

Baymer[®] Spray AL747b

General Properties and Applications

Baymer[®] Spray AL 747 B is a blend which contains polyols, catalyst and a blowing agent. The applied blowing agent does not deplete the ozonlayer (ODP=0). Together with isocyanate Desmodur[®] 44 V 20 L it reacts to form a rigid polyurethane foam.

The material is to be processed using an airless spray technique and is used as a thermal insulation material for buildings.

Applied in the correct manner, this foam has:

- An applied density of around 56 kg/m³
- An initial lambda value of 0.020 W/mK
- Fire classification B2 (DIN 4102)

Typical data (no specification)

Property	Unit	Value	Method
Density at 20°C	kg/m ³	1213	EN-ISO 2811-2
Viscosity at 25°C	mPa.s	480	PET-10-01
Colour		Brown	

Packaging

Baymer[®] Spray AL 747 B is available in:

- Drums (225 kg)
- IBC (1000 kg)

Storage

Recommended storage temperature: 15 - 25°C.

Storage stability: 6 months

Store the material in its original sealed packaging in a dry well ventilated area not exposed to direct sunlight and other weather conditions and in compliance with local safety regulations.

Labeling and REACH applications

This product data sheet is only valid in conjunction with the latest edition of the corresponding Safety Data Sheet. Any updating of safety-relevant information – in accordance with statutory requirements – will only be reflected in the Safety Data Sheet, copies of which will be revised and distributed. Information relating to the current classification and labeling, applications and processing methods and further data relevant to safety can be found in the currently valid Safety Data Sheet.

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Directions for Processing

Recommended mixing ratio	(volume)	(weight)
Baymer [®] Spray AL 747 B	100	100
Desmodur [®] 44 V 20 L	100	101,4

Manual foam test	(internal lab. meth.; PET-55-02 5°C):
Start time	4 s
Gel time	10 s
Tack free time	13 s
Free rise density	44,5 kg/m ³
Component temperature	60 - 65°C
Substrate temperature	> 15°C
Thickness of layers	< 2 cm

Baymer[®] Spray AL 747 B should be mixed with the isocyanate component, Desmodur[®] 44 V 20 L, using an appropriate machine and gun in a 1 to 1 volumetric ratio. The density of the obtained foam depends on the actual conditions during the application process as well as on the spraying technique. With increasing layer thickness and temperature the density will decrease.

All to be sprayed substrates must be free from dirt, grease, oil and moisture prior to the application. Moisture in any form, like rain, fog, ice or a high air humidity (> 70% RH), will react chemically and will adversely affect system performance and corresponding physical properties. Application should not take place at an ambient temperature below 3°C of the dew point. Primers may be necessary dependent upon conditions; consult a Bayer Material Science Technical Service Representative. Wind velocities in excess of 18 km/hr may result in excessive loss of exotherm and interfere with the mixing efficiency, affecting foam surface, cure, physical properties; and will cause overspray. Precautions must be taken to prevent damage to adjacent areas from overspray.

The maximum thickness of the layers is 2 cm. The next layer is to be applied after the previous layer has cooled down to appr. 30°C to prevent build up of heat.

When bagshots are made to flush the machine, these bagshots should not have a diameter larger than 30 cm, also to prevent heat build up.

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foam properties	Property	standard	unit	value	classification
	Density	EN 1602	kg/m ³	55,8	
	Closed cells	ISO 4590	%	>90	CCC4
	Compr. str.	EN 826	kPa		
	- parallel			473	CS
	- perpendicular			-	(10\Y)200
	E-modulus	EN 826	N/mm ²	14,9	
	Dim. stab.	EN 1604			DS (TH) 4
	100 °C		%	l= 0,1 w= 0,0 t= -0,2	
	-20 °C		%	l= 0,0 w= 0,0 t= 0,0	
	70 °C/ 95% RH		%	l= 1,1 w= 1,1 t= 0,5	
	Lambda initial	EN 12667	W/m.K	0.020	
	aged			0.022	
	Fire classification	DIN4102-1			B2

The methods described in this publication for testing the fire performance of polyurethane and the results quoted do not permit direct conclusions to be drawn regarding every possible fire risk there may be under service conditions.
Furthermore, this does not release the producer of the finished parts from his obligation to carry out suitable tests on his end product with respect to fire performance and/or fire risk in order to guarantee conformity with the required fire safety standard.

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Safety precautions

The reaction product of Baymer[®] Spray AL 747 B and Desmodur[®] 44 V 20 L is an organic combustible product. If exposed to fire and/or heat it may present a fire risk in certain applications. Do not use welding or cutting equipment, flame or any other ignition source on or immediately adjacent to the exposed foam.

With respect to safety precautions during application, please refer to:

- The currently valid Safety Data Sheet
- Our Product Stewardship program
- PU- Europe Product Stewardship program

This information and our technical advice - whether verbal, in writing or by way of trials - are given in good faith but without warranty, and this also applies where proprietary rights of third parties are involved. Our advice does not release you from the obligation to check its validity and to test our products as to their suitability for the intended processes and uses. The application, use and processing of our products and the products manufactured by you on the basis of our technical advice are beyond our control and, therefore, entirely your own responsibility. Our products are sold in accordance with the current version of our General Conditions of Sale and Delivery.

This product is not designated as „Medical Grade“* and therefore shall not be considered a candidate for the manufacture of a medical device or of intermediate products for medical devices, which are intended under normal use to be brought into direct contact with the patient's body (e.g., skin, body fluids or tissues, including indirect contact to blood)*. If the intended use of the product is for the manufacture of a medical device or of intermediate products for medical devices, Bayer MaterialScience AG must be contacted in advance to provide its agreement to sell such product for such purpose. Nonetheless, any determination as to whether a product is appropriate for use in a medical device or intermediate products for medical devices must be made solely by the purchaser of the product without relying upon any representations by Bayer MaterialScience AG. * Please see the "Guidance on Use of Bayer MaterialScience Products in a Medical Application" document. In case of questions, please contact: productsafety@bayerbms.com

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