

# Safety data sheet

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BASF Safety data sheet according to Regulation (EC) No. 1907/2006

Date / Revised: 27.08.2009

Version: 3.1

Product: **Caffeine Anhydrous Powder**

(30057897/SDS\_GEN\_EU/EN)

Date of print 28.08.2009

## 1. Substance/preparation and company identification

### Caffeine Anhydrous Powder

Use: food additive(s), Pharmaceutical agent

Company:

BASF SE

67056 Ludwigshafen

GERMANY

Operating Division Care Chemicals

Telephone: +49 621 60-48434

Telefax number: +49 621 60 66-48434

E-mail address: EM-Masterdata@basf.com

Emergency information:

International emergency number:

Telephone: +49 180 2273-112

## 2. Hazard identification

**According to REGULATION (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures**

Label elements and precautionary statement:

Pictogram:



Signal Word:

| Warning

Hazard Statement:

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| Harmful if swallowed.

Precautionary Statements (Prevention):

| Do not eat, drink or smoke when using this product. Wash with plenty of water and soap thoroughly after handling.

Precautionary Statements (Response):

| Call a POISON CENTER or doctor/physician if you feel unwell. IF SWALLOWED: rinse mouth.

Precautionary Statements (Disposal):

| Dispose of contents/container to hazardous or special waste collection point.

Classification of the substance and mixture:

| Acute toxicity: Cat. 4 (oral)

#### **Possible Hazards**

Harmful if swallowed.

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### **3. Composition/information on ingredients**

#### Chemical nature

caffeine

CAS Number: 58-08-2

EC-Number: 200-362-1

INDEX-Number: 613-086-00-5

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### **4. First-Aid Measures**

General advice:

Remove contaminated clothing.

If inhaled:

Keep patient calm, remove to fresh air, seek medical attention.

On skin contact:

Wash thoroughly with soap and water.

On contact with eyes:

Immediately wash affected eyes for at least 15 minutes under running water with eyelids held open, consult an eye specialist.

On ingestion:

Rinse mouth immediately and then drink plenty of water, seek medical attention.

Note to physician:

Treatment: Treat according to symptoms (decontamination, vital functions), no known specific antidote.

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## 5. Fire-Fighting Measures

Suitable extinguishing media:  
water, dry extinguishing media, carbon dioxide, foam

Special protective equipment:  
Wear a self-contained breathing apparatus.

Further information:  
Collect contaminated extinguishing water separately, do not allow to reach sewage or effluent systems. Dispose of fire debris and contaminated extinguishing water in accordance with official regulations.

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## 6. Accidental Release Measures

Personal precautions:  
Avoid dust formation. Ensure adequate ventilation.

Environmental precautions:  
Do not discharge into drains/surface waters/groundwater. Discharge into the environment must be avoided.

Methods for cleaning up or taking up:  
For small amounts: Pick up with suitable appliance and dispose of.  
For large amounts: Pick up with suitable appliance and dispose of.  
Dispose of absorbed material in accordance with regulations.

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## 7. Handling and Storage

### Handling

Avoid the formation and deposition of dust.

Protection against fire and explosion:  
The product is capable of dust explosion. Prevent electrostatic charge - sources of ignition should be kept well clear - fire extinguishers should be kept handy.

### Storage

Further information on storage conditions: Keep container tightly closed. Protect contents from the effects of light.

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## 8. Exposure controls and personal protection

### Personal protective equipment

#### Respiratory protection:

Breathing protection if breathable aerosols/dust are formed. Particle filter with medium efficiency for solid and liquid particles (e.g. EN 143 or 149, Type P2 or FFP2)

#### Hand protection:

Suitable chemical resistant safety gloves (EN 374) also with prolonged, direct contact (Recommended: Protective index 6, corresponding > 480 minutes of permeation time according to EN 374): E.g. nitrile rubber (0.4 mm), chloroprene rubber (0.5 mm), butyl rubber (0.7 mm) and other  
Supplementary note: The specifications are based on tests, literature data and information of glove manufacturers or are derived from similar substances by analogy. Due to many conditions (e.g. temperature) it must be considered, that the practical usage of a chemical-protective glove in practice may be much shorter than the permeation time determined through testing.

#### Eye protection:

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

#### Body protection:

Body protection must be chosen depending on activity and possible exposure, e.g. apron, protecting boots, chemical-protection suit (according to EN 14605 in case of splashes or EN ISO 13982 in case of dust).

#### General safety and hygiene measures:

Wearing of closed work clothing is recommended. Avoid contact with the skin, eyes and clothing. Handle in accordance with good industrial hygiene and safety practice.

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## 9. Physical and Chemical Properties

Form:	powder	
Colour:	white	
Odour:	almost odourless	
pH value:	5.5 - 6.5 (10 g/l, 20 °C)	
melting range:	approx. 235 - 239 °C	
Flash point:	not applicable	
Flammability:	not readily ignited	
Ignition temperature:	> 600 °C	(DIN 51794)
Self ignition:		not self-igniting
Fire promoting properties:	not fire-propagating	(other)
Bulk density:	approx. 360 kg/m <sup>3</sup>	
Solubility in water:	20 g/l (20 °C)	

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Partitioning coefficient n-octanol/water (log Pow): -0.091 (Directive 92/69/EEC, A.8)  
(23 °C)  
Literature data.

Viscosity, dynamic:  
not applicable

Molar mass: 194.19 g/mol

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## 10. Stability and Reactivity

Thermal decomposition: No decomposition if stored and handled as prescribed/indicated.

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

Hazardous decomposition products:  
No hazardous decomposition products if stored and handled as prescribed/indicated.

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## 11. Toxicological Information

### Acute toxicity

Experimental/calculated data:  
LD50 rat (oral): 367 mg/kg (BASF-Test)

LC50 rat (by inhalation): approx. 4.94 mg/l 4 h (OECD Guideline 403)

LD50 rat (dermal): > 2,000 mg/kg (BASF-Test)

### Irritation

Assessment of irritating effects:  
Not irritating to the skin. Not irritating to the eyes.

Experimental/calculated data:  
Skin corrosion/irritation rabbit: non-irritant (OECD Guideline 404)

Serious eyes damages/irritation rabbit: non-irritant (OECD Guideline 405)

### Respiratory/Skin sensitization

Assessment of sensitization:  
Skin sensitizing effects were not observed in animal studies.

Experimental/calculated data:  
Mouse Local Lymph Node Assay (LLNA) : Non-sensitizing. (OECD Guideline 429)

### **Germ cell mutagenicity**

Assessment of mutagenicity:

The substance was mutagenic in various test systems with microorganisms and cell cultures; however, these results could not be confirmed in tests with mammals.

### **Reproductive toxicity**

Assessment of reproduction toxicity:

In high doses a potential to impair fertility cannot be fully excluded.

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## **12. Ecological Information**

### **Ecotoxicity**

Assessment of aquatic toxicity:

Acutely harmful for aquatic organisms. The inhibition of the degradation activity of activated sludge is not anticipated when introduced to biological treatment plants in appropriate low concentrations.

Toxicity to fish:

LC50 (96 h) 87 mg/l, *Leuciscus idus* (DIN 38412 Part 15, static)

The details of the toxic effect relate to the nominal concentration.

Aquatic invertebrates:

EC50 (48 h) 182 mg/l, *Daphnia magna* (Directive 79/831/EEC, static)

The details of the toxic effect relate to the nominal concentration.

Aquatic plants:

EC50 (72 h) > 100 mg/l (growth rate), *Scenedesmus subspicatus* (OECD Guideline 201, static)

The details of the toxic effect relate to the nominal concentration.

Microorganisms/Effect on activated sludge:

EC50 (17 h) 3,490 mg/l, *Pseudomonas putida* (DIN 38412 Part 8, aerobic)

EC20 (180 min) approx. 900 mg/l, activated sludge (OECD Guideline 209, aerobic)

The product has not been tested. The statement has been derived from products of a similar structure and composition.

### **Persistence and degradability**

Assessment biodegradation and elimination (H<sub>2</sub>O):

Readily biodegradable (according to OECD criteria). The product has not been tested. The statement has been derived from products of a similar structure and composition.

Elimination information:

90 - 100 % DOC reduction (22 d) (OECD 301 A (new version)) (aerobic, activated sludge, domestic)

Analogous: Assessment derived from products with similar chemical character.

### **Bioaccumulation potential**

Bioaccumulation potential:

Accumulation in organisms is not to be expected.

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### 13. Disposal Considerations

Observe national and local legal requirements.

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### 14. Transport Information

#### Land transport

ADR

Not classified as a dangerous good under transport regulations

RID

Not classified as a dangerous good under transport regulations

#### Inland waterway transport

ADNR

Not classified as a dangerous good under transport regulations

#### Sea transport

IMDG

Not classified as a dangerous good under transport regulations

#### Air transport

IATA/ICAO

Not classified as a dangerous good under transport regulations

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### 15. Regulatory Information

#### Regulations of the European union (Labelling) / National legislation/Regulations

EC-Number: 200-362-1

as in Annex I of Directive 67/548/EEC:

Hazard symbol(s)

Xn

Harmful.

R-phrases(s)

R22

Harmful if swallowed.

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S-phrase(s)

S2

Keep out of the reach of children.

### **Other regulations**

as in Annex I of Directive 67/548/EEC

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## **16. Other Information**

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Vertical lines in the left hand margin indicate an amendment from the previous version.

The data contained in this safety data sheet are based on our current knowledge and experience and describe the product only with regard to safety requirements. The data do not describe the product's properties (product specification). Neither should any agreed property nor the suitability of the product for any specific purpose be deduced from the data contained in the safety data sheet. It is the responsibility of the recipient of the product to ensure any proprietary rights and existing laws and legislation are observed.