DATA SHEET

EDU-CHEM C-1898

APPLICATIONS

Ultra-light, semi rigid polyurethane pour foam specially formulated for the insulation of cavity walls and other building components.

RAW MATERIALS

Component R is a mixture of various chemicals, which have been specially formulated for the application. The principal ingredient is a non-polluting polyol. Storage temperature: minimum +10ºC.

Component I consist of one chemical only: MDI Isocyanate. The storage in open drums or at temperatures below 15ºC causes crystallisation. Isocyanate reacts with water and must be protected from moisture.

Handling of the materials: see overleaf.

COMPONENT PROPERTIES	*COMPONENT R (POLYOL)*	*COMPONENT I (ISOCYANATE)*
Specific gravity g/cm^3 (20°C):	1.06	1.24
Viscosity mPa·s (cp) (25°C):	195	225
Storage (unopened):	max. 3 months	max. 6 months
Mixing ratio – by volume:	100	100

PROPERTIES (hand mixed @ 20ºC)

			TEST METHOD
Density, Free Rise	kg/m^3	8.4	BS4370 part 1 meth 2
Cream Time		10 sec	
Tack Free Time		72 sec	
Compressive Strength (10% def.):			
Parallel to rise (‖)	mpa	0.009	ISO 844
Perpendicular to rise (⊥)	mpa	0.006	ISO 844
Tensile Strength:			
Parallel to rise (‖)	mpa	0.31	ISO 844
Perpendicular to rise (⊥)	mpa	0.16	ISO 844
Dimensional stability:			
(+100º C/ 48 h)	%	< 1	ISO 2796
Thermal conductivity coefficient			
(aged 24h/mean temp 10º C)	W/m·K	0.041	ISO 8301
(aged 24h/mean temp 24º C)	W/m K	0.043	ISO 8301
Closed Cell Content	%	< 2	ASTM D2856

GENERAL DATA SHEET

HANDLING AND APPLICATION - RISKS AND SAFETY REGULATIONS

RAW MATERIALS

Containers should be kept tightly closed until use, not be exposed to heat and be opened carefully. Suitable protective clothes, impermeable gloves and eye protection should be worn during any preliminary work. Avoid inhalation and consumption of the harmful substance as well as contact with skin and eyes.

Component R is water-soluble. In case of contact rinse promptly with water or wash with soap and water. Always keep a bottle of eye rinse at hand. Continued contact with skin and eyes will cause irritation and smarting.

Component I, MDI isocyanate, is harmful. Component I attacks all mucous membranes of the respiratory system and eyes. The risks increase with rising temperature. Protective equipment as described above should be used as well as suitable respiratory equipment, where abundant ventilation is not possible. If vapour has been inhaled, difficulty in breathing and asthmatic symptoms may arise. Fresh air is to be provided immediately. In case of direct indisposition get to doctor immediately, to whom label from container should be shown, if possible. Component I is not water-soluble. In case of contact, rinse thoroughly with water or wash with soap and water.

FOAMING

By mixing the two components they react with each other and form the foam plastic. The reaction is exothermic, i.e. develops its own heat. During the cure process and before the foam plastic has dried or is "tackfree" the greatest risks occur. The reaction develops harmful vapours. Provide plenty of fresh air and, if necessary, supplement the respiratory protection with admission of fresh air.

FIRE

In case of fire or explosion avoid inhalation of the smoke! It may contain toxic cleavage products - especially from the isocyanate. All normal fire extinguishers can be used.

REMOVAL

The best way of removing the residues is to mix them whereupon they become a rigid foam product. Spillages of Component R can be wiped off with a moist cloth, cotton waste or the like. Small spillages of Component I can be wiped off with cleaning fluid. Larger spillages can be removed with oil absorbing granules and residues should be removed with a neutralisation fluid consisting of:

Isopropyl alcohol . . . . . .50 parts by weight
Water . . . . . .50 parts by weight

SAFETY

⚠ **REMEMBER** - contaminated clothing is to be removed immediately!

⚠ The importance of care and cleanliness when handling the chemicals cannot be overemphasised!

⚠ Allergic persons should NOT be engaged with the production of foam!

⚠ Smoking should be avoided!

⚠ **ONLY** specially trained personnel should be allowed to work with the materials (cf. our material safety data sheet).

DATA SHEET

EDU-CHEM C-1746

APPLICATIONS

This polyurethane system has been specially formulated as an all-round pour-in-place PUR-system with special environmentally friendly raw materials and very low odour during processing. The mixed foam will stand temperatures of minus 30 o C.

RAW MATERIALS

Component R is a mixture of various chemicals, which have been adapted to the application. The principal ingredient is a non-polluting polyol and the blowing agent is CO_2. Other constituents such as catalysts and stabilisers are added in order to optimise performance and keeping qualities. Storage temperature: 15 - 25ºC

Component I consists of one chemical only: MDI isocyanate. The storage in open containers or at temperatures below 15ºC causes crystallisation. Component I reacts with water and must be protected from moisture.

Handling of the materials: see overleaf.

COMPONENT PROPERTIES	*COMPONENT R (CS1471)*	*COMPONENT I (M229)*
Specific gravity g/cm^3 (20°C):	1.04	1.23
Viscosity mPa·s (cp) (25°C):	615	190
Storage (unopened):	max. 6 months	max. 6 months
Mixing ratio – by weight:	100	118
Mixing ratio – by volume:	100	100

FOAM CHARACTERISTICS AT 20ºC (hand mixed)

Cream time:	30 sec.	Gel time:	210 sec.
		Rise time:	390 sec.

PROPERTIES (hand mixed)

			TEST METHOD
Density, free rise:	kg/m^3	43	BS 4370 part 1 meth. 2
Compressive strength (10% def.):			
Parallel to rise (‖)	MPa	0.22	ISO 844
Perpendicular to rise (⊥)	MPa	0.17	ISO 844
E-modulus:			
Parallel to rise (‖)	MPa	8.0	ISO 844
Perpendicular to rise (⊥)	MPa	4.7	ISO 844
Thermal conductivity coefficient λ:			
(aged 24h/mean temp. = 10ºC/⊥)	W/m·K	0.0245	ISO 8301
Closed cells:	%	>87	ASTM D2856 meth. C
Burning characteristics:		Not flame retarded	

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CS1471

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