POLYMER GROUP LTD
SOLUTIONS FOR EXTREME ENVIRONMENTS

Product data sheet

ENDURATHANE GP65S

PRODUCT DESCRIPTION

Endurathane GP65S is a fully formulated polyol blend designed to react with **Suprasec 5005 or Endurathane Part A** isocyanate to make a general purpose rigid polyurethane foam with good moulding characteristics**.**

Endurathane GP65S is formulated with HFC as the blowing agent which has zero ozone depleting potential. **ENDURATHANE GP65S** is a fire retarded grade foam with good self-extinguishing properties and is formulated halogen free to minimise corrosion.

TYPICAL LABORATORY REACTION & PROPERTIES DATA

Mixing ratio :

Endurathane GP65S :	100pbv	100pbw
Isocyanate:	100pbv	110pbw

(pbv: parts by volume, pbw: parts by weight)

Laboratory reaction profile at 21°C :

Cream Time (sec) :	50-60
Gel Time (sec) :	130-160
Rise Time (sec) :	160-190
Free Rise Core Density (kg/m3) :	60-65

Typical liquid properties at 21°C :

Appearance :	Clear coloured liquid
Viscosity (Brookfield) :	800 mPa s
Specific Gravity :	1.11

Typical properties as seen in laboratory samples:

Test	Result	Method
10% Compressive strength – parallel (50kg/m3)	450 kPa	AS2498.3
Dimensional stability 14 days @ -30°C 14 days @ 70°C with 100% humidity 14 days @ 100°C	% change -0.25 -0.3	D2126-66
Thermal conductivity (k-factor) @22.5°C	0.028 W/mK	EKO machine
Closed cell content	>95%	Pycnometer

RECOMMENDED USES:

Applications include:-

- Taxidermy
- Buoyancy chambers
- Door cavity insulation

STORAGE AND HANDLING PRECAUTIONS

The product contains HFC which has a boiling point of 24°C. Storage at elevated temperatures will result in build up within the drums, and for this reason the product should be stored away from direct sunlight.

When opening a container, care must be taken to release any internal pressure slowly.

To prevent loss of HFC by evaporation, and to prevent ingress of moisture, drums must be kept tightly sealed when not in use.

Storage Stability

Recommended storage temp: 10-25°C
Under these conditions this product has a storage stability of at least 6 months.

PACKAGING

Nett 210 kg per 200 litre drum.

HEALTH AND SAFETY ADVICE

Refer to Polymer Group Material Safety Data Sheets for individual products. Also refer to technical Information PU193-IE *"MDI-Based Compositions: Hazards and Safe handling Procedures".*

LIMITATIONS:

*Although **Endurathane GP65S** contains fire retardant, all low density plastic foams (including polyurethane foam) will burn when exposed to fire. Expanded foam must be protected from all sources of ignition.*

Foam and cavities in general should be protected from all moisture and salt ingress to prevent corrosion. Best practice is to keep all forms of moisture out of cavities to prevent corrosion.

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APPLICATION DATA

ENDURATHANE GP65S can be hand mixed (see separate application bulletin) or machine-applied through 2-component polyurethane application equipment such as ***Graco Reactor*** with ***Fusion*** or similar.

Please consult your representative for advice regarding any equipment application questions you may have.

Equipment: ***Graco Reactor***

Pre-heat:	Part A [isocyanate]	30-40°C
	Part B [polyol)	30-40°C
Hose Temperature:		35-45°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 GP65S 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 approximately 0.014 m³ at an installed density of 70 kg/m³ applied under ideal conditions [1 m² = 3.5kg @ 50mm].

STORAGE AND HANDLING PRECAUTIONS

ALL CHEMICALS MUST BE USED BY TRAINED PERSONNEL.

Component B [polyol] contains HFC which has a boiling point of 24°C. Storage at elevated temperatures will result in build up within the drums, and for this reason the product should be stored away from direct sunlight.

When opening a container, care must be taken to release any internal pressure slowly.

To prevent loss of HFC by evaporation, and to prevent ingress of moisture, drums must be kept tightly sealed when not in use.

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 overspray 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 Stability
Recommended storage temperature is 10-25°C in tightly closed containers to prevent moisture and other contamination. Under these conditions this product has a storage stability of at least 6 months.

Store out of direct sunlight and sources of heat. If exposed to moisture Component A will crystallise resulting in line blockages.

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