

Safety data sheet

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BASF Safety data sheet according to Regulation (EC) No. 1907/2006 as amended from time to time.

Date / Revised: 27.03.2018

Version: 3.0

Product: **Flight**

(ID no. 30523257/SDS_CPA_IE/EN)

Date of print 27.03.2018

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Flight

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

Relevant identified uses: crop protection product, herbicide

1.3. Details of the supplier of the safety data sheet

Company:

BASF A/S
Kalvebod Brygge 45, 2. sal
1560 København, DENMARK

Contact address:

BASF plc
PO Box 4, Earl Road, Cheadle Hulme,
Cheadle, Cheshire
SK8 6QG, UNITED KINGDOM

Telephone: +44 161 485-6222

E-mail address: product-safety-north@basf.com

1.4. Emergency telephone number

International emergency number:

Telephone: +49 180 2273-112

SECTION 2: Hazards Identification

2.1. Classification of the substance or mixture

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

Aquatic Chronic 1

H410

For the classifications not written out in full in this section the full text can be found in section 16.

2.2. Label elements

Globally Harmonized System (GHS) in accordance with IE regulations.

Pictogram:



Signal Word:

Warning

Hazard Statement:

H410 Very toxic to aquatic life with long lasting effects.

Precautionary Statements (Response):

P391 Collect spillage.

Precautionary Statements (Disposal):

P501 Dispose of contents/container to a licensed hazardous waste disposal contractor or collection site except for triple rinsed empty containers which can be disposed of as non-hazardous waste.

Labeling of special preparations (GHS):

EUH208: May produce an allergic reaction. Contains: pendimethalin (ISO); N-(1-ethylpropyl)-2,6-dinitro-3,4-xylidine, 1,2-benzisothiazol-3(2H)-one; 1,2-benzisothiazolin-3-one

2.3. Other hazards

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

See section 12 - Results of PBT and vPvB assessment.

If applicable information is provided in this section on other hazards which do not result in classification but which may contribute to the overall hazards of the substance or mixture.

SECTION 3: Composition/Information on Ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Chemical nature

crop protection product, herbicide, suspension concentrate (SC)

Hazardous ingredients (GHS)

according to Regulation (EC) No. 1272/2008

pendimethalin (ISO); N-(1-ethylpropyl)-2,6-dinitro-3,4-xylidine

Content (W/W): 29.7 %

CAS Number: 40487-42-1

EC-Number: 254-938-2

INDEX-Number: 609-042-00-X

Skin Sens. 1

Aquatic Acute 1

Aquatic Chronic 1

H317, H400, H410

Differing classification according to current knowledge and the criteria given in Annex I of Regulation (EC) No. 1272/2008

Skin Sens. 1B

Aquatic Acute 1

Aquatic Chronic 1

H317, H400, H410

picolinafen (ISO); 2-Pyridinecarboxamide, N-(4-fluorophenyl)-6-[3-(trifluoromethyl)phenoxy]-

Content (W/W): 0.68 %

CAS Number: 137641-05-5

Aquatic Acute 1

Aquatic Chronic 1

H400, H410

sodium alkyl-naphthalene sulphonate, formaldehyde condensate

Content (W/W): < 10 %

Eye Dam./Irrit. 2

H319

| 1,2-benzisothiazol-3(2H)-one; 1,2-benzisothiazolin-3-one

Content (W/W): < 0.05 %

CAS Number: 2634-33-5

EC-Number: 220-120-9

INDEX-Number: 613-088-00-6

Acute Tox. 4 (oral)

Skin Corr./Irrit. 2

Eye Dam./Irrit. 1

Skin Sens. 1

Aquatic Acute 1

M-factor acute: 10

H318, H315, H302, H317, H400

Specific concentration limit:

Skin Sens. 1: >= 0.05 %

Propane-1,2-diol

Content (W/W): < 20 %
CAS Number: 57-55-6
EC-Number: 200-338-0
REACH registration number: 01-
2119456809-23

Silica gel, precipitated, crystalline free

Content (W/W): < 5 %

CAS Number: 112926-00-8

REACH registration number: 01-

2119379499-16

For the classifications not written out in full in this section, including the hazard classes and the hazard statements, the full text is listed in section 16.

SECTION 4: First-Aid Measures

4.1. Description of first aid measures

Remove contaminated clothing.

If inhaled:

Keep patient calm, remove to fresh air.

On skin contact:

Wash thoroughly with soap and water.

On contact with eyes:

Wash affected eyes for at least 15 minutes under running water with eyelids held open.

On ingestion:

Rinse mouth and then drink plenty of water.

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

Symptoms: The most important known symptoms and effects are described in the labelling (see section 2) and/or in section 11., Further important symptoms and effects are so far not known.

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

Treatment: Symptomatic treatment (decontamination, vital functions).

SECTION 5: Fire-Fighting Measures

5.1. Extinguishing media

Suitable extinguishing media:

water spray, carbon dioxide, foam, dry powder

5.2. Special hazards arising from the substance or mixture

carbon monoxide, hydrogen fluoride, Carbon dioxide, nitrogen oxides, sulfur oxides

The substances/groups of substances mentioned can be released in case of fire.

5.3. Advice for fire-fighters

Special protective equipment:

Wear self-contained breathing apparatus and chemical-protective clothing.

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. In case of fire and/or explosion do not breathe fumes. Keep containers cool by spraying with water if exposed to fire.

SECTION 6: Accidental Release Measures**6.1. Personal precautions, protective equipment and emergency procedures**

Do not breathe vapour/spray. Use personal protective clothing. Avoid contact with the skin, eyes and clothing.

6.2. Environmental precautions

Do not discharge into the subsoil/soil. Do not discharge into drains/surface waters/groundwater.

Do not allow contamination of public drains or surface or ground waters. Inform local water plc if spillage enters drains and the Environmental Protection Agency if it enters surface or ground waters. Keep people and animals away.

6.3. Methods and material for containment and cleaning up

For small amounts: Pick up with suitable absorbent material (e.g. sand, sawdust, general-purpose binder, kieselguhr).

For large amounts: Dike spillage. Pump off product.

Dispose of absorbed material in accordance with regulations. Collect waste in suitable containers, which can be labeled and sealed. Clean contaminated floors and objects thoroughly with water and detergents, observing environmental regulations.

6.4. Reference to other sections

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

SECTION 7: Handling and Storage**7.1. Precautions for safe handling**

No special measures necessary if stored and handled correctly. Ensure thorough ventilation of stores and work areas. When using do not eat, drink or smoke. Hands and/or face should be washed before breaks and at the end of the shift.

Protection against fire and explosion:

No special precautions necessary. The substance/product is non-combustible. Product is not explosive.

7.2. Conditions for safe storage, including any incompatibilities

Segregate from foods and animal feeds.

Further information on storage conditions: Keep away from heat. Protect from direct sunlight.

Protect from temperatures below: -5 °C

The product can crystallize below the limit temperature.

Protect from temperatures above: 35 °C

Changes in the properties of the product may occur if substance/product is stored above indicated temperature for extended periods of time.

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.

SECTION 8: Exposure Controls/Personal Protection

8.1. Control parameters

Components with occupational exposure limits

57-55-6: Propane-1,2-diol

TWA value 10 mg/m³ (OEL (IE)), Particulate

TWA value 470 mg/m³ ; 150 ppm (OEL (IE)), Total vapour and particulates

7631-86-9: Silicon dioxide

TWA value 6 mg/m³ (OEL (IE)), Total inhalable dust

TWA value 2.4 mg/m³ (OEL (IE)), Respirable dust

Refer to the current schedule of occupational exposure standards published by the Irish HSA. For normal use and handling refer to the product label/leaflet. In all other cases the following apply.

8.2. Exposure controls

Personal protective equipment

Respiratory protection:

Respiratory protection not required.

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) etc.

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

The statements on personal protective equipment in the instructions for use apply when handling crop-protection agents in final-consumer packing. Wearing of closed work clothing is recommended. Store work clothing separately. Keep away from food, drink and animal feeding stuffs.

SECTION 9: Physical and Chemical Properties

9.1. Information on basic physical and chemical properties

Form:	suspension	
Colour:	orange	
Odour:	sweetish	
Odour threshold:		
	Not determined due to potential health hazard by inhalation.	
pH value:	approx. 5.6 - 7.6 (CIPAC standard water D, 1 %(m), 22 °C)	
crystallization temperature:	approx. -6.3 °C	
Boiling point:	approx. 100 °C	(measured)
Flash point:		(DIN EN 22719; ISO 2719)
	No flash point - Measurement made up to the boiling point.	
Evaporation rate:		
	not applicable	
Flammability:	not flammable	(calculated)
Lower explosion limit:		
	As a result of our experience with this product and our knowledge of its composition we do not expect any hazard as long as the product is used appropriately and in accordance with the intended use.	
Upper explosion limit:		
	As a result of our experience with this product and our knowledge of its composition we do not expect any hazard as long as the product is used appropriately and in accordance with the intended use.	

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Ignition temperature:	385 °C The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.	(Directive 92/69/EEC, A.15)
Vapour pressure:	approx. 23 hPa (20 °C) Information applies to the solvent.	
Density:	approx. 1.12 g/cm ³ (20 °C)	(OECD Guideline 109)
Relative vapour density (air):	not applicable	
Solubility in water:	dispersible	
Partitioning coefficient n-octanol/water (log Kow):	not applicable	
Thermal decomposition:	No decomposition if stored and handled as prescribed/indicated.	
Viscosity, dynamic:	approx. 66 - 68 mPa.s (20 °C, 100 1/s)	(OECD 114)
Explosion hazard:	Based on the chemical structure there is no indicating of explosive properties.	(Directive 92/69/EEC, A.14)
Fire promoting properties:	not fire-propagating	(Directive 2004/73/EC, A.21)

9.2. Other information

Other Information:

If necessary, information on other physical and chemical parameters is indicated in this section.

SECTION 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 if stored and handled as prescribed/indicated.

10.4. Conditions to avoid

See MSDS section 7 - Handling and storage.

10.5. Incompatible materials

Substances to avoid:

strong oxidizing agents, strong bases, strong acids

10.6. Hazardous decomposition products

Hazardous decomposition products:

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

SECTION 11: Toxicological Information

11.1. Information on toxicological effects

Acute toxicity

Assessment of acute toxicity:

Virtually nontoxic after a single ingestion. Virtually nontoxic after a single skin contact. Virtually nontoxic by inhalation. The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

Experimental/calculated data:

LD50 rat (oral): > 5,000 mg/kg (OECD Guideline 401)

LC50 rat (by inhalation): > 3.75 mg/l 4 h (OECD Guideline 403)

Highest concentration available for testing. No mortality was observed. An aerosol with respirable particles was tested.

LD50 rat (dermal): > 4,000 mg/kg (OECD Guideline 402)

No mortality was observed.

Irritation

Assessment of irritating effects:

Not irritating to the eyes. Not irritating to the skin. The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

Experimental/calculated data:

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

Serious eye damage/irritation rabbit: non-irritant (OECD Guideline 405)

Respiratory/Skin sensitization

Assessment of sensitization:

There is no evidence of a skin-sensitizing potential. The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

Experimental/calculated data:

modified Buehler test guinea pig: Skin sensitizing effects were not observed in animal studies. (OECD Guideline 406)

Germ cell mutagenicity

Assessment of mutagenicity:

The product has not been tested. The statement has been derived from the properties of the individual components. Mutagenicity tests revealed no genotoxic potential.

Carcinogenicity

Assessment of carcinogenicity:

The product has not been tested. The statement has been derived from the properties of the individual components.

Information on: pendimethalin (ISO); N-(1-ethylpropyl)-2,6-dinitro-3,4-xylidine

Assessment of carcinogenicity:

In long-term studies in rats the substance induced thyroid tumors. The effect is caused by an animal specific mechanism that has no human counter part. In long-term studies in mice in which the substance was given by feed, a carcinogenic effect was not observed.

Reproductive toxicity

Assessment of reproduction toxicity:

The product has not been tested. The statement has been derived from the properties of the individual components. The results of animal studies gave no indication of a fertility impairing effect.

Developmental toxicity

Assessment of teratogenicity:

The product has not been tested. The statement has been derived from the properties of the individual components. Animal studies gave no indication of a developmental toxic effect at doses that were not toxic to the parental animals.

Specific target organ toxicity (single exposure)

Assessment of STOT single:

The available information is not sufficient for the evaluation of specific target organ toxicity.

Repeated dose toxicity and Specific target organ toxicity (repeated exposure)

Assessment of repeated dose toxicity:

The product has not been tested. The statement has been derived from the properties of the individual components.

Information on: pendimethalin (ISO); N-(1-ethylpropyl)-2,6-dinitro-3,4-xylidine

Assessment of repeated dose toxicity:

No substance-specific organotoxicity was observed after repeated administration to animals. Adaptive effects were observed after repeated exposure in animal studies.

Information on: picolinafen (ISO); 2-Pyridinecarboxamide, N-(4-fluorophenyl)-6-[3-(trifluoromethyl)phenoxy]-

Assessment of repeated dose toxicity:

Repeated exposure to large quantities may affect certain organs.

Information on: Silica gel, precipitated, crystalline free

Assessment of repeated dose toxicity:

| *The substance may cause damage to the lung after repeated inhalation of high doses.*

Aspiration hazard

No aspiration hazard expected.

The product has not been tested. The statement has been derived from the properties of the individual components.

Other relevant toxicity information

Misuse can be harmful to health.

SECTION 12: Ecological Information

12.1. Toxicity

Assessment of aquatic toxicity:

Very toxic to aquatic life with long lasting effects.

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

Toxicity to fish:

LC50 (96 h) 4.08 mg/l, *Oncorhynchus mykiss* (EPA 72-1, Flow through.)

Aquatic invertebrates:

EC50 (48 h) 9.81 mg/l, *Daphnia magna* (OPP 72-2 (EPA-guideline), static)

| No observed effect concentration (21 d) 0.00881 mg/l, *Daphnia magna*

Aquatic plants:

EC50 (72 h) 0.0299 mg/l (growth rate), *Selenastrum capricornutum* (OECD Guideline 201, static)

No observed effect concentration (72 h) 0.0017 mg/l, *Selenastrum capricornutum*

EC50 (72 h) 0.0122 mg/l (growth rate), *Selenastrum capricornutum*

EC10 (72 h) 0.007 mg/l, *Selenastrum capricornutum*

Chronic toxicity to fish:

| No observed effect concentration (28 d) 0.486 mg/l, *Oncorhynchus mykiss*

12.2. Persistence and degradability

Assessment biodegradation and elimination (H₂O):

The product has not been tested. The statement has been derived from the properties of the individual components.

Information on: pendimethalin (ISO); N-(1-ethylpropyl)-2,6-dinitro-3,4-xylidine
Assessment biodegradation and elimination (H2O):
Not readily biodegradable (by OECD criteria).

Information on: picolinafen (ISO); 2-Pyridinecarboxamide, N-(4-fluorophenyl)-6-[3-(trifluoromethyl)phenoxy]-
Assessment biodegradation and elimination (H2O):
Not readily biodegradable (by OECD criteria).

12.3. Bioaccumulative potential

Assessment bioaccumulation potential:

The product has not been tested. The statement has been derived from the properties of the individual components.

Information on: pendimethalin (ISO); N-(1-ethylpropyl)-2,6-dinitro-3,4-xylidine
Bioaccumulation potential:
Bioconcentration factor: 5, 100
Based on a weight of evidence, the compound will not bioaccumulate.

Information on: picolinafen (ISO); 2-Pyridinecarboxamide, N-(4-fluorophenyl)-6-[3-(trifluoromethyl)phenoxy]-
Bioaccumulation potential:
Bioconcentration factor: 580
Accumulation in organisms is not to be expected.

12.4. Mobility in soil

Assessment transport between environmental compartments:

Adsorption in soil: The product has not been tested. The statement has been derived from the properties of the individual components.

Information on: pendimethalin (ISO); N-(1-ethylpropyl)-2,6-dinitro-3,4-xylidine
Assessment transport between environmental compartments:
Volatility: The substance will slowly evaporate into the atmosphere from the water surface.
Adsorption in soil: Following exposure to soil, adsorption to solid soil particles is probable, therefore contamination of groundwater is not expected.

Information on: picolinafen (ISO); 2-Pyridinecarboxamide, N-(4-fluorophenyl)-6-[3-(trifluoromethyl)phenoxy]-
Assessment transport between environmental compartments:
Adsorption in soil: Following exposure to soil, adsorption to solid soil particles is probable, therefore contamination of groundwater is not expected.

12.5. Results of PBT and vPvB assessment

The product does not contain a substance fulfilling the PBT (persistent/bioaccumulative/toxic) criteria or the vPvB (very persistent/very bioaccumulative) criteria.

12.6. Other adverse effects

The product does not contain substances that are listed in Regulation (EC) 1005/2009 on substances that deplete the ozone layer.

12.7. Additional information

Other ecotoxicological advice:

Do not discharge product into the environment without control.

SECTION 13: Disposal Considerations

13.1. Waste treatment methods

Must be sent to a suitable incineration plant, observing local regulations.

Contaminated packaging:

Contaminated packaging should be emptied as far as possible and disposed of in the same manner as the substance/product.

SECTION 14: Transport Information

Land transport

ADR

UN number	UN3082
UN proper shipping name:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (contains PENDIMETHALIN)
Transport hazard class(es):	9, EHS
Packing group:	III
Environmental hazards:	yes
Special precautions for user:	None known

RID

UN number	UN3082
UN proper shipping name:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (contains PENDIMETHALIN)
Transport hazard class(es):	9, EHS
Packing group:	III
Environmental hazards:	yes

Special precautions for user: None known

Inland waterway transport

ADN

UN number: UN3082
UN proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID,
 N.O.S. (contains PENDIMETHALIN)
Transport hazard class(es): 9, EHSM
Packing group: III
Environmental hazards: yes
Special precautions for user: None known

Transport in inland waterway vessel

Not evaluated

Sea transport

IMDG

UN number: UN 3082
UN proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID,
 N.O.S. (contains PENDIMETHALIN)
Transport hazard class(es): 9, EHSM
Packing group: III
Environmental hazards: yes
 Marine pollutant: YES
Special precautions for user: None known

Air transport

IATA/ICAO

UN number: UN 3082
UN proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID,
 N.O.S. (contains PENDIMETHALIN)
Transport hazard class(es): 9, EHSM
Packing group: III
Environmental hazards: yes
Special precautions for user: None known

14.1. UN number

See corresponding entries for "UN number" for the respective regulations in the tables above.

14.2. UN proper shipping name

See corresponding entries for "UN proper shipping name" for the respective regulations in the tables above.

14.3. Transport hazard class(es)

See corresponding entries for "Transport hazard class(es)" for the respective regulations in the tables above.

14.4. Packing group

See corresponding entries for "Packing group" for the respective regulations in the tables above.

14.5. Environmental hazards

See corresponding entries for "Environmental hazards" for the respective regulations in the tables above.

14.6. Special precautions for user

See corresponding entries for "Special precautions for user" for the respective regulations in the tables above.

14.7. Transport in bulk according to Annex II of MARPOL and the IBC Code

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

SECTION 15: Regulatory Information**15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture**Prohibitions, Restrictions and Authorizations

Annex XVII of Regulation (EC) No 1907/2006: Number on List: 3

Restrictions of Regulation (EC) No 1907/2006, Annex XVII, do not apply for the intended use(s) of the product given in this MSDS.

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

This product may be subject to the Seveso II Directive and amendments if specific threshold tonnages are exceeded.

For further medical advice Doctors should contact the National Poisons Information Centre at Beaumont Hospital, Dublin.

15.2. Chemical Safety Assessment

Advice on product handling can be found in sections 7 and 8 of this safety data sheet.

SECTION 16: Other Information

For proper and safe use of this product, please refer to the approval conditions laid down on the product label.

Full text of the classifications, including the hazard classes and the hazard statements, if mentioned in section 2 or 3:

Aquatic Chronic	Hazardous to the aquatic environment - chronic
Skin Sens.	Skin sensitization
Aquatic Acute	Hazardous to the aquatic environment - acute
Eye Dam./Irrit.	Serious eye damage/eye irritation
Acute Tox.	Acute toxicity
Skin Corr./Irrit.	Skin corrosion/irritation
H410	Very toxic to aquatic life with long lasting effects.
H317	May cause an allergic skin reaction.
H400	Very toxic to aquatic life.
H319	Causes serious eye irritation.
H318	Causes serious eye damage.
H315	Causes skin irritation.
H302	Harmful if swallowed.

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. This safety data sheet is neither a Certificate of Analysis (CoA) nor technical data sheet and shall not be mistaken for a specification agreement. Identified uses in this safety data sheet do neither represent an agreement on the corresponding contractual quality of the substance/mixture nor a contractually designated use. It is the responsibility of the recipient of the product to ensure any proprietary rights and existing laws and legislation are observed.

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