

Safety data sheet

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

Date / Revised: 23.09.2013

Version: 4.1

Product: **PULSAR® 40 SL**

(ID no. 58984782/SDS_CPA_EU/EN)

Date of print 28.10.2014

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

1.1. Product identifier

PULSAR® 40 SL

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 Agro B.V. Arnhem (NL) Zürich

Branch

Im Tiergarten 7

8055 Zürich, SWITZERLAND

Operating Division Crop Protection

Telephone: +49 621 60-27777

E-mail address: Produktinformation-Pflanzenschutz@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 Acute 1

Aquatic Chronic 1

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

Possible Hazards:

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

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, EU (GHS)

Pictogram:



Signal Word:

Warning

Hazard Statement:

H400

Very toxic to aquatic life.

H410

Very toxic to aquatic life with long lasting effects.

EUH401

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

Precautionary Statements (Response):

P391

Collect spillage.

Labeling of special preparations (GHS):

May produce an allergic reaction. Contains: 1,2-BENZISOTHIAZOL-3(2H)-ONE, SORBITAN, MONOLAURATE, ETHOXYLATED

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

EEC Directives

Hazard symbol(s)

N

Dangerous for the environment.



R-phrase(s)

R50/53

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

S-phrase(s)

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S2	Keep out of the reach of children.
S13	Keep away from food, drink and animal feeding stuffs.
S20/21	When using do not eat, drink or smoke.
S29/35	Do not empty into drains, this material and its container must be disposed of in a safe way.
S57	Use appropriate container to avoid environmental contamination.

The product contains: 1,2-BENZISOTHIAZOL-3(2H)-ONE, SORBITAN, MONOLAURATE, ETHOXYLATED
 May produce an allergic reaction.

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, Soluble concentrate (SL)

Hazardous ingredients (GHS)

according to Regulation (EC) No. 1272/2008

imazamox (ISO), (RS)-2-(4-isopropyl-4-methyl-5-oxo-2-imidazolin-2-yl)-5-methoxymethylnicotinic acid

Content (W/W): 3.7 %	Aquatic Acute 1
CAS Number: 114311-32-9	Aquatic Chronic 1
	H400, H410

Sorbitan, monododecanoate, poly(oxy-1,2-ethanediyl) derivs.

Content (W/W): < 40 %	Skin Sens. 1
CAS Number: 9005-64-5	H317

Ammonium hydroxide ((NH₄)(OH))

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Content (W/W): < 1.5 %
CAS Number: 1336-21-6

Skin Corr./Irrit. 1B
Aquatic Acute 1
H314, H400

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

Content (W/W): < 0.1 %
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
H318, H315, H302, H317, H400

Propane-1,2-diol

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

Hazardous ingredients

according to Directive 1999/45/EC

imazamox (ISO), (RS)-2-(4-isopropyl-4-methyl-5-oxo-2-imidazolin-2-yl)-5-methoxymethylnicotinic acid

Content (W/W): 3.7 %
CAS Number: 114311-32-9
Hazard symbol(s): N
R-phrases: 50/53

Sorbitan, monododecanoate, poly(oxy-1,2-ethanediyl) derivs.

Content (W/W): < 40 %
CAS Number: 9005-64-5

Ammonium hydroxide ((NH₄)(OH))

Content (W/W): < 1.5 %
CAS Number: 1336-21-6
Hazard symbol(s): C, N
R-phrases: 34, 50

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

Content (W/W): < 0.1 %
CAS Number: 2634-33-5
EC-Number: 220-120-9
INDEX-Number: 613-088-00-6
Hazard symbol(s): Xn, N
R-phrases: 22, 38, 41, 43, 50

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Propane-1,2-diol

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

For the classifications not written out in full in this section, including the indication of danger, the hazard symbols, the R phrases, 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, Carbon dioxide, nitrogen 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:

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

SECTION 6: Accidental Release Measures

6.1. Personal precautions, protective equipment and emergency procedures

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

6.2. Environmental precautions

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

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.

Storage stability:

Storage duration: 24 Months

7.3. Specific end use(s)

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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

1336-21-6: ammonia...%

TWA value 14 mg/m³ ; 20 ppm (OEL (EU))
indicativeSTEL value 36 mg/m³ ; 50 ppm (OEL (EU))
indicative

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) and other

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: liquid
Colour: colourless to yellowish
Odour: characteristic

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Odour threshold:	Not determined due to potential health hazard by inhalation.	
pH value:	approx. 4 - 6 (20 °C) (measured with the undiluted substance)	
Melting point:	approx. < 0 °C	
Boiling point:	approx. 100 °C	
Flash point:	Information applies to the solvent.	
Evaporation rate:	Non-flammable.	
Flammability:	not applicable	
Lower explosion limit:	Based on the structure or composition there is no indication of flammability	
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.	
Ignition temperature:	421.7 °C	(Directive 92/69/EEC, A.15)
Vapour pressure:	approx. 23 hPa (20 °C) Information applies to the solvent.	
Density:	approx. 1.08 g/cm ³ (20 °C)	
Relative vapour density (air):	not determined	
Solubility in water:	fully soluble	
Partitioning coefficient n-octanol/water (log Kow):	not applicable	
Thermal decomposition:	not determined	
Viscosity, dynamic:	109.0 mPa.s (25 °C)	(OECD 114)
Explosion hazard:	not explosive	(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 by inhalation. Virtually nontoxic after a single ingestion. Virtually nontoxic after a single skin contact.

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

LC50 rat (by inhalation): > 6.6 mg/l (OECD Guideline 403)

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

Irritation

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

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Experimental/calculated data:

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

Serious eye damage/irritation rabbit: non-irritant (Guideline 92/69/EEC, B.5)

Respiratory/Skin sensitization

Assessment of sensitization:

There is no evidence of a skin-sensitizing potential.

Experimental/calculated data:

Guinea pig maximization test guinea pig: Skin sensitizing effects were not observed in animal studies. (Guideline 92/69/EEC, B.6)

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. The results of various animal studies gave no indication of a carcinogenic effect.

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.

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. No substance-specific organotoxicity was observed after repeated administration to animals.

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 organisms. May cause long-term adverse effects in the aquatic environment.

Toxicity to fish:

LC50 (96 h) > 100 mg/l, *Oncorhynchus mykiss* (OECD 203; ISO 7346; 92/69/EEC, C.1)

Aquatic invertebrates:

LC50 (48 h) > 100 mg/l, *Daphnia magna* (OECD Guideline 202, part 1, static)

Aquatic plants:

EC50 (7 d) 0.52 mg/l (growth rate), *Lemna gibba* (OECD guideline 221, static)

No observed effect concentration (7 d) 0.05 mg/l (growth rate), *Lemna gibba*

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: imazamox (ISO), (RS)-2-(4-isopropyl-4-methyl-5-oxo-2-imidazolin-2-yl)-5-methoxymethylnicotinic acid

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: imazamox (ISO), (RS)-2-(4-isopropyl-4-methyl-5-oxo-2-imidazolin-2-yl)-5-methoxymethylnicotinic acid

Bioaccumulation potential:

*Bioconcentration factor: < 1, *Lepomis macrochirus* (OECD-Guideline 305)*

Does not accumulate in organisms.

12.4. Mobility in soil

Assessment transport between environmental compartments:

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

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Information on: imazamox (ISO), (RS)-2-(4-isopropyl-4-methyl-5-oxo-2-imidazolin-2-yl)-5-methoxymethylnicotinic acid

Assessment transport between environmental compartments:

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

Following exposure to soil, the product trickles away and can - dependant on degradation - be transported to deeper soil areas with larger water loads.

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 Annex I of Regulation (EC) 2037/2000 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 IMAZAMOX 4%)

Transport hazard class(es):

9, EHSM

Packing group:

III

Environmental hazards:

yes

Special precautions for
user:

Tunnel code: E

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RID

UN number: UN3082
UN proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (contains IMAZAMOX 4%)
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 IMAZAMOX 4%)
Transport hazard class(es): 9, EHS
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 IMAZAMOX 4%)
Transport hazard class(es): 9, EHS
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 IMAZAMOX 4%)
Transport hazard class(es): 9, EHS
Packing group: III

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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 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

SECTION 15: Regulatory Information

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

For the user of this plant-protective product applies: 'To avoid risks to man and the environment, comply with the instructions for use.' (Directive 1999/45/EC, Article 10, No. 1.2)

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 indication of danger, the hazard symbols, the R phrases, and the hazard statements, if mentioned in section 2 or 3:

N	Dangerous for the environment.
C	Corrosive.
Xn	Harmful.
50/53	Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
34	Causes burns.
50	Very toxic to aquatic organisms.
22	Harmful if swallowed.
38	Irritating to skin.
41	Risk of serious damage to eyes.
43	May cause sensitization by skin contact.
Aquatic Acute	Hazardous to the aquatic environment - acute
Aquatic Chronic	Hazardous to the aquatic environment - chronic
Skin Sens.	Skin sensitization
Skin Corr./Irrit.	Skin corrosion/irritation
Acute Tox.	Acute toxicity
Eye Dam./Irrit.	Serious eye damage/eye irritation
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.
H317	May cause an allergic skin reaction.
H314	Causes severe skin burns and eye damage.
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. 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.

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