

# Castorthane 100

High-Density Spray Moulding Foam

## High Density Spray Foam – Renewable Resource Based & CFC/HCFC Free

### PRODUCT DESCRIPTION

**Castorthane 100** is a 100% water-blown high density rigid polyurethane spray foam.

**Castorthane 100** is used to provide additional strength to a range of plastic materials, including abs, polystyrene, polycarbonate etc.

### STRUCTURAL STRENGTH

This product adheres strongly to the prepared substrate, improving structural integrity of fragile substrates.

For best adhesive results, please consult your Polymer Group sales representative.

### COMPONENT B PROPERTIES

Appearance: light amber liquid  
Specific Gravity @ 20°C: 1.07 g/mL

### TYPICAL REACTION DATA

|                             |      |
|-----------------------------|------|
|                             | PBV* |
| <b>Castorthane 100:</b>     | 100  |
| Castorthane Part A (type 1) | 100  |
| * (parts by volume)         |      |

### Reaction Profile @ 21°C

|                        |                           |
|------------------------|---------------------------|
| Cream Time (secs):     | 3-5 secs                  |
| Rise Time (secs):      | 15-20 secs                |
| Free Rise Core Density | 100-130 kg/m <sup>3</sup> |

### TYPICAL FOAMED PHYSICAL PROPERTIES

|                       |                     |
|-----------------------|---------------------|
| Thermal Conductivity  | > 0.035 W/mK (aged) |
| Compressive Strength: | >750 kPa            |

### RECOMMENDED USES:

#### Applications include:-

- Thin section mould spraying for movie sets
- Reinforcing moulds and other structures



### HEALTH AND SAFETY ADVICE

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

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

**Component B [polyol]** contains HFC 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.



### PACKAGING

Nett 210 kg per 200 litre drum.

### STORAGE STABILITY

This product has a storage stability of approximately 6 months. For prolonged storage it is recommended that the temperature should not exceed 25°C.



## APPLICATION DATA

**Castorthane 100** is machine-applied through 2-component polyurethane application equipment such as **Graco Reactor** with **Fusion or Probler P2** or similar heated plural airless spray equipment.

### Equipment: **Graco Reactor E-30 or E-XP2**

Pre-heat: Part A [isocyanate] 50-60°C  
Part B [polyol] 50-60°C  
Hose Temperature: 55-65°C

Operating pressure at 1600-2000 psi.

Optimum temperatures will vary with equipment, substrate temperature and ambient conditions generally. Operator must have adequate product knowledge to recognise faulty foam so remedial action can be taken.

### Pre-Conditioning:

The materials should be maintained prior to application at an optimum temperature of 25°C. This may require the use of band heaters.

### Substrates:

**Castorthane 100** 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.** This product in combination with Castorthane Part A is suitable for spraying on substrates with temperatures in the range of 15-50°C with good foam rise and surface texture.

### Cure Time and Recoat Time:

This product shall generally be applied in one or more passes at no more than 10mm and no less than 5mm thickness per pass.



## STORAGE AND HANDLING PRECAUTIONS

**ALL CHEMICALS MUST BE USED BY TRAINED PERSONNEL.**

**Component B** is hygroscopic and readily absorbs moisture which will affect the sprayed density. To prevent ingress of moisture, drums must be kept tightly sealed when not in use. If carrying out detailed spray work use a desiccator on the resin drum. The product should be stored away from direct sunlight.

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

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.

Rev 0