

# RIGID POLYURETHANE FOAM

## PRODUCT SAFETY INFORMATION

Date of last change: 1017

### Manufacturer, supplier

**Paul Bauder GmbH & Co. KG**  
**Korntaler Landstraße 63**  
**70499 Stuttgart**

URL: [www.bauder.de](http://www.bauder.de)  
Telephone: +49 (0)711 8807-0  
E-mail: [info@bauder.de](mailto:info@bauder.de)

### 1. Identification/trade name:

**1.1 Trade name:** BauderPIR

**1.2 Delivery form:** Boards

**1.3 Product composition:** Thermal insulation made from polyurethane rigid foam

### 2. Chemical characterization

The thermal insulation layer consists of polyurethane rigid foam.

In the presence of catalysts and blowing agents, polyurethane rigid foam is generated through a chemical reaction of polyisocyanate with polyols and through the trimerization of polyisocyanate. The final foam does not contain isocyanates. Pentane is used as the blowing agent.

### 3. Foam properties

Polyurethane rigid foam is a duroplastic foam whose pores are at least 90% closed. The blowing agent is enclosed in the cells. The cell gas produces the excellent thermal properties of the insulation.

Polyurethanerigid foam does not melt.

Insulation material made from polyurethane rigid foam does not release physiologically significant quantities of volatile substances.

**3.1 Foam raw density:** > 28 kg/m<sup>3</sup>

**3.2 Colour:** Yellowish/brownish

**3.3 Odour:** Odourless following ageing

**3.4 Quality monitoring:** BauderPIR is subject to quality monitoring by ÜGPU (Überwachungsgemeinschaft Polyurethan- Hartschaum e.V.).

## 4. Fire behaviour

### 4.1 Fire class

BauderPIR is classified in accordance with the European fire class E as per EN 13501-1.

### 4.2 Thermal decomposition

Like all organic products, polyurethane rigid foam is flammable. In the case of a fire, polyurethane rigid foam disintegrates. No burning particles fall off. During a fire, in addition to soot-like combustion products, steam, carbon monoxide, carbon dioxide, nitrogen oxides, and traces of hydrogen cyanide arise, as during the combustion of all nitrogen-containing organic substances, such as wool. BauderPIR contains phosphorous-based flame retardants. These can also result in combustion products.

### 4.3 Fire-fighting measures

As well as water-foam, dry powder fire extinguishers have proven to be most effective. Self-contained breathing apparatus must be worn when fighting fires.

## 5. Handling and storage

### 5.1 Handling:

Physiologically harmless polyurethane rigid foam dust is created during sawing, grinding, and cutting work. For industrial-scale work, the fitter should protect himself - as for all dusty work - by wearing a suitable dust filter mask (see the breathing protection fact sheet of the occupational insurance association of the chemicals industry). The concentration of dust in the air (general dust limit value in accordance with the Technical Rules for Hazardous Substances, TRGS No. 900) should not exceed the following values:

- 10 mg/m<sup>3</sup> (measured as a respirable fraction)
- 1.25 mg/m<sup>3</sup> (measured as an alveolar fraction)

In order to reliably prevent a dust explosion, suction systems that prevent the accumulation of dust are required in closed rooms.

### 5.2 Storage:

Polyurethane rigid foam must be stored in a dry place. Its surface will yellow if exposed to sunlight for a long time.

## 6. Recycling/disposal

If it cannot be reused, polyurethane rigid foam is taken to municipal waste incinerators for energy recovery. Waste code number in accordance with the European waste catalogue: 170604 (construction site waste)

---

#### Comment:

The above specifications apply for the intended use of the products. They are based on our current state of knowledge and do not constitute the assurance of product features. The user is responsible for observing all applicable laws and regulations.