

**PENFLUFEN FS 50**Version 1 / EU
102000017285

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Revision Date: 24.09.2009

Print Date: 30.03.2010

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING**Product information**

Trade name PENFLUFEN FS 50
Product code (UVP) 79115911
Usage seed treatment
Company Bayer CropScience AG
Alfred-Nobel-Straße 50
40789 Monheim am Rhein
Germany

Telefax +49(0)2173-38-7394
Responsible Department Material and Transport Safety Management
+49(0)2173-38-3409/3189 (during business hours only)
Email: INFO.EHS@bayercropscience.com

Emergency telephone number +49(0)2133-51-4233 (Sicherheitszentrale Dormagen, Bayer AG)

2. HAZARDS IDENTIFICATION**Risk advice to man and the environment**

Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

3. COMPOSITION/INFORMATION ON INGREDIENTS**Chemical nature**Flowable concentrate for seed treatment (FS)
Penflufen 50 g/l**Hazardous components**

Chemical Name	CAS-No. / EC-No.	Symbol(s)	R-phrases(s)	Concentration [%]
Penflufen	494793-67-8	N	R50/53	4,81

For the full text of the R-phrases mentioned in this Section, see Section 16.

4. FIRST AID MEASURES**General advice**

Move out of dangerous area. Place and transport victim in stable position (lying sideways).
Remove contaminated clothing immediately and dispose of safely.

Skin contact

Wash off immediately with soap and plenty of water. If symptoms persist, call a physician.

Eye contact

Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes.
Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Get medical attention if irritation develops and persists.



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Ingestion

Rinse mouth. Do NOT induce vomiting. Call a physician or poison control center immediately.

Notes to Physician

Treatment

Treat symptomatically.

Gastric lavage is not normally required. However, if a significant amount (more than a mouthful) has been ingested, administer activated charcoal and sodium sulphate.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Extinguishing media which should not be used for safety reasons

High volume water jet

Specific hazards during fire fighting

In the event of fire the following may be released:

Hydrogen cyanide (hydrocyanic acid)

Hydrogen fluoride (HF)

Carbon monoxide (CO)

Nitrogen oxides (NO_x)

Special protective equipment for fire-fighters

In the event of fire and/or explosion do not breathe fumes.

In the event of fire, wear self-contained breathing apparatus.

Further information

Contain the spread of the fire-fighting media.

Do not allow run-off from fire fighting to enter drains or water courses.

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions

Avoid contact with spilled product or contaminated surfaces.

Use personal protective equipment.

Environmental Precautions

Do not allow to get into surface water, drains and ground water.

Methods for cleaning up

Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder).

Clean contaminated floors and objects thoroughly, observing environmental regulations.

Keep in suitable, closed containers for disposal.

Additional Advice

Information regarding safe handling, see section 7.

Information regarding personal protective equipment, see section 8.

Information regarding waste disposal, see section 13.

7. HANDLING AND STORAGE

Handling

Advice on safe handling

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Use only in area provided with appropriate exhaust ventilation.

Storage

Requirements for storage areas and containers

Keep containers tightly closed in a dry, cool and well-ventilated place.

Store in original container.

Store in a place accessible by authorized persons only.

Advice on common storage

Keep away from food, drink and animal feedingstuffs.

Temperature tolerance	min.	max.
	-10 °C	40 °C

Suitable materials

HDPE (high density polyethylene)

8. EXPOSURE CONTROLS/PERSONAL PROTECTION**Personal protective equipment**

In normal use and handling conditions please refer to the label and/or leaflet. In all other cases the following recommendations would apply.

Respiratory Protection	No personal respiratory protective equipment normally required. Respiratory protection should only be used to control residual risk of short duration activities, when all reasonably practicable steps have been taken to reduce exposure at source e.g. containment and/or local extract ventilation. Always follow respirator manufacturer's instructions regarding wearing and maintenance.
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Hand protection	Wear CE Marked (or equivalent) nitrile rubber gloves (minimum thickness 0,40 mm). Wash when contaminated. Dispose of when contaminated inside, when perforated or when contamination outside cannot be removed. Wash hands always before eating, drinking, smoking or using the toilet.
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Eye protection	Wear goggles conforming to EN166 (Field of Use 5 or equivalent).
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Skin and body protection	Wear standard coverall and type 6 suit. Wear two layers of clothing wherever possible. Polyester/cotton or cotton overalls should be worn under chemical protection suit and should be professionally laundered frequently.
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Hygiene measures

Avoid contact with skin, eyes and clothing.

Keep working clothes separately.

Wash hands before breaks and immediately after handling the product.

Remove soiled clothing immediately and clean thoroughly before using again.

Garments that cannot be cleaned must be destroyed (burnt).

9. PHYSICAL AND CHEMICAL PROPERTIES**Appearance**

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Form	liquid, suspension
Colour	red
Odour	weak, characteristic

Safety data

pH	6,0 - 8,5 at 100 % (23 °C)
Flash point	No flash point - Determination conducted up to the boiling point.
Autoignition Temperature	515 °C
Density	approx. 1,04 g/cm ³ at 20 °C
Water solubility	miscible
Viscosity, dynamic	0,182 Pas at 20 °C Velocity gradient 20 /s
Viscosity, dynamic	0,153 Pas at 40 °C Velocity gradient 20 /s
Surface tension	39 mN/m at 25 °C
Oxidizing properties	No oxidizing properties
Explosivity	Not explosive. 92/69/EEC, A.14 / OECD 113

10. STABILITY AND REACTIVITY

Hazardous Reactions	No hazardous reactions when stored and handled according to prescribed instructions. Stable under recommended storage conditions.
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11. TOXICOLOGICAL INFORMATION

Acute Oral Toxicity	LD50 (rat) > 2.000 mg/kg
Acute Inhalation Toxicity	LC50 (rat) > 4,188 mg/l Exposure time: 4 h Determined in the form of a respirable aerosol. Highest attainable concentration.
Acute Dermal Toxicity	LD50 (rat) > 2.000 mg/kg
Skin Irritation	No skin irritation. (rabbit)
Eye Irritation	No eye irritation. (rabbit)
Sensitization	Non-sensitizing. (mouse) OECD Test Guideline 429, local lymph node assay (LLNA)

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12. ECOLOGICAL INFORMATION**Ecotoxicity effects**

Toxicity to Fish	LC50 (Cyprinus carpio (Carp)) 1,68 mg/l Exposure time: 96 h
Toxicity to daphnia	EC50 (Water flea (Daphnia magna)) 85 mg/l Exposure time: 48 h
Toxicity to algae	EC50 (Pseudokirchneriella subcapitata) > 100 mg/l Growth rate; Exposure time: 72 h
Toxicity to bacteria	EC50 (Activated sludge) > 1.000 mg/l Exposure time: 3 h

13. DISPOSAL CONSIDERATIONS**Product**

In accordance with current regulations and, if necessary, after consultation with the site operator and/or with the responsible authority, the product may be taken to a waste disposal site or incineration plant.

Contaminated packaging

Not completely emptied packagings should be disposed of as hazardous waste.

Waste key for the unused product

020108 agrochemical waste containing dangerous substances

14. TRANSPORT INFORMATION**ADR/RID/ADNR**

UN-Number	3082
Labels	9
Packaging group	III
Hazard no.	90
Description of the goods	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (PENFLUFEN SOLUTION)
Tunnel Code	E

This classification is in principle not valid for carriage by tank vessel on inland waterways.
Please refer to the manufacturer for further information.

IMDG

UN-Number	3082
Labels	9
Packaging group	III
EmS	F-A , S-F
Marine pollutant	Marine pollutant
Description of the goods	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (PENFLUFEN SOLUTION)

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IATA

UN-Number	3082
Labels	9
Packaging group	III
Description of the goods	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (PENFLUFEN SOLUTION)

15. REGULATORY INFORMATION

The product is classified and labelled in accordance with the EC Directive on dangerous substances EC-Directive 67/548, as amended.

Classification:

Hazard warning labelling compulsory

Hazardous components which must be listed on the label:

- Penflufen

Symbol(s)

N

Dangerous for the environment

R-phrases(s)

R51/53

Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

S-phrases(s)

S35

This material and its container must be disposed of in a safe way.

S57

Use appropriate container to avoid environmental contamination.

Exceptional labelling

To avoid risks to man and the environment, comply with the instructions for use.

Further information

WHO-classification: III (Slightly hazardous)

16. OTHER INFORMATION**Further information**

Text of R-phrases mentioned in Section 3

R50/53

Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

The information given in this Data Sheet has been included in accordance with the guidelines established by Regulation (EC) 1907/2006. This data sheet complements the user's instructions, but does not replace them. The information it contains is based on the knowledge available about the product concerned at the time it was compiled. Users are further reminded of the possible risks of using a product for purposes other than those for which it was intended. The required information complies with current EEC legislation. Addressees are requested to observe any additional national requirements.

Changes since the last version are highlighted in the margin. This version replaces all previous versions.