



product information

AFLAS[®] 150E

DESCRIPTION

AFLAS[®] Fluoroelastomers are copolymers of tetrafluoroethylene and propylene. This combination gives AFLAS[®] Fluoroelastomers unique properties over conventional FKM-type fluoroelastomers in demanding applications found in the oil & gas, chemical process, wire & cable, industrial equipment, food handling, pharmaceutical, heavy duty diesel and automotive industries. AFLAS Fluoroelastomers display outstanding resistance to heat, acids & bases, many solvents, ozone, and steam. Classified by ASTM D 1418-01 as FEPM.

MATERIAL FEATURES

- Excellent base and amine resistance unmatched by FKM-type fluoroelastomers
- Extremely high electrical resistivity, compared with other elastomers
- High heat resistance compared to FKMs
- Outstanding steam resistance
- Low viscosity
- Excellent elongation

END USER BENEFITS

- Excellent processing for extrusion
- Compression / transfer molding are also applicable

TYPICAL APPLICATIONS

- Wire insulator
- Cable jacket
- Hoses, tubes
- Sheets
- And more...

AFLAS[®] is a registered trademark of Asahi Glass Company, LTD.

The information provided herein is related only to the specific product designated and may not be applicable where such product is used in combination with any other materials or in any process. NO REPRESENTATION OR WARRANTIES, EITHER EXPRESSED OR IMPLIED, OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE OR OF ANY OTHER NATURE, ARE MADE HEREUNDER. The user of this product has the sole responsibility to determine the suitability of the product for any use and manner of use intended. This document may be revised after its issuance, and the user is advised to use the latest revision.

AGC

AGC Chemicals Americas, Inc.
Business & Technical Center
55 E. Uwchlan Ave, Suite 201
Exton, PA 19341

Phone: 610.423.4300

Fax: 610.423.4301

<http://www.agcchem.com>



CURE AND CONDITIONS

AFLAS 150E must be optimally formulated to take full advantage of its physical properties. Note that the optimal formulation depends on the intended use.

AFLAS 150E is peroxide-curable. The best performing peroxide is Perkadox® P-14Sfl or Vul-Cup® 40KE. TAIC* is the recommended co-agent and is required for the cure. Press cure is accomplished at 170°C for 20 minutes. Press cure conditions (temperature and time) should be decided in consideration of various factors, such as the size of parts, required properties, scorch safety and mold release.

To achieve the best physical properties, AFLAS 150E also requires a post cure. The recommended standard condition is 200°C for ≥ 4 hours. The strength can be further enhanced by adjusting the condition to 230°C for ≥ 4 hours. Depending on the size of the part, the cure time must be optimized.

*Triallylisocyanurate

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

Perkadox® is a registered trademark of Akzo Nobel Chemicals, B.V.

Vul-Cup® is a registered trademark of Arkema, Inc.

AFLAS 150E RPA (CURE) COMPOUND DATA

177°C, 100CPM, 3° Strain, 12 minutes

Property	Units	AFLAS 150E
Min S'	dNm	2.5
Max S'	dNm	27.9
10% Cure (tc10)	min	0.9
50% Cure (tc50)	min	2.3
90% Cure	min	7.1

AFLAS® is a registered trademark of Asahi Glass Company, LTD.

The information provided herein is related only to the specific product designated and may not be applicable where such product is used in combination with any other materials or in any process. NO REPRESENTATION OR WARRANTIES, EITHER EXPRESSED OR IMPLIED, OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE OR OF ANY OTHER NATURE, ARE MADE HEREUNDER. The user of this product has the sole responsibility to determine the suitability of the product for any use and manner of use intended. This document may be revised after its issuance, and the user is advised to use the latest revision.

AGC

AGC Chemicals Americas, Inc.
Business & Technical Center
55 E. Uwchlan Ave, Suite 201
Exton, PA 19341

Phone: 610.423.4300

Fax: 610.423.4301

<http://www.agcchem.com>



product information

AFLAS 150E COMPOUND COMPARATIVE PROPERTIES

Property	Units	AFLAS 150E
Tg (Glass transition temperature)	°C	-3
TR-10	°C	+3
Brittle Point	°C	-40
Compression Set (70hrs @ 200°C)	%	32
Tensile Strength, Yield	MPa/psi	13/1886
M100	MPa/psi	5/725
Elongation	%	360
Fluorine Content	%	57
Mooney (ML1+10)	kN/m	60 (100°C) 45 (121°C)
G' Storage Modulus (nominal) of Raw Gum	kPa	160

Formulation(PHR):

AFLAS 150E	100
MT 990 Carbon	30
TAIC*	5
Peroxide**	1
Sodium Stearate	1

Cure Conditions:

Press cure: 170°C / 20 minutes

Post cure: 200°C / 4 hours

* Triallylisocyanurate

** 1,3-bis(t-butylperoxy)-diisopropylbenzene

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.

AFLAS® is a registered trademark of Asahi Glass Company, LTD.

The information provided herein is related only to the specific product designated and may not be applicable where such product is used in combination with any other materials or in any process. NO REPRESENTATION OR WARRANTIES, EITHER EXPRESSED OR IMPLIED, OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE OR OF ANY OTHER NATURE, ARE MADE HEREUNDER. The user of this product has the sole responsibility to determine the suitability of the product for any use and manner of use intended. This document may be revised after its issuance, and the user is advised to use the latest revision.



AGC Chemicals Americas, Inc.
Business & Technical Center
55 E. Uwchlan Ave, Suite 201
Exton, PA 19341
Phone: 610.423.4300
Fax: 610.423.4301
<http://www.agcchem.com>



AFLAS 150E COMPATIBILITY DATA

Heat Resistance 200°C for 720 hours	Units	AFLAS 150E
Retention of Tensile Strength	(%)	+17
Retention of Tensile Elongation	(%)	+3
Change in Hardness	(Points)	0
50% NaOH Resistance 70°C for 720 hours	Units	AFLAS 150E
Retention of Tensile Strength	(%)	+5
Retention of Tensile Elongation	(%)	-16
Change in Hardness	(Points)	0
Volume change	(%)	0
28% Aqueous Ammonia Resistance 70°C for 720 hours	Units	AFLAS 150E
Retention of Tensile Strength	(%)	+5
Retention of Tensile Elongation	(%)	-19
Change in Hardness	(Points)	-1
Volume change	(%)	+2
Steam Resistance 180°C for 720 hours	Units	AFLAS 150E
Retention of Tensile Strength	(%)	-8
Retention of Tensile Elongation	(%)	+11
Change in Hardness	(Points)	-3
Volume Change	(%)	+11
Hot water Resistance 180°C for 720 hours	Units	AFLAS 150E
Retention of Tensile Strength	(%)	-9
Retention of Tensile Elongation	(%)	+3
Change in Hardness	(Points)	-5
Volume Change	(%)	+20

AFLAS® is a registered trademark of Asahi Glass Company, LTD.

The information provided herein is related only to the specific product designated and may not be applicable where such product is used in combination with any other materials or in any process. NO REPRESENTATION OR WARRANTIES, EITHER EXPRESSED OR IMPLIED, OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE OR OF ANY OTHER NATURE, ARE MADE HEREUNDER. The user of this product has the sole responsibility to determine the suitability of the product for any use and manner of use intended. This document may be revised after its issuance, and the user is advised to use the latest revision.



AGC Chemicals Americas, Inc.
 Business & Technical Center
 55 E. Uwchlan Ave, Suite 201
 Exton, PA 19341
 Phone: 610.423.4300
 Fax: 610.423.4301
<http://www.agcchem.com>



product information

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.

For more information and samples contact

AGC Chemicals Americas, Inc.
55 E. Uwchlan Avenue, Suite 201
Exton, PA 19341

Phone: (800) 424-7833

Fax: (610) 423-4301

AFLAS® is a registered trademark of AGC Chemicals Americas, Inc.

AFLAS 150E Product Information.DOC Rev. 1, 11/2013

AFLAS® is a registered trademark of Asahi Glass Company, LTD.

The information provided herein is related only to the specific product designated and may not be applicable where such product is used in combination with any other materials or in any process. NO REPRESENTATION OR WARRANTIES, EITHER EXPRESSED OR IMPLIED, OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE OR OF ANY OTHER NATURE, ARE MADE HEREUNDER. The user of this product has the sole responsibility to determine the suitability of the product for any use and manner of use intended. This document may be revised after its issuance, and the user is advised to use the latest revision.

AGC

AGC Chemicals Americas, Inc.
Business & Technical Center
55 E. Uwchlan Ave, Suite 201
Exton, PA 19341

Phone: 610.423.4300

Fax: 610.423.4301

<http://www.agcchem.com>