# FS42

## Polyurethane, Closed Cell Foam — 43 kg/m$^3$

## PRODUCT DESCRIPTION

**FS42** is a medium-density rigid polyurethane foam system designed to provide a slow-reacting foam for hand mixed or machine-dispensed pour or injection with a free rise density of 43 kg/m$^3$.

## INTENDED USES

- Commercial and industrial insulation and void filling applications, including pipe-in-pipe systems where the foam is either hand mixed or machine dispensed.

## FEATURES

- Hand Mixing
- Excellent insulation properties for temperatures ranging from −30 °C to 85 °C
- 1:1 mix ratio for standard Graco Equipment
- The FS range is made in Australia under ISO9001. It contains no Ozone-depleting potential and is well below the 'Greenstar' VOC threshold.

## PRODUCT DATA

| Property | FS Part A | FS42 Part B |
|---|---|---|
| **Appearance** | Brown | Yellow |
| **Specific Gravity** | 1.23 g/mL (25 °C) | 1.14 g/mL (20 °C) |
| **Viscosity Cps** | 225 mPa.s (25 °C) | 630 mPa.s (20 °C) |

## MIXED PRODUCT DATA

| Parameter | Specification |
|---|---|
| **Mix Ratio** | 1:1 |
| **Cream Time** | 45 Seconds |
| **Rise Time** | 360 Seconds |
| **Free Rise Density** | 43 kg/m$^3$ |

## TYPICAL CURED PROPERTIES

| Test | Method | Result |
|---|---|---|
| **Core Density** | ASTM D1622 | 43 kg/m$^3$ |
| **10% Compressive Strength Perpendicular (50 kg/m$^3$)** | AS2498.3 | 300 kPa |
| **Dimensional Stability: 14 days @ −30 °C** | AS2498.6 | −0.33% |
| **Dimensional Stability: 14 days @ 70 °C with 100% humidity** | AS2498.6 | −0.44% |
| **Dimensional Stability: 14 days @ 100 °C** | AS2498.6 | −0.82% |
| **Closed Cell Content** | ASTM D6226 | > 95% |
| **Thermal Conductivity (K Value)** | ASTM C518 | 0.023 W/mK |
| **R Value (@ 50 mm)** | Thickness (m) / K value | 2.17 |
| **Compressive Strength — Parallel** | ASTM D1621 | > 200 kPa |
| **Compressive Strength — Perpendicular** | ASTM D1621 | > 200 kPa |
| **VOC Emissions ("Greenstar" limit = 0.5 mg/m$^2$/hr)** | CETEC-D5116 | 0.01 over 24 hrs |

## FS42 R-VALUES AT DIFFERENT THICKNESSES

| Thickness (mm) | R-Value |
|---|---|
| **30 mm** | 1.29 |
| **50 mm** | 2.15 |
| **75 mm** | 3.22 |
| **100 mm** | 4.29 |
| **125 mm** | 5.36 |
| **150 mm** | 6.44 |
| **175 mm** | 7.51 |

## APPLICATION & EQUIPMENT SETTINGS

| Setting | Recommended Value |
|---|---|
| **Graco Equipment** | Graco E-30 and AP Fusion Gun or GX7a |
| **Dynamic Spray Pressure** | > 1500 psi |
| **Operating Temperature** | 45 °C |

## LIMITATIONS

- If used externally, it must be protected from direct weather exposure with a spray-applied membrane.

## PACK SIZE

| Kit Size | Code | Component Description |
|---|---|---|
| **40L Kit** | PU074 | FS Part A 25kg in a 20L Pail |
| | PU097 | FS42 Part B 22kg in a 20L Pail |
| **400L Kit** | PU074 | FS Part A 250kg in a 200L Drum |
| | PU097 | FS42 Part B 220kg in a 200L Drum |

## STORAGE & HANDLING

Store in dry, shaded conditions away from sources of heat and ignition and in properly sealed containers. Protect from heat and frost. Protect contents from moisture. A shelf life of 12 months minimum is typical with unopened containers if stored at ambient conditions at 25 °C. If either component is opened and partially used, it should be purged with nitrogen or desiccated air and resealed.

## DISPOSAL

**Liquid Systems:** Liquid Polyol or isocyanate should be disposed of with an EPA approved industrial waste company which meet all applicable federal, state and local laws and regulations.

**Cure Urethanes:** Fully reacted polyurethanes are inert and can be disposed of as regular landfill.

**Container:** Dispose of contaminated drums in accordance with federal, state and local laws and regulations. Do not reuse empty containers.

## HEALTH & SAFETY

> **Safety Notice:** Water contamination can cause dangerous pressure build up in isocyanate drums. Caution must be taken when opening containers to slowly release the pressure. Please download the most recent SDS from **foamstudio.com.au** and read prior to using FOAM.STUDIO products.

## DISCLAIMER

The information contained herein is offered without charge and is for use by technically qualified personnel at their own risk. All statements, technical information and recommendations contained herein are based on tests and data which we believe to be reliable, but the accuracy or completeness thereof is not guaranteed, and no warranty of any kind is made with respect thereto.