Asia Polyurethane
亞洲聚氨脂
制造厂私人有限公司
Advancement through Performance & Unity
22 Tuas Crescent Singapore 638716
TEL (65)6861-6688 Fax(65)6861-2277
service@apu.com.sg www.apu.com.sg



# RF 5237/30-15

## PRODUCT DESCRIPTION

RF 5237/30-15 is a fully blended (including blowing agent) rigid polyurethane foam system. This product is designed for insulation panel and pipe applications with a need for a slower reactivity and good surface appearance. This product contains a flame retardant, giving foam with a minimum fire rating of B3 standard according to DIN 4102.

## CHEMICAL PROPERTIES

**RF 5237/30-15A (Polyol Blend)**

| | |
|---|---|
| Appearance | Light Yellow Liquid |
| Specific Gravity @25°C | 1.10 - 1.12 |
| Viscosity @25°C | 1100 - 1500 mPas |

**RF 5237/30-15B (Isocyanate)**

| | |
|---|---|
| Appearance | Dark Brown Liquid |
| Specific Gravity @25°C | 1.22 – 1.26 |
| Viscosity @25°C | 150 – 250 mPas |

## TYPICAL REACTION DATA

**Laboratory**

| | |
|---|---|
| Chemical Temperatures (°C) | 26 |
| Mixing Ratio (A : B) | 100 : 120 |
| Cream Time (s) | 50 – 60 |
| Gel Time (s) | 270 – 330 |
| Free Rise Core Density (kg/m$^3$) | 30 – 33 |

22 Tuas Crescent Singapore 638716
TEL (65)6861-6688 Fax(65)6861-2277
service@apu.com.sg www.apu.com.sg

## TYPICAL PHYSICAL PROPERTIES

| Property | Test Standard | Unit | Value | Value | Value | Value | Value |
|---|---|---|---|---|---|---|---|
| Overall Moulded Density | - | kg/m$^3$ | 49 | 54 | 65 | 76 | 87 |
| Core Density | ASTM D1622 | kg/m$^3$ | 45 | 50 | 60 | 70 | 80 |
| Compressive Strength<br>- Parallel<br>- Perpendicular | ASTM D1621 | kPa | <br>230<br>210 | <br>290<br>285 | <br>470<br>430 | <br>640<br>620 | <br>900<br>885 |
| Dimensional Stability<br>48 hrs exposure @ -15°C<br>@ 100°C | ASTM D2126 | <br>% volume change | <br>-0.3<br>+1.1 | <br>-0.2<br>+0.5 | <br>-0.1<br>+0.3 | <br>-0.1<br>+0.2 | <br>-0.0<br>+0.1 |
| Thermal Conductivity | ASTM C518 | W/m°C | 0.021 | 0.021 | 0.022 | 0.023 | 0.024 |
| Closed Cell Content | ASTM D2856 | % | 91 | 93 | 96 | 96 | 97 |
| Tensile Strength | ASTM D1623 | kPa | | 380 | | | |
| Shear Strength | ASTM C273 | kPa | | 220 | | | |
| Water vapour transmission | ASTM E96 | Perm.in | | 5.0 | | | |
| Water Absorption | ASTM D2842 | % v/v | | 1.1 | | | |
| Horizontal Burn Test<br>- Mean burn length<br>- Mean burn time | BS4735 | <br>mm<br>s | | <br>30<br>25 | | | |

## STORAGE OF MATERIALS

The materials are sensitive to humidity and partially used drums should be tightly sealed to prevent the ingress of moisture.

**RF 5237/30-15A (Polyol Blend)**

The Polyol blend has a shelf life of six months from date of manufacture when stored indoors at temperatures of 20-40°C. The Polyol blend should be thoroughly mixed before use.

**RF 5237/30-15B (Isocyanate)**

The Isocyanate has a shelf life of one year from date of manufacture when stored indoors at temperatures of 20-40°C. Avoid storage temperatures of below 0°C (as some crystallization may occur) or above 50°C (as formation of insoluble solids may occur).

22 Tuas Crescent Singapore 638716
TEL (65)6861-6688 Fax(65)6861-2277
service@apu.com.sg www.apu.com.sg

## GENERAL SAFETY PRECAUTIONS

The following guidelines apply to both Polyol and Isocyanate components.

**Handling**
Contact with skin and eyes must be avoided. Safety goggles, protective gloves and overalls must be worn when working with these chemicals.

**Ventilation**
This product must be used in a well ventilated area.

**First Aid Measures**

| | | |
|---|---|---|
| Excessive Inhalation | : | In the case of excessive inhalation, where the patient feels dizzy or light headed, remove patient from exposure. |
| Skin Contact | : | Wash skin immediately with water, followed by soap and water. If symptoms (irritation or blistering) persist, obtain medical attention. Contaminated clothing should be laundered before re-issue. |
| Eye Contact | : | Irrigate with eyewash solution or clean water, holding the eyelids apart, for at least 10 minutes.<br><br>Obtain medical attention. |
| Ingestion | : | Provided the patient is conscious, wash out mouth with water and give 200-300ml of water to drink. Do not induce vomiting. |

**Further Medical Treatment**

Consult Doctor and accompany patient with this Urethane Information document with symptomatic treatment and supportive therapy as indicated.

22 Tuas Crescent Singapore 638716
TEL (65)6861-6688 Fax(65)6861-2277
service@apu.com.sg www.apu.com.sg

## APPLICATION GUIDELINES

### Facing Preparation

The facings should be clean, dry, and free of grease, oil, solvent or other contaminants, which will interfere with proper adhesion and/or polyurethane insulation quality. In most cases, a primer should be used to enhance the foam adhesion to the substrate. This product can be used with facing temperatures in the range 25°- 45°C. Higher facing temperatures (40° - 45°C) will enhance foam flow and adhesion.

### Equipment Type

This product is suitable for both Low and High Pressure dispensing equipment or hand mix.

### Jig Design

The pressure the rising foam exerts on the jig depends on the degree of overpack, mould temperature, panel thickness, and foam free rise core density. For a system with a free rise core density of 25kg/m$^3$; the following table can be used as a guide:

| Degree of Overpacking | Expansion Pressure (Bar) |
|---|---|
| 1.2 | 0.1 - 0.2 |
| 1.5 | 0.3 - 0.4 |
| 2.0 | 0.7 -0.9 |
| 2.5 | 1.3 - 1.6 |

* Typical overpacking for RF 5237/30-15 will be 1.7 - 2.2

### Demould Properties

Typical demoulding times for this product are as follows:

| Panel Thickness (mm) | Demould Times (mins) |
|---|---|
| 50mm | 35 |
| 100mm | 60 |
| 150mm | 80 |