POLYMER GROUP LTD
(ISO 9001)
SOLUTIONS FOR EXTREME ENVIRONMENTS

product data sheet

ENDURATHANE 3245N-100R

POUR-IN-PLACE FOAM SYSTEM

DESCRIPTION:

ENDURATHANE 3245N-100R rigid polyurethane foam is a low density, 90-95% closed cell, highly energy efficient, general purpose insulation and buoyancy medium suitable for handpour or machine application.

ENDURATHANE 3245N-100R is a fire retarded grade with good self extinguishing properties, coupled with low thermal conductivity and permeability, good mechanical strength, chemical resistance and dimensional stability.

RECOMMENDED USES:

Applications include:-

- Wall and door cavity insulation
- Pipe insulation
- Buoyancy chambers
- Insulated building panels
- Refrigerated transport trailers
- Refrigerated containers
- Commercial display cabinets
- Walk-in coolers/freezers
- Fish holds & freezers
- Laminated composites for:-
  - light weight spandrels
  - low cost insulation boards
  - roofing panels
  - partition panel systems

PHYSICAL PROPERTIES:

Components:

Component A (isocyanate)	
Viscosity (20°C)	200 cps
Flashpoint (ASTM D92)	230°C
Specific Gravity	1.25
Component B (polyol)	
Viscosity (20°C)	330cps
Specific Gravity	1.13

Reaction Profile:

Cream Time (20°C)	45 secs
Rise Time	180 secs
Tack Free Time	220 secs

Mix Ratio:

100A:100B parts by volume
107A:100B parts by weight

Pack Sizes:

2 x 1 kg kits
2 x 5 kg kits
2 x 20 lt pails
2 x 200 lt drums (480 kg set)

Cured Foam:

Density	32 kg/m³
Thermal Conductivity (Kcal/m² hr °C)	0.019 - 0.023
Compressive Strength	150 kN/m²
Closed Cells	90 - 95%
Dimensional Stability	
24 hrs @ 100°C	1 to 5%
24 hrs @ -40°C	0%
24 hrs @ 70°C/100% RH	0 to 5%
Water Absorption (23°Ckgs/m²)	0.49
Water Vapour Permeability (Perm-in ASTM C-355 @ 23°C)	1.8
Flammability	
DIN 4102	B3 rating
ASTM D-1692	self extinguishing
Theoretical Usage	1 kg of expanded foam occupies 0.03 cu. m

(Make adequate allowance for losses)

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APPLICATION DATA

ENDURATHANE 3245N-100R can be hand mixed (see separate application bulletin) or machine-applied through 2-component polyurethane application equipment such as ***Glas-Craft Probler*** or similar.
Please consult your representative for advice regarding any equipment application questions you may have.

Equipment: ***Glas-Craft Probler***

Pre-heat: Part A [isocyanate] 45°C
Part B [polyol] 45°C
Hose Temperature: 40-50°C
Optimum temperatures will vary with equipment, substrate temperature and ambient conditions generally.
Check and maintain correct output ratio to ± 2%.
Ensure metering is accurate by regular ratio checks and monitoring of line pressures to gun. Operator must have adequate product knowledge to recognise faulty foam so remedial action can be taken.

Substrates:

Endurathane 3245N-100R may be applied to most surfaces. Substrates must be clean and dry.
Ambient and surface temperatures should be above 15°C. **Low temperatures will decrease yield markedly.**

Theoretical Coverage:

Always check yield and application rates at start of job and then regularly to ensure product usage is as expected. Pay special attention when applying on to a profiled substrate to determine the "flat" area. This can often be as much as 25% greater than the measured area. Similarly adequate allowance must be made for overpacking, especially when cavities are narrow or foam has a long flow path.
1 kg of foam occupies 0.032 cu.m [0.625 sq.m @ 50mm] applied under ideal conditions [1 sq.m = 1.6kg @ 50mm].

Handling Precautions:

All chemical materials should be used by trained personnel.

Component A [isocyanate] contains methylenebisphenyldiisocyanate [MDI]. It is an irritant and allergic sensitiser. It is moderately toxic. **Avoid contact with skin or eyes, avoid breathing vapour** and use only in well ventilated areas.

Component B [polyol] contains HCFC, a volatile blowing agent. It is a mild irritant. In confined spaces it may displace sufficient air to be hazardous. Provide ventilation or use only in well ventilated situations.

Always wear **eye protection** and suitable **protective clothing.**

Flush splashes to the skin or eyes with copious quantities of water.

Clean up:

Owing to the chemical resistance of polyurethane products it is important to clean up any surplus as quickly as possible. Methyl Proxitol is suitable for general cleaning and methylene chloride can be used as a line flush. **Wear suitable protective clothing, goggles and gloves at all times when cleaning.** Greasing components beforehand assists with contamination removal.

Storage:

Store at temperatures between 15° and 26°C in tightly closed containers to prevent moisture and other contamination. If exposed to moisture Component A will crystallise resulting in line blockages.

Shelf Life: Minimum 6 months.

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