

## MONNELI COLMEFOAM LHD

*Spray Polyurethane Foam*

### Product Description

COLMEFOAM LHD is a polyurethane spray foam system for the production of rigid foam with closed cells, used for roofs, walls and floor insulation over metal, concrete and plywood. The system is CFC-free and has Zero Ozone Depletion Potential (Zero ODP) value.

Colme foam LHD is a composed of Polyol Component (A), a mixture of polyol, catalyst, blowing agent and other additives and Isocyanate-Component (B), a mixture of diphenylmethane- disocyanate, isomers and halogen.

### Properties

Properties		Polyol	Isocyanate
Viscosity at 25°C	mPa.s	580-630	180-240
Specific gravity at		1.18	1.22-1.24
Storage temperature	°C	10 - 25	10-25
Color		Light yellow	Brown
Stability	Months	4	6

### Lab Reactivity

Cream time	4 - 5	sec
Gel time	8 - 10	sec
Free rise density	30-31	Kg/m <sup>3</sup>

### Physical Properties

Density	40±2	Kg/m <sup>3</sup>	BS EN 1602: 2013
Average water absorption	0.90	%	ASTM C209: 2015
Average water vapor transmission	0.70	Grains/h.ft <sup>2</sup>	ASTM E96-00
Dimensional stability under specific temperature & humidity	7.0 7.0 2.0	L% W% T%	BS EN 1604: 2013
Closed cell content	>90	No	ASTM D6226-10 Procedure 1
Thermal conductivity	0.024	%	ASTM C518: 2015
Compressive strength at 10% deformation	170	Grains/h.ft <sup>2</sup>	BS EN 826: 1996

Tensile strength parallel to faces of thermal insulation	180	kPa	BS EN 1608 : 2013
Fire behavior	Class F/ B3	Class	BS EN 13501- 1:2007

Packaging	Part A	Part B
	220 Kg	250 Kg

Machine Conditions		
Component temperature	30-50	°C
Mixing ratio A:B	1:1	-
Component pressure	50-80	bar

Environment Conditions		
Ambient temperature	Between +10 and +48	°C
Relative humidity	<85%	-
Wind speed	≤ 20	km/h

Substrate Conditions		
Primer	Flash coat of spray foam (1-2mm)	When needed
Substrate temperature	Between +10 and +48	°C
Substrate humidity	≤ 20 Without condensations on substrates	Porous substrates non-porous substrates

## Application

- Must be applied using plural-component spray equipment. The mixture reacts on the surface, adhering to it instantaneously, and expanding into a rigid foam
- Thickness should be between 10-20mm. In order to maintain the designed density and dimensional stability, it is not recommended to apply thicker layers.
- Higher than recommended layer thicknesses, cause a decrease in density and worse dimensional stability of the foam. Very thin layers will increase the density and decrease product yield.
- When applying a total thickness of (>6 cm), it is important to keep a time gap of 10 min between the layers. Longer time gap is necessary for thicknesses above 10 cm
- The distance from the spray gun to the substrate is recommended to be approx. 80 cm.

## Storage

The storage life of this product referred to in this data sheet is provisionally 3 months from the time of production date when stored at 25°C.

## Health & Safety

The isocyanate component irritates the respiration system, eyes and skin. This can have allergic reactions if inhaled or when comes in contact with skin. The required measurements indicated in the safety data sheet should be noted during handling of isocyanate. The same procedure should also be applied during handling of the A system (polyol) considering the risk available.

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