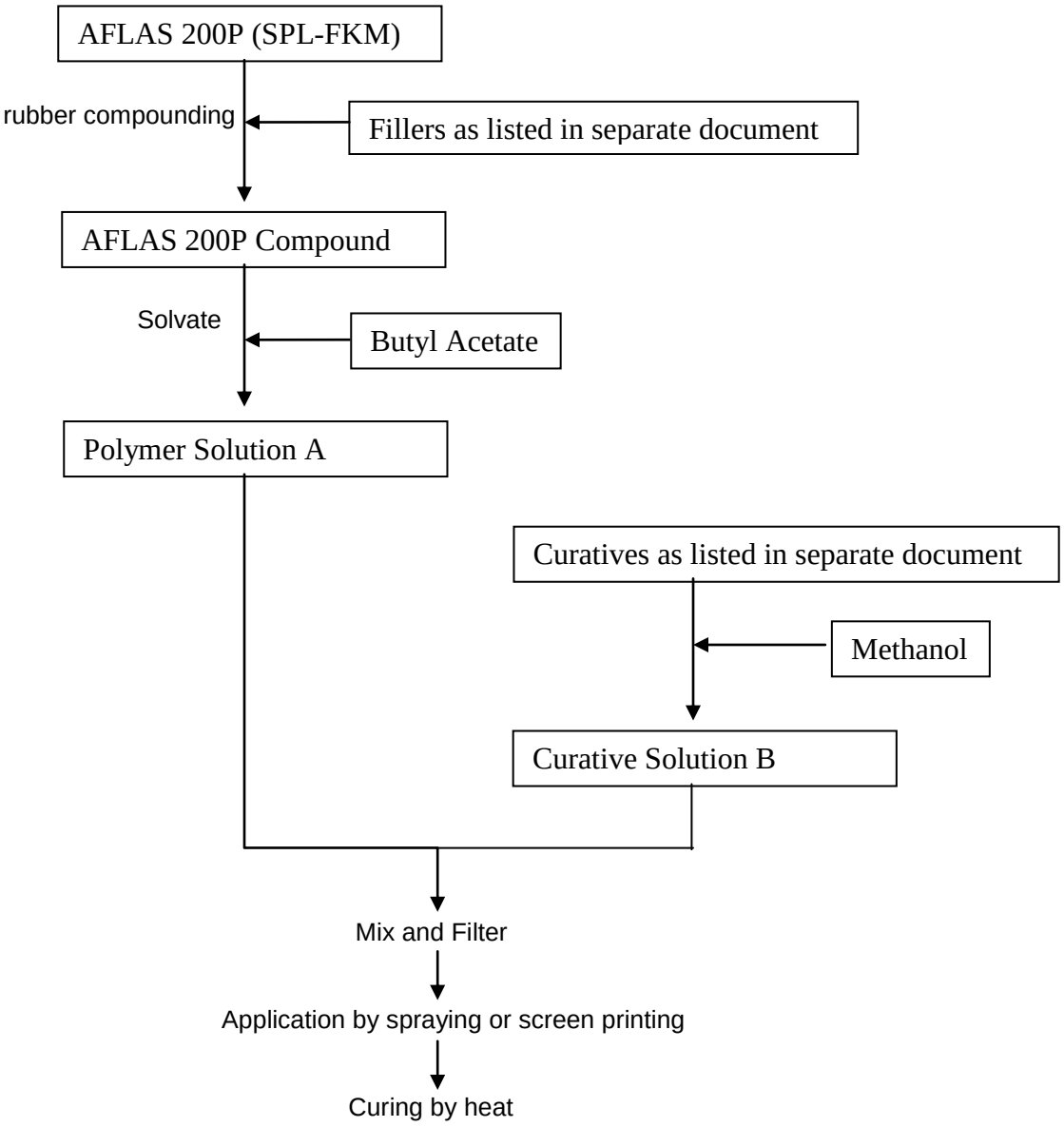
AFLAS COATING PROCEDURE

AFLAS 200P(SPL-FKM) is sold by AGC.



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AFLAS COATING PERFORMANCE

Hardness test

Test method：GB/T 6739-2006

HB	H	2H	3H	4H	5H	6H
OK	OK	OK	OK	OK	OK	OK

Picture: 6H test result

Impact resistance test

Test method：GB/T 1732-93

5cm	10cm	15cm	20cm	25cm	30cm	35cm	40cm	45cm	50cm
OK	OK	OK	OK	OK	OK	OK	OK	OK	OK

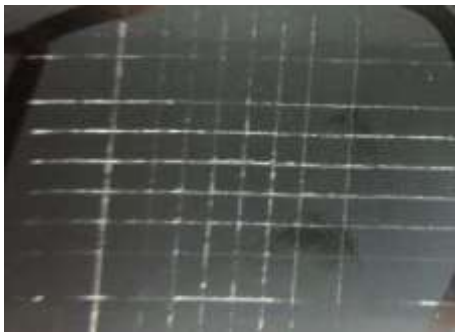
Picture: 50cm test result. Pass – no wrinkles

Adhesion test

Test method：GB/T 9286-1998

1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th
Level 1	Level 1	Level 1	Level 1	Level 1	Level 1	Level 1	Level 1	Level 1	Level 1

Picture: 10 times of test result.



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AFLAS COATING CHEMICAL RESISTANCE

Dexcool (Organic Acid Technology Long Life Coolant) resistant test

The coated specimens were soaked in Dexcool Prestone 50/50 (OAT) in a pressure vessel at 125C for 1 week in a pressure vessel. The specimens were hung in the vessel so that those were exposed to Gas Phase.

Gas Phase AFLAS (L: Initial, R:immersed) FKM (L: Initial, R:immersed)

Adhesion test result:

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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 400ºC. Fluoroelastomers can react with molten alkali metals and finely divided magnesium and aluminum at temperatures above 425ºC. Thermal decomposition of this product at temperatures above 400ºC 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 boxes. 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.

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.

For more information and samples contact

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