

# Safety data sheet

According to regulation (EC) No. 1907/2006 (REACH)

Date created: 27.03.2015  
Date revised: 15.01.2018



## Badamid® PA12 FM-Z3 S3

### 1. Identification of the substance/mixture and of the company

#### 1.1. Product identifier

**Badamid PA12 FM-Z3 S3**

#### 1.2. Relevant identified uses of the substance or mixture and uses advised against

Relevant identified uses: Polymer

Recommended use: Polymer, for industrial processing only

#### 1.3. Details of the supplier of the safety data sheet

Bada AG  
E-Mail: info@bada.de  
Untere Strut 1  
D-77815 Bühl/Baden

Fon: +49 (0) 72 23-940 77-0 (Mo.–Fr. 08:30–16:30 Uhr)  
Fax: +49 (0) 72 23-940 77-77  
Web: www.bada.de

#### 1.4. Emergency telephone number

Giftinformationszentrum-Nord – Tel.: +49 (0) 551-19240

### 2. Hazards Identification

#### 2.1. Classification of the substance or mixture



GHS08: Health hazard

STOT RE Cat. 2 H373: May cause damage to organs from prolonged or repeated exposure..

#### 2.2. Label elements

Subject to labelling according to GHS criteria.



GHS08: Health hazard

Signal word: **Caution**

#### Components requiring mandatory labelling:

N-butylbenzenesulfonamide

#### Hazards:

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H373: May cause damage to organs after prolonged or repeated exposure

### Safety instructions:

P260 Dust / Smoke / Gas / Fog / Steam / Aerosol not inhale

P314 In case of discomfort seek medical advice / seek medical advice

P501 Dispose of contents / container in accordance with local/regional/national/international regulations

### 2.3. Other hazards

According to Regulation (EC) No 1272/2008 [CLP]

No specific dangers known, if the regulations/notes for storage and handling are considered.

## 3. Composition/Information on Ingredients

### 3.1. Substances

Not applicable

### 3.2. Mixtures

#### Chemical characterization:

Preparation based on polyamide 12 (PA12, CAS No. 25038-74-8), impact modifier, processing aids, possibly pigments

>PA12-HIP<

#### Hazardous ingredients (GHS):

According to regulation 1272/2008/EC

N-butylbenzene sulfonamide (BBSA)

Content (w/w): 10-≤15% (mass percentage)

CAS No.: 3622-84-2

EINECS-No.: 222-823-6



STOT RE Cat. 2, H373

Aquatic Chronic Cat. 3, H412

## 4. First-Aid Measures

### 4.1. Description of first aid measures

Avoid contact with the skin, eyes and clothing.

#### If inhaled:

If difficulties occur after dust has been inhaled, remove to fresh air and seek medical attention.

#### On skin contact with polymer melt:

- Cool with water
- Do not use force or solvents to remove product incrustations from affected skin areas
- Medical treatment necessary

#### On contact with eyes:

If irritation develops, seek medical attention. In case of contact with the eyes, rinse immediately for at least 15 minutes with plenty of water.

#### On ingestion:

Rinse mouth and then drink plenty of water. If difficulties occur: Seek medical attention.

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### 4.2. Most important symptoms and effects, both acute and delayed

Symptoms: No significant reaction of the human body to the product known.

Hazards: No hazard is expected under intended use and appropriate handling

### 4.3. Indication of any immediate medical attention and special treatment needed

Treatment: Treat symptomatically

## 5. Fire-Fighting Measures

### 5.1. Extinguishing media

Water spray, foam, dry powder, CO<sub>2</sub>

### 5.2. Special hazards arising from the substance or mixture

Avoid thermal decomposition (see section 9 for decomposition temperature).

During thermal decomposition, e. g. due to overheating during processing or in the event of fire or smoldering, gases and vapours that are harmful to health may be produced. See "Hazardous decomposition products".

#### Hazardous decomposition products:

Mainly carbon monoxide, carbon dioxide and nitrogen oxides.

Furthermore hydrocarbons (aliphatic and aromatic), amines, nitriles, aldehydes, ketones, acids, ammonia, hydrogen cyanide.

Under certain fire conditions, traces of other toxic substances cannot be excluded. The formation of further decomposition products depends on the fire conditions.

### 5.3. Advice for fire-fighters

#### Special protective equipment:

Wear a self-contained breathing apparatus, as toxic gases and carbon monoxide may be formed.

Wear protective clothing and face protection.

Dispose of fire debris and contaminated extinguishing water in accordance with official regulations.

## 6. Accidental Release Measures

### 6.1. Personal precautions, protective equipment and emergency procedures

Granules: Special danger of slipping by leaking/spilling product. Take up mechanically

Schmelze: Danger of exothermal decomposition. Cool down using water.

### 6.2. Environmental precautions

No special precautions necessary.

### 6.3. Methods and material for containment and cleaning up

For small amounts: Pick up with suitable appliance and dispose of.

For large amounts: Pick up with suitable appliance and dispose of.

### 6.4. Reference to other sections

Information regarding exposure controls/personal protection and disposal considerations can be found in section 8 and 13.

## 7. Handling and Storage

### 7.1. Precautions for safe handling

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Take precautionary measures against static discharges. Do not breathe dust. When the product is chopped or ground, dust explosion regulations have to be considered. Use closed systems. Provide exhaust ventilation. Do not breathe fumes.

### 7.2. Conditions for safe storage, including any incompatibilities

Protect against moisture. Suitable materials for containers: Polyethylen.

### 7.3. Specific end use(s)

For the relevant identified use(s) listed in Section 1 the advice mentioned in this section 7 is to be observed.

## 8. Exposure Controls/Personal Protection

### 8.1. Control parameters

Components with occupational exposure limits:

#### **N-butylbenzenesulfonamide**

CAS No.: 3622-84-2

DNEL (worker, exposition route dermal absorption): 0.23 mg/kg body weight/day

DNEL (worker, exposition path inhalation admission): 1.63 mg/m<sup>3</sup>

DNEL (general, oral exposure pathway): 0.083 mg/kg body weight/day

DNEL (general, exposure pathway inhaled uptake): 0.29 mg/m<sup>3</sup>

PNEC (STP) 60 mg/l

PNEC (Sediment (fresh water)) 0.213 mg/kg Sediment

PNEC (periodic release) 0.37 mg/l

PNEC (sea water) 0.0037 mg/l

PNEC (Sediment (sea water)) 0.0213 mg/kg Sediment

PNEC (floor) 0.27 mg/kg

PNEC (fresh water) 0.037 mg/l

### 8.2. Exposure controls

Personal protective equipment:

Respiratory protection: Breathing protection if breathable aerosols/dust are formed. Wear respiratory protection (type P3) if ventilation is inadequate.

Hand protection: Use additional heat protection gloves when handling hot molten masses (EN 407), e.g. of textile or leather.

Eye protection: Safety glasses with side-shields (frame goggles) (e.g. EN 166)

General safety and hygiene measures: Do not eat, drink or smoke at work station. Wash hands and uncovered skin after work.

## 9. Physical and Chemical Properties

<b>Form:</b>	Granules
<b>Color:</b>	various, depending on the colourant
<b>Odour:</b>	odourless
<b>Odour threshold:</b>	not applicable
<b>Melting temperature:</b>	approx. 170 - 180 °C
<b>Boiling range:</b>	not applicable, product decomposes
<b>Flash point:</b>	not applicable
<b>Evaporation rate:</b>	not applicable
<b>Flammability</b>	not applicable

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<b>Lower explosion limit:</b>	not applicable, product decomposes
<b>Explosion risk:</b>	no risk of explosion
<b>Decomposition temperature:</b>	> 300 °C
<b>Ignition temperature :</b>	> 400 °C
<b>Self ignition temperature:</b>	no self-igniting
<b>Relative density:</b>	no data available
<b>Relative vapor density:</b>	not applicable
<b>Vapor pressure:</b>	BBSA: 0.0397 mPa
<b>Viscosity:</b>	not applicable
<b>Solubility in water:</b>	insoluble
<b>pH value:</b>	not applicable
<b>Partitioning coefficient n-octanol/H<sub>2</sub>O</b>	2,05 log POW (BBSA)
<b>Viscosity, kinematic:</b>	not applicable, the product is a solid
<b>Density:</b>	1,00 - 1,50 g/cm <sup>3</sup>
<b>Bulk density:</b>	approx. 700 kg/m <sup>3</sup>

## 10. Stability and Reactivity

### 10.1. Reactivity

No hazardous reactions if stored and handled as prescribed/indicated.

### 10.2. Chemical stability

The product is stable if stored and handled as prescribed/indicated.

### 10.3. Possibility of hazardous reactions

No hazardous reactions known if stored and handled as prescribed/indicated.

### 10.4. Conditions to avoid

Avoid temperatures above decomposition temperature (cf. Section 9). Upon thermal decomposition, e.g. by overheating during processing, or in case of fire, hazardous gases and vapors may be formed. Cf. "hazardous decomposition products".

### 10.5. Incompatible materials

No substances known that should be avoided.

### 10.6. Hazardous decomposition products:

Mainly carbon monoxide and nitrogen oxides.

Further hydrocarbons (aliphatic and aromatic), amines, nitriles, aldehydes, ketones, acids, ammonia, hydrogen cyanide, ε-Caprolactam.

Under special circumstances, traces of other toxic components cannot be excluded. Formation of other decomposition products depends on burning conditions.

## 11. Toxicological Information

### Acute toxicity:

Contact with hot melt can cause burns.

### **N-butylbenzenesulfonamide**

CAS No.: 3622-84-2

LD50 (oral, rat): 2070 mg/kg

LD50 (dermal, rat): >2000 mg/kg

LC50/4h (inhalative, rat): >4 mg/l.

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### Irritation:

Based on our experience and the information available, no adverse health effects are expected if handled as recommended with suitable precautions for designated uses.

### Contact with eyes:

Eye contact with granules may cause eye irritation.

### Respiratory/Skin sensitization:

Based on our experience and the information available, no adverse health effects are expected if handled as recommended with suitable precautions for designated uses.

### Germ cell mutagenicity:

Based on our experience and the information available, no adverse health effects are expected if handled as recommended with suitable precautions for designated uses.

### Carcinogenicity:

Based on our experience and the information available, no adverse health effects are expected if handled as recommended with suitable precautions for designated uses.

### Reproductive toxicity:

Based on our experience and the information available, no adverse health effects are expected if handled as recommended with suitable precautions for designated uses.

### Specific target organ toxicity (single exposure):

Based on our experience and the information available, no adverse health effects are expected if handled as recommended with suitable precautions for designated uses.

### Specific target organ toxicity (repeated exposure):

May damage the liver  
NOAEL = 50 mg/kg/day (28 days, for men and women)

### Aspiration hazard:

No aspiration hazard expected.

### Other relevant toxicity information:

None.

## 12. Ecological Information

### 12.1. Toxicity

Assessment of aquatic toxicity:

**N-butylbenzolsulfonamid**

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EC50 (48 h): 56 mg/l (daphnia magna)  
EC50 (72 h): 49 mg/l (selenastrum capricornutum)  
LC50 (96 h): >38 mg/l (danio rerio)

### 12.2. Persistence and degradability

Experience shows this product to be inert in water and non-degradable. The product is virtually insoluble in water and can thus be separated from water mechanically in suitable effluent treatment plants.

### 12.3. Bioaccumulative potential

The product will not be readily bioavailable due to its consistency and insolubility in water.

### 12.4. Mobility in soil

Study scientifically not justified due to product consistency and insolubility in water.

### 12.5. Results of PBT and vPvB assessment

The product is not persistent/bioaccumulative/toxic.

## 13. Disposal Considerations

Check for possible recycling. The preparation can be molten and processed several times. Consider sorting accuracy and cleanliness of plastics.

Incinerate in suitable incineration plant, or landfill as consumer waste, observing local authority regulations.

Waste code according to European waste catalogue:

070213 Waste plastic

Contaminated packaging:

Packs must be completely emptied. Completely emptied packagings can be given for recycling.

## 14. Transport Information

### Land transport

ADR / RID

Not classified as a dangerous good under transport regulations.

UN number:	Not applicable
UN proper shipping name:	Not applicable
Transport hazard class(es):	Not applicable
Packing group:	Not applicable
Environmental hazards:	Not applicable
Special precautions for user	None known

### Inland waterway transport

ADN

Not classified as a dangerous good under transport regulations.

UN number:	Not applicable
UN proper shipping name:	Not applicable
Transport hazard class(es):	Not applicable
Packing group:	Not applicable
Environmental hazards:	Not applicable
Special precautions for user	None known
Transport in inland waterway vessel:	Not evaluated

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### Sea transport

IMDG

Not classified as a dangerous good under transport regulations.

UN number:	Not applicable
UN proper shipping name:	Not applicable
Transport hazard class(es):	Not applicable
Packing group:	Not applicable
Environmental hazards:	Not applicable
Special precautions for user	None known
Transport in inland waterway vessel:	Not evaluated

### Air transport

IATA / ICAO

Not classified as a dangerous good under transport regulations.

UN number:	Not applicable
UN proper shipping name:	Not applicable
Transport hazard class(es):	Not applicable
Packing group:	Not applicable
Environmental hazards:	Not applicable
Special precautions for user	None known

### Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code

Regulation:	Not evaluated
Shipment approved:	Not evaluated
Pollution name:	Not evaluated
Pollution category:	Not evaluated
Ship Type:	Not evaluated

## 15. Regulatory Information

### 15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

National regulations (Annex 1 of VwVwS, Germany):

Water hazard class WGK (2) [self-assessment]

### 15.2. Chemical Safety Assessment

Chemical Safety Assessment not required.

## 16. Other Information

Full text of the hazard warnings referred to in section 2 and section 3:

H373: May cause damage to organs after prolonged or repeated exposure

H412: Harmful to aquatic organisms with long-term effects.

Do not use parts made of this material for medical applications where they are not suitable for use in medical devices.

permanent implantation into the human body.



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The information in this safety data sheet corresponds to the best of our knowledge at the time of printing. They are intended to provide information for safe handling of the product specified in this safety data sheet during storage, processing, transport and disposal. The information is not transferable to other products and does not constitute a product specification.

It is the responsibility of the fabricators to determine the suitability of the material for a specific purpose.