



ECOFIL 40

All Water Blown Foam System

Product Description

Mix Ratio 1 / 1.5 (40 / 60) : Resin / Isocyanate [by weight].
Mix Ratio by Volume = 40 / 54 : Resin / Isocyanate.

ECOFIL 40 is a two component, all water blown, polyurethane rigid foam system. At typical moulded densities of 40 to 50 Kg/m³, the Ecofil 40 system produces a fine celled foam with low friability and good adhesion to substrates.

Approvals

ECOFIL 40 Buoyancy foams have been tested and evaluated for use in life saving appliances according to the International Convention For Safety At Sea “**SOLAS**” **chapter III & International Maritime Organisation (IMO)**. This certification was issued by Lloyd’s Registered Shipping on behalf of the Maritime Safety Agency (**MSA**) and Type Approval on behalf of the UK Government Department of Transport (**DOT**).

IMO Resolution A 689 (17)
IMO Resolution MSC 81 (70) Part 1. (Copies available on request).

Equipment

Process through suitable dispense machinery to produce polyurethane foam for use in free rise, pour - in - place, or moulding applications. The machine should be capable of maintaining the mix ratio at $\pm 2\%$ accuracy and temperature at 20-25°C. Consult Isothane technical Staff for machine manufacturer recommendations.



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Component Description

ECOFIL 40 Resin component is a fully formulated liquid mixture. It should be stored in sealed tanks or drums and heated to 20°C prior to use. Viscosity @ 20°C = 1000cps. Specific Gravity @ 20°C = 1.11.

ECOFIL 40 Iso is a liquid mixture containing crude Diphenyl – methane – diisocyanate. It should be stored in sealed tanks or drums and heated to 20°C prior to use. Viscosity @ 20°C = 325 cps. Specific Gravity @ 20°C = 1.23.

Typical Properties

ECOFIL 40 when processed through suitable foam machinery gives a product of nominal overall density: 40 to 50 Kg/m³.

Typical Laboratory Cup Test Results @ 20°C (40 parts Resin / 60 Parts Isocyanate by weight)

Cream Time	30	Seconds
Rise Time	250	Seconds
Free Density	38	kg/m ³



This information is of a general nature and is supplied without recommendation or guarantee. It does not make claim to be free from patent infringement. Properties shown are typical and do not imply specification tolerances. Liability for loss or damage through use cannot be accepted except for death or injury caused by negligence on the part of Isothane Ltd. Whilst these specifications are based on expert knowledge, practical experience and laboratory testing, successful application depends upon the nature and conditions in which the products are applied. Users must, by comprehensive testing, ensure suitability of product for own use. Without control or supervision of the preparation for and application of Isothane products, general guarantees cannot be offered.



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Typical Physical Properties of Ecofil 40

Core Density	36 kg / m ³	BS 4370
Compressive strength -		
A. Parallel to Rise Direction	240 KN / m ²	BS4370
B. Perpendicular to Rise	180 Kn / m ²	BS4370
Water Absorption @ 1.5m / head 7 days (weight absorbed / total surface area)	0.342 kg / m ²	IMO STD
Buoyancy	958 kg / m ³	
Tensile Strength	200 KN / m ²	BS4370
Dimensional Stability Maximum % Linear Change		
24Hr @ 100° C	-2.5%	BS4370
24Hr @ -20° C	-0.05%	BS4370
Closed Cell Content	94%	BS4370
Thermal Conductivity @ 23° C (Anacon)	0.030 W / m° C (aged)	ASTM C-518
Extent if Burn Characteristics*	< 125 mm	BS4735

* Note. This is an indicative small-scale laboratory fire test and not intended to be used to evaluate the potential fire hazard of a material composite when used in situ.

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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