Version 7 12.07.16

ISOTHANE LD40 MOULDING FOAM INSULATION SYSTEM

PRODUCT DESCRIPTION

LD40 is a two component, 1:1 ratio, CFC & HCFC FREE rigid foam system which when processed through suitable dispense machinery will produce a rigid foam of approximate density 40 kg/m³ with good compressive strength, cell structure and other physical properties.

USES

LD40 is a general-purpose system for use in a wide variety of moulding applications where the foam needs gradual rise. LD40 is used in the thermal insulation of large panels, water heaters, storage tanks, refrigerated containers, behind produce store pressure walls and related double skin applications. It is particularly useful for the filling of large volumes where its gradual rise and excellent flow properties are used to best advantage.

EQUIPMENT

LD40 can be processed through all standard foam dispense equipment. The machine should be capable of maintaining the mix ratio at ±2% accuracy and controlling the component temperatures at 20-50°. Consult Isothane technical staff for a specific recommendation.

RECOMMENDED MACHINE SETTINGS

Block Temperature	Minimum operating	100-120°F/40-50°C
Hose Temperature Reading	Minimum operating	100°F/40-50°C
Chemical Pressures	Minimum operating	500 psi

Not greater than 200 psi difference iso/resin

STORAGE, HANDLING AND PERSONAL PROTECTION

The recommendations in our Safety Data Sheet for this product must be followed at all times. More general information is included in our publication “A Guide to the Safe Handling of Polyurethane Chemicals” and in the following Technical Data Sheets which are available on request:-

- Fire safety when Storing, Handling and Installing Polyurethane Foam.
- Decontamination of Isocyanates using Isothane Decontaminant.

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REACTIVITY PROFILE

Laboratory test results (typical) at 20ºC:-

Cream time	13 - 18 seconds
Rise time	155 ± 15 seconds
Free rise density	32 ± 1 kg/m³

PHYSICAL PROPERTIES

PROPERTY	VALUE	METHOD
* Thermal conductivity, aged, <80mm thick	0.027 W / mK	BS EN ISO 13165
* Thermal conductivity, aged, 80-120mm thick	0.026 W / mK	BS EN ISO 13165
* Thermal conductivity, aged, >120mm thick	0.025 W / mK	BS EN ISO 13165
Compressive strength - normal to major plane: (50mm cavity)	210 KPa	BS 4370:Pt1
Shear strength - parallel to major plane: (50mm cavity)	241 kPa	BS4370:Pt2
Dimensional stability linear change at: 24 hrs @ -15ºC 24hrs @ +70ºC	 - 0.2 / 0 / 0.2% (L / W / T) 0.3 / 0.4 / 0.1% (L / W / T)	 BS 4370:Pt1 BS4370: Pt2
Water Vapour Permeability parallel to foam thickness	5.9ng / (pa.sm) max	BS4370: Pt2
Closed Cell Content	90%	BS4370: Pt2
*Burning Characteristics	Less than 40mm	BS4735
*Tensile Adhesion to Masonry Aerated Concrete Brick Breeze Block Appearance Density	 51 kPa 155 kPa 166 kPa Uniform, fine cell structure 42 kg/m³	 BS4757 BS4757 BS4757

*Tests carried out independently by UKAS approved laboratories

LD40 SYSTEM COMPONENTS

Resin SG @ 20ºC	1.15
Resin Viscosity @ 20ºC	400cps
Iso SG @ 20ºC	1.24
Iso Viscosity @ 20ºC	350cps
Ozone Depletion Potential (ODP)	ZERO
Shelf Life	12 months

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