

Sample Material Data Sheet

# PUR Flexible Foam

Technical Specialist Group PUR Flexible Foam

MAT20180522 • As at May 2018

A safety data sheet according to Article 31 of the EU Regulation 1907/2006 (REACH) is not required for PUR flexible foam. The following information is therefore only provided in compliance with Annex II to the relevant regulation.

**PRODUCT:** Polyurethane Flexible Foam

**TYPE:**

**MANUFACTURER:**

## Chemical characterisation

Polyurethane (PUR) flexible foam is a poly-addition product of isocyanate and polyether or polyester polyol.

## Ingredients

The product contains following ingredients requiring labelling:

## Handling

A period of at least 24 hours should elapse between the production and further processing of PUR flexible foams.

Production and curing processes of PUR flexible foams are subject to separate safety measures.

In the event that dust is produced during the further processing of PUR flexible foams, it is recommended to minimise exposure to the dust with suitable measures. Otherwise, no special measures need to be taken for the further processing of PUR flexible foams.

## First-aid measures

No measures need to be taken.

## Fire safety during processing and storage

For the processing and storage of polyurethane flexible foams, safety regulations such as the following apply:

- General safety directives of the fire insurance provider for factories and commercial installations (ASF)  
VdS-Nr.: 2038, 2008-01
- Sample safety regulations for the manufacturing and processing of plastic foams  
VdS-Nr. 2049, 2008-06
- Electrical installations in plants at risk of fire and risks equivalent thereto, guidelines for loss prevention  
VdS-Nr. 2033, 2007-09
- Guidelines for sprinkler systems, planning and installation,
  - Risk classification (Annex A) foams, foam rubber and foam products
  - Allocation of stored goods (Annex B)
    - B.2.4 Material factor 4
    - B.4.2 Stock materialVdS-Nr. CEA 4001, 2013-08

These regulations, which were drawn up by the fire committee of the Association of Property Insurers together with the insurance committee of the Federation of German Industries, apply to

- storage of slabstock goods,
- separation of the operating departments,
- electrical systems,
- extinguishing devices,
- welding and flame-cutting work as well as working with open flames,
- cutting devices,
- storage of flammable substances,
- smoking ban,
- electric heaters,
- cooperating with the fire brigade,
- instruction of employees.

### VdS documents available from:

Verband der Sachversicherer e.V. (VdS)  
Formularstelle  
Postfach 10 37 53  
50477 Köln

**Measures  
in case of fire**

PUR flexible foam is flammable. All conventional extinguishing agents such as water (also with foam additive), CO<sub>2</sub> or powder extinguishers are suitable for fighting fires. In the event of fire, strong smoke development must be expected. It is therefore essential to wear self-contained breathing protection when fighting fires. Depending on the conditions under which the combustion takes place, the combustion gases contain different amounts of carbon black, carbon monoxide, nitrogen oxides, hydrogen cyanide and organic pyrolysis products, as is the case with the combustion of wool and wood. Flame retardant foam types must also be expected to produce corrosive fumes such as hydrogen chloride.

The discharge of extinguishing water into surface waters or municipal sewage systems is harmless. All components occurring in the extinguishing water are precipitated and decomposed in municipal sewage treatment plants. For flame retardant foam types, it may be necessary to classify the extinguishing water into water hazard classes.

**Measures in the event  
of accidental release**

Does not apply to PUR flexible foam.

**Handling and storage**

No foam specific measures are necessary.

**Exposure controls and  
personal protective equipment**

Exposure controls do not apply to PUR flexible foams. Personal protection equipment is not necessary.

**Physical and chemical  
properties**

Open-cell, flexible foam, weak inherent odour.  
Decomposition temperature: > 180°C  
Ignition temperature: 315°C – 370°C  
Autoignition temperature: 370°C – 427°C

**Stability and reactivity**

The product is dimensionally stable over a temperature range of - 40°C to + 100°C. Open ignition sources must be kept away.

## Toxicology

According to the current state of knowledge, PUR foam is physiologically harmless, i.e. there are no health risks when used as intended.

The basic raw materials diisocyanate and polyalcohol react with each other to form the polymer matrix in which they are fully integrated. Reacted PUR foams do not contain free isocyanate.

No substances listed in the constantly updated SVHC candidate list of the REACH regulation are used in the production of PUR flexible foams.

The modified polysiloxanes (foam stabilizers) used are similar but not identical to silicone oils. These polysiloxanes are also contained in vehicle paints, for example, to ensure flowability during application. They do not lead to wetting disturbances and do not influence the adhesion mediation during the laminating process of technical foams.

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## Ecology

Depending on the type of foam, the product can rot only slowly or not at all.

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## Disposal

According to the European Waste Catalogue, which is also binding in Germany, various key numbers can be used for polyurethane waste.

- 0702 Waste from the production, processing, distribution, use of plastics, synthetic rubber and synthetic fibres
- 070213 Plastic waste
- 1201 Waste from mechanical shaping processes and the physical and mechanical surface treatment of metals and plastics

According to the Closed Substance Cycle Waste Management Act (KrW-/AbfG) and its ordinances, there are no special requirements for disposal. Like all wastes with a low ash content, wastes of PUR flexible foam are very well suited for energetic disposal in order to use the high calorific value.

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## Transport

No special measures need to be taken during transport. The product is not a hazardous good according to ADR, RID, ADN, IMDG and IATA (As at 2015).

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## Regulations

There are currently no special regulations (see points 5 & 7).

**Other notes**

None.

This DOCUMENT was developed in the Specialist Association Foamed Plastics and Polyurethanes by the Technical Specialist Group PUR Flexible Foam.



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