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POLYISOCYANURATE BLOCK FOAM

DESCRIPTION

Ecofoam BS400 is a rigid polyisocyanurate (PIR) block foam product for board stock and pour in place applications. The formulation has a free-rise density of 51 kg/m³.

Erathane BS400 can be manually drill mixed (@ a minimum speed of 2500 rpm) or processed through foam-dispensing equipment. Polyisocyanurate foam has utility in a wide variety of insulation applications including roofing systems, building panels and in laminates for industrial fridges or freezers.

COMPONENT PROPERTIES

	Polyol	Isocyanate
Appearance	Clear, straw liquid	Brown liquid
Brookfield Viscosity (cps)	830	750
Specific Gravity	1.20	1.23

REACTION PROFILE

Laboratory results based on hand-mix @ 20°C

Mix ratio by weight (Polyol: Iso) 100:155

Mix Time (seconds)	25
Cream Time (seconds)	40
Gel Time (seconds)	150
Tack-Free Time (seconds)	450
Density (kg/m³)	50



This information is of general nature and is supplied without recommendation of guarantee. It does not make claim to be free from patent infringement. Properties shown are typical and do not imply specification tolerances. Era Polymers cannot accept liability for loss or damage through use. Whilst these technical details are based on expert knowledge, practical experience and laboratory testing, successful application depends upon the nature and conditions in which the products are supplied. Users must, by comprehensive testing, evaluate this product in their own application.

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TYPICAL PHYSICAL PROPERTIES

Properties presented below are to be used as a guide and not intended for specification purposes.

Foamed Density	61 kg/m³	
Compressive Strength (@ 10%) parallel to rise	414 kPa	Test Method AS2498.3
Compressive Strength (@ 10%) perpendicular to rise	340 kPa	Test Method AS2498.3
Closed Cell Content	95%	Test Method ASTM D2856-94
Thermal Conductivity (k-factor) **	0.024 W/mK	Test Method ASTM C518-02

** (Notes on Thermal Conductivity: Product tested without the skin on the foam. The thermal conductivity of the foam is tested at an average temperature of 25°C (resulting from lower and upper plate temperatures 35°C and 15°C on the heat meter apparatus). In applications where the foam is between non-porous substrates such as metal sheets, plastic or in construction the k-factor of the foam will be maintained but any rupture of the cells of the rigid foam results in a higher thermal conductivity value).

PROCESSING INFORMATION

It is recommended the polyol be mechanically mixed before removing any material from the drum as it contains components that settle on standing.

STORAGE CONDITIONS AND HANDLING

The components are sensitive to humidity and should at all times be stored in sealed drums. The recommended storage temperatures are 18-25°C, which will give a normal shelf life of 3 months. At elevated temperatures problems may arise with pressure build-up within the drums. When opening these drums extreme care must be exercised in releasing the internal pressure. It is recommended that the drum contents should be mixed well before use.

HEALTH AND PERSONAL PROTECTION

Before handling these chemicals please consult the Material Safety Data Sheets for the two components. The polyol component contains tertiary amines. Contact with the skin or eyes must be avoided. Safety goggles and protective gloves should be worn whenever handling both of the chemicals. Splashes that come into contact with the skin must be wiped off immediately and the contaminated area washed with soap and water. Splashes in the eye must be flushed immediately with plenty of clean running water. If irritation occurs thereafter contact an eye specialist.

GENERAL INFORMATION

- 1. The degree of insulation is determined by the thickness of the foam used. For cavity fill or moulding applications it is recommended to mould to a density of 55-65 kg/m³.
- 2. At temperatures less than 15°C the reaction rate of **Ecofoam BS400** will be much slower resulting in an increase in density, and reduction in foam yield and quality. Under these conditions we recommend the use of temperature controlled conditions for drums storage.



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