

# Safety data sheet

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

Date / Revised: 12.04.2011

Version: 2.2

Product: **Ibuprofen 50**

(ID no. 30076166/SDS\_GEN\_EU/EN)

Date of print 13.04.2011

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

### Product identifier

## Ibuprofen 50

Chemical name: Ibuprofen

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

Relevant identified uses: Pharmaceutical agent

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

Company:

BASF SE

67056 Ludwigshafen

GERMANY

Operating Division Nutrition and Health

Telephone: +49 621 60-48434

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

### Emergency telephone number

International emergency number:

Telephone: +49 180 2273-112

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## 2. Hazards Identification

### Label elements

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

Globally Harmonized System, EU (GHS)

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Pictogram:



Signal Word:

Warning

Hazard Statement:

H319 Causes serious eye irritation.  
 H302 Harmful if swallowed.  
 H335 May cause respiratory irritation.

Precautionary Statements (Prevention):

P271 Use only outdoors or in a well-ventilated area.  
 P280d Wear eye/face protection.  
 P260i Do not breathe dust/gas/mist/vapours.  
 P270 Do not eat, drink or smoke when using this product.  
 P264 Wash with plenty of water and soap thoroughly after handling.

Precautionary Statements (Response):

P312 Call a POISON CENTER or doctor/physician if you feel unwell.  
 P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
 P304 + P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.  
 P301 + P330 IF SWALLOWED: rinse mouth.  
 P337 + P311 If eye irritation persists: Call a POISON CENTER or doctor/physician.

Precautionary Statements (Storage):

P403 + P233 Store in a well-ventilated place. Keep container tightly closed.  
 P405 Store locked up.

Precautionary Statements (Disposal):

P501 Dispose of contents/container to hazardous or special waste collection point.

According to Directive 67/548/EEC or 1999/45/EC

Directive 1999/45/EC ('Preparation Directive')

Hazard symbol(s)

Xn Harmful.



R-phrases(s)

R36/37 Irritating to eyes and respiratory system.  
 R22 Harmful if swallowed.

S-phrases(s)

S51 Use only in well-ventilated areas.

## Classification of the substance or mixture

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

Acute toxicity: Cat. 4 (oral)  
Serious eye damage/eye irritation: Cat. 2  
Specific target organ toxicity following single exposure: Cat. 3 (irritating to respiratory system)

### According to Directive 67/548/EEC or 1999/45/EC

Possible Hazards:  
Harmful if swallowed.  
Irritating to eyes and respiratory system.  
The product is under certain conditions capable of dust explosion.

## Other hazards

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

Other Hazards (GHS):  
The product is under certain conditions capable of dust explosion.

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## 3. Composition/Information on Ingredients

### Substances

#### Chemical nature

Ibuprofen (Content (W/W): 100 %)  
CAS Number: 15687-27-1  
EC-Number: 239-784-6

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## 4. First-Aid Measures

### Description of first aid measures

Remove contaminated clothing. Remove affected person from danger area. First aid personnel should pay attention to their own safety. If the patient is likely to become unconscious, place and transport in stable sideways position (recovery position). Show container, label and/or safety data sheet to physician.

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. If irritation develops, seek immediate medical attention.

On ingestion:

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

### **Most important symptoms and effects, both acute and delayed**

Symptoms: headache, dizziness

### **Indication of any immediate medical attention and special treatment needed**

Treatment: Symptomatic treatment (decontamination, vital functions).

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## **5. Fire-Fighting Measures**

### **Extinguishing media**

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

### **Special hazards arising from the substance or mixture**

Evolution of fumes/fog.

### **Advice for fire-fighters**

Special protective equipment:  
Wear self-contained breathing apparatus and chemical-protective clothing.

Further information:

Do not allow to enter drains or waterways. Dispose of fire debris and contaminated extinguishing water in accordance with official regulations.

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## **6. Accidental Release Measures**

### **Personal precautions, protective equipment and emergency procedures**

Ensure adequate ventilation. Avoid dust formation. Avoid contact with the skin, eyes and clothing.

### **Environmental precautions**

Do not discharge into drains/surface waters/groundwater.

### **Methods and material for containment and cleaning up**

For small amounts: Contain with dust binding material and dispose of.

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

Avoid raising dust. Wear suitable protective equipment.

### **Reference to other sections**

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

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## **7. Handling and Storage**

### **Precautions for safe handling**

Ensure adequate ventilation. Avoid the formation and deposition of dust.

Protection against fire and explosion:

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Prevent electrostatic charge - sources of ignition should be kept well clear - fire extinguishers should be kept handy.

Dust explosion class: Dust explosion class 2 (Kst-value 200 up to 300 bar m s-1).

### **Conditions for safe storage, including any incompatibilities**

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

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## **8. Exposure Controls/Personal Protection**

### **Control parameters**

#### **Exposure controls**

##### 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

Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin and eyes. Remove contaminated clothing. Hands and/or face should be washed before breaks and at the end of the shift. Avoid inhalation of dusts.

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## **9. Physical and Chemical Properties**

### **Information on basic physical and chemical properties**

Form:	crystalline, powder
Colour:	white
Odour:	characteristic
Odour threshold:	not determined
pH value:	not determined

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melting range:	75 - 77 °C	
Boiling range:	154 - 157 °C (5.32 hPa) Literature data.	(other)
Flash point:	not applicable	
Evaporation rate:	negligible	
Flammability:	does not ignite	
Lower explosion limit:	30 g/m <sup>3</sup>	
Upper explosion limit:	not determined	
Ignition temperature:	not applicable	
Vapour pressure:	0.000012 hPa (25 °C) Literature data.	
Relative density:	Study does not need to be conducted.	
Relative vapour density (air):	not relevant	
Solubility in water:	Literature data. 0.01139 g/l (25 °C)	
Partitioning coefficient n-octanol/water (log Kow):	3.87 (25 °C) Literature data.	
Self ignition:	not self-igniting	Test type: Spontaneous self-ignition at room-temperature.
Thermal decomposition:	No decomposition if stored and handled as prescribed/indicated.	
Viscosity, dynamic:	not relevant	
Viscosity, kinematic:	not applicable	
Explosion hazard:	not explosive	(other)
Fire promoting properties:	not fire-propagating	(other)

**Other information**

Minimum ignition energy:	3 - 5 mJ	
Bulk density:	200 - 600 kg/m <sup>3</sup> Literature data.	
pKA:	4.91	(other)
adsorption/water - soil:	log KOC: 2.6 Adsorption to solid soil phase is expected.	(calculated)

**10. Stability and Reactivity****Reactivity**

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Formation of  
flammable gases:

Remarks:

Forms no flammable gases in the  
presence of water.

### **Chemical stability**

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

### **Possibility of hazardous reactions**

The product is chemically stable.

### **Conditions to avoid**

Avoid dust formation. Avoid electro-static charge.

### **Incompatible materials**

Substances to avoid:  
oxidizing agents, strong alkalies

### **Hazardous decomposition products**

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

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## **11. Toxicological Information**

### **Information on toxicological effects**

#### Acute toxicity

Assessment of acute toxicity:  
Harmful if swallowed.

Experimental/calculated data:  
LD50 rat (oral): 1,600 mg/kg

#### Irritation

Assessment of irritating effects:  
Irritating to eyes and respiratory system.

Experimental/calculated data:  
Skin corrosion/irritation: mildly irritating

Serious eye damage/irritation: Irritant.

#### Respiratory/Skin sensitization

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

Experimental/calculated data:  
Guinea pig maximization test guinea pig: Non-sensitizing. (OECD Guideline 406)

### Germ cell mutagenicity

#### Assessment of mutagenicity:

The substance was not mutagenic in bacteria. The substance was not mutagenic in a test with mammals.

### Carcinogenicity

#### Assessment of carcinogenicity:

In long-term animal studies in which the substance was given in high doses by feed, a carcinogenic effect was not observed.

### Reproductive toxicity

#### Assessment of reproduction toxicity:

The results of animal studies gave no indication of a fertility impairing effect.

### Developmental toxicity

#### Assessment of teratogenicity:

No indications of a developmental toxic / teratogenic effect were seen in animal studies.

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## 12. Ecological Information

### **Toxicity**

#### Assessment of aquatic toxicity:

Acutely harmful for aquatic organisms.

#### Toxicity to fish:

LC50 (96 h) 173 mg/l, *Lepomis macrochirus* (Screening test, static)

Nominal concentration.

no data

#### Aquatic invertebrates:

EC50 (48 h) 29.6 mg/l, *Daphnia magna* (Daphnia test acute)

#### Aquatic plants:

EC50 (72 h) 315 mg/l (growth rate), *Scenedesmus subspicatus* (Guideline 92/69/EEC, C.3, static)

The details of the toxic effect relate to the nominal concentration. The product has not been tested. The statement has been derived from products of a similar structure or composition.

#### Microorganisms/Effect on activated sludge:

EC50 (20 min) 120.1 mg/l, bacteria (soil)

#### Chronic toxicity to aquatic invertebrates:

No observed effect concentration (21 d), 20 mg/l, *Daphnia magna* (other, semistatic)

### **Persistence and degradability**

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

Not readily biodegradable (by OECD criteria). Moderately/partially biodegradable.

#### Elimination information:

30 - 40 % BOD of the ThOD (28 d) (OECD 301D; EEC 92/69, C.4-E) (aerobic, activated sludge)

### **Bioaccumulative potential**

Bioaccumulation potential:

Because of the n-octanol/water distribution coefficient (log Pow) accumulation in organisms is possible.

### **Mobility in soil (and other compartments if available)**

Assessment transport between environmental compartments:

The substance will not evaporate into the atmosphere from the water surface.

Adsorption to solid soil phase is expected.

### **Results of PBT and vPvB assessment**

According to Annex XIV of Regulation (EC) No.1907/2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH): The product does not contain a substance fulfilling the PBT (persistent/bioaccumulative/toxic) criteria or the vPvB (very persistent/very bioaccumulative) criteria. Self classification

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## **13. Disposal Considerations**

### **Waste treatment methods**

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**

ADN

Not classified as a dangerous good under transport regulations

### **Sea transport**

IMDG

Not classified as a dangerous good under transport regulations

### **Air transport**

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IATA/ICAO

Not classified as a dangerous good under transport regulations

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## 15. Regulatory Information

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

If other regulatory information applies that is not already provided elsewhere in this safety data sheet, then it is described in this subsection.

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## 16. Other Information

Any other intended applications should be discussed with the manufacturer. Corresponding occupational protection measurements must be followed.

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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.