

Technical Data Sheet



The Chemical Company

Elastospray® 1629/1

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Application

A Class 1 - ODP Zero polyurethane spray system (in-situ foam) for the production of closed cell rigid foam. The system can be used to insulate and prevent condensation on a wide range of applications including roofs, walls, floors and soffits.

Chemical Characteristics

A or Polyol Component: A mixture of polyol, flame retardant, catalyst, stabiliser, and HFC blowing agent
B or Isocyanate Component: Polymeric diphenylmethane diisocyanate MDI (IsoPMDI 92140)

Supply

The type of supply for the components will be decided after consultation with our Sales Office.

Storage, Preparation

Polyurethane components are moisture sensitive. Therefore they must be stored at all times in sealed, closed containers. The A-component (Polyol) must be homogenised by basic stirring before processing. More detailed information should be obtained from the separate data sheet entitled "Information for in-coming material control, storage, material preparation and waste disposal" and from the component data.

Processing

Elastospray spray foam systems can be processed through all standard two component equipment designed for this purpose. This unit must be capable of maintaining a 1:1 by volume ratio, temperatures between 30 and 60°C using pre-heaters and heated hoses and pressures between 50 and 80 bar (700 – 1200 psi). Self cleaning, impingement mix spray guns are recommended.

Possible Hazards

The B-component (Isocyanate) irritates the eyes, respiratory organs and the skin. Sensitisation is possible through inhalation and skin contact. MDI is harmful by inhalation. When processing MDI, take note of the necessary precautionary measures described in the Material Safety Data Sheets (MSDS). This applies also for the possible hazards in using the A-component (Polyol) as well as any other components. See also our separate information sheet " Safety and Precautionary Measures for the Processing of Polyurethane Systems." Use our Training Programme " Safe Handling of Isocyanate."

Waste Disposal

More detailed information is provided in our country specific pamphlet.

Consumer Articles, Medical Products

There are national and international laws and regulations to consider if it is intended to produce consumer articles (e.g. articles that necessitate food or skin contact, toys etc.) or medical objects out of Elastogran's products. Where these do not exist, the current legal requirements of the European Union for consumer articles as well as medical products should be sufficient. Consultation with the Elastogran Sales Office and our Ecology and Product Safety Department is strongly recommended.

Component Data

	Unit	A -Comp	B -Comp.	Method
Density (20°C)	g/cm ³	1.21	1.24	G 133-08
Viscosity (20°C)	mPas	200	220	G 133-07
Storage Stability	Days	90	180	

Processing Data

Cup Test

	Unit	Value	Method
Component Temperature	°C	20	
Mixing Ratio	by weight by volume	A:B = 100:103 A:B = 100:100	
Mixing Weights	g	A = 28.0 B = 28.8	
Cream Time	s	4	G 132 – 01
String Time	s	9	G 132 – 01
Rise Time	s	18	G 132 – 01
Free Rise Density	kg/m ³	34	G 132 – 01

Machine Processing

	Unit	Value	
Mixing Ratio	by volume	A:B = 100:100	
Mixing Pressure	Bar	50 - 80	
Component Temperature	°C	30 - 60	

Physical Properties

	Unit	Measured value	Method
Density – apparent overall	kg/m ³	40 - 45	EN 1602
Thermal conductivity (Initial)	W/(m·K)	0.0209	EN 12667
Compression strength	N/mm ²	0.259	EN 826
Dimensional stability -20°C	%	<1%	EN 1604
Dimensional stability +70°C 90%RH	%	<2%	EN 1604
Closed cell content	%	>95%	ISO 4590
Water vapour transmission	mg/(m ² .h)	1084.68	EN 12086
Water vapour resistance	m ² .h.Pa/mg	2.21	EN 12086
Water vapour permeability	mg/(m.h.Pa)	0.0115	EN 12086
Water vapour diffusion resistance factor μ		61.12	
Spread of flame		Class 1	BS 476 Part 7

The above properties are typical of what can be expected when Elastospray 1629/1 is processed using recommended procedures. The values above were obtained by foam samples produced in Elastogran's laboratories.

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The data contained in this publication is based on our current knowledge and experience. In view of the many factors that may affect processing and application of our product, this data does not relieve processors from carrying out their own investigations and tests; neither does this data imply any guarantee of certain properties, or the suitability of the product for a specific purpose. Any descriptions, drawings, photographs, data, proportions, weights etc. given herein may change without prior notice and do not constitute the agreed contractual quality of the product. It is the responsibility of the recipient of our products to ensure that any proprietary rights and existing laws and legislation are observed. (01.04.2011).

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