

Castorthane 50

Low-Density Spray Foam

Hard Spray Foam System for Prop & Theming

DESCRIPTION:

Castorthane 50 rigid spray foam is a new generation high performance rigid insulation and moulding foam incorporating **14% renewable resource plant oil**. The reactivity profile of **Castorthane 50** has been designed to provide optimum coverage (yield). Suitable for thin film initiation and DTV (direct to vertical) substrates.

Castorthane 50 is formulated with a degree of green strength flexibility to enable spray moulded articles, panels etc to be demoulded easily and rapidly.

Castorthane 50 is a fire retarded foam 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 ceiling insulation
Roof insulation/refurbishment
Fruit and vegetable coolstores [in-situ]
Walk-in coolers/freezers
Fish holds & freezers
Stage/studio prop creation

NOTE: All exterior applications should be protected against weather exposure by sheathing or covering with a monolithic membrane. Consult your PGL representative for advice.

As polyurethane foam products may constitute a serious fire hazard if improperly used or protected, a careful assessment should be made to determine what potential hazard may exist.

PHYSICAL PROPERTIES:

Components:

Component A (isocyanate)	
• Viscosity (20°C)	200cps
• Flashpoint (ASTM D92)	230 C
• Specific Gravity	1.24
Component B (polyol)	
• Viscosity (20°C)	350-450cps
• Specific Gravity	1.12

Reaction Profile:

• Cream Time (20°C)	3 - 5 secs
• Rise Time	12 - 18 secs
• Tack Free Time	16 - 22 secs

Mix Ratio:

100A:100B parts by volume

Cured Foam:

• Density, free rise core	50-55 kg/m ³
• Thermal Conductivity (Kcal/m ² hr °C)	0.038-0.042
• Compressive Strength	> 400 kPa
• Closed Cells	90-95%
Dimensional Stability	
• 24 hrs @ 100°C	1-5%
• 24 hrs @ -40°C	0%
• 24 hrs @ 70°C/100% RH	0-5%
Flammability	Formulated to be self-extinguishing



PACKAGING

A: Nett 250 kg per 200 litre drum.
B: Nett 210 kg per 200 litre drum.



APPLICATION DATA

Castorthane 50 should be machine-applied through two component polyurethane application equipment such as Glas-Craft Probler or similar. Please consult your representative or Contracts Manager for advice regarding any equipment application questions you may have.

Equipment: Glas-Craft Probler

Primary Heater: Part A (Isocyanate) 30-45°C
Part B (Polyol) 30-45°C

Hose Temperature: 35-50°C

Spray Pressure: 900-1200 psi

Optimum temperatures will vary with equipment, substrate temperature and ambient conditions generally. Check and maintain correct output ratio to $\pm 2\%$.

Substrates:

Castorthane 50 may be applied over most surfaces. Substrates must be clean and dry. Where adhesion is at all doubtful a suitable primer should be applied first. Contact your Technical Representative for advice. Water in any form will react adversely with the components. **Ambient and surface temperatures** should be above 15°C. **Low temperatures will decrease yield markedly.**

Theoretical Coverage:

Always check yield and coverage rates at start of job and then regularly during application to ensure product coverage is as expected. Pay special attention when spraying on to a profiled substrate to determine the "flat" area to be sprayed. This can often be as much as 25% greater than the measured area. Similarly adequate allowance must be made for spraying losses especially when working outside. It is not recommended to spray when wind velocities exceed 5 km/hr.

1 kg of foam occupies 0.050 -0.055 cu.m applied under ideal conditions.



STORAGE AND HANDLING PRECAUTIONS

ALL CHEMICALS MUST ONLY BE USED BY TRAINED PERSONNEL.

Component A [isocyanate] contains methylene bisphenyl di-isocyanate [MDI]. It is moderately toxic. **Avoid contact with skin or eyes, avoid breathing any vapour** and use only in well ventilated areas with respiratory protection.

Component B [polyol] is a mild irritant. Wear appropriate personal protective equipment.



HEALTH AND SAFETY ADVICE

Refer to Polymer Group Safety Data Sheets for individual products.

Always wear protective **eye and breathing protection** (full face respirator with disposable lens covers) and suitable **protective clothing** ie, disposable overalls, gloves and boots when spraying.

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:

Store at temperatures between 15°C 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 12 months.

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