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

Product identifier

EURO-LIGHTNING

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

Relevant identified uses: crop protection product, herbicide
Recommended use: herbicide

Details of the supplier of the safety data sheet

Company:
BASF SE
67056 Ludwigshafen
GERMANY
Operating Division Crop Protection

Telephone: +49 621 60-27777
E-mail address: Produktinformation-Pflanzenschutz@basf.com

Emergency telephone number

International emergency number:
Telephone: +49 180 2273-112

2. Hazards Identification

Label elements

Globally Harmonized System, EU (GHS)

Hazard Statement:
H412 Harmful 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 (Disposal):
P501 Dispose of contents/container to hazardous or special waste collection point.

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

EEC Directives
R-phrase(s)
R52/53 Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

S-phrase(s)
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.

Classification of the substance or mixture

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

Aquatic Chronic 3

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

Possible Hazards:
Harmful 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.

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.

3. Composition/Information on Ingredients

Mixtures
Chemical nature

crop protection product, herbicide, Soluble concentrate (SL)

Preparation based on: imazapyr, 2-[4,5-dihydro-4-methyl-4-(1-methylethyl)-5-oxo-1 H-imidazol-2-yl]-3-pyridine carboxylate, imazamox, ammonium salts

Hazardous ingredients (GHS)
according to Regulation (EC) No. 1272/2008

| imazamox |
| Content (W/W): 3.1 % | Aquatic Acute 1 |
| CAS Number: 114311-32-9 | Aquatic Chronic 1 |
| | H400, H410 |

| imazapyr, 2-[4,5-dihydro-4-methyl-4-(1-methylethyl)-5-oxo-1 H-imidazol-2-yl]-3-pyridine carboxylate |
| Content (W/W): 1.4 % | Eye Dam./Irrit. 2 |
| CAS Number: 81334-34-1 | Aquatic Chronic 3 |
| INDEX-Number: 613-126-00-1 | H319, H412 |

| Propane-1,2-diol |
| Content (W/W): < 15 % | |
| 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 |
| Content (W/W): 3.1 % |
| CAS Number: 114311-32-9 |
| Hazard symbol(s): N |
| R-phrase(s): 50/53 |

| imazapyr, 2-[4,5-dihydro-4-methyl-4-(1-methylethyl)-5-oxo-1 H-imidazol-2-yl]-3-pyridine carboxylate |
| Content (W/W): 1.4 % |
| CAS Number: 81334-34-1 |
| INDEX-Number: 613-126-00-1 |
| Hazard symbol(s): Xi |
| R-phrase(s): 36, 52/53 |
4. First-Aid Measures

**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.

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

Symptoms: No significant reaction of the human body to the product known.

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

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

5. Fire-Fighting Measures

**Extinguishing media**

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

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

- carbon monoxide, ammonia, anhydrous, Carbon dioxide, nitrogen oxides

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

**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.

6. Accidental Release Measures

Personal precautions, protective equipment and emergency procedures
Use personal protective clothing. Avoid contact with the skin, eyes and clothing. Do not breathe vapour/spray.

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

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.

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

7. Handling and Storage

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.

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

Protect from temperatures below: -10 °C
The product can crystallize below the limit temperature.
Protect from temperatures above: 40 °C
Changes in the properties of the product may occur if substance/product is stored above indicated temperature for extended periods of time.

**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.

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### 8. Exposure Controls/Personal Protection

#### Control parameters

**Components with workplace control parameters**

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

#### 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.

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### 9. Physical and Chemical Properties

**Information on basic physical and chemical properties**

- **Form:** liquid, slightly viscous
- **Colour:** yellow to amber
- **Odour:** faint odour, aliphatic
Odour threshold: not determined
pH value: approx. 5 - 7
(measured with the undiluted substance)
solidification temperature: approx. -14 °C
(1,013.3 hPa)
Boiling point: approx. 100 °C
(1,013.3 hPa)
Information applies to the solvent.
Flash point: Non-flammable.
Evaporation rate: not applicable
Flammability: does not ignite
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.
Ignition temperature: 398 °C
Vapour pressure: approx. 23.3 hPa
(20 °C)
Density: approx. 1.07 g/cm³
(20 °C)
Relative vapour density (air): not applicable
Solubility in water: soluble
Partitioning coefficient n-octanol/water (log Kow): not applicable
Thermal decomposition: not determined
Viscosity, dynamic: not determined
Explosion hazard: Based on the chemical structure there is no indicating of explosive properties.
Fire promoting properties: Based on its structural properties the product is not classified as oxidizing.

Other information
10. Stability and Reactivity

**Reactivity**
No hazardous reactions if stored and handled as prescribed/indicated.

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

**Possibility of hazardous reactions**
No hazardous reactions if stored and handled as prescribed/indicated.

**Conditions to avoid**
See MSDS section 7 - Handling and storage.

**Incompatible materials**
Substances to avoid:
strong bases, strong acids, strong oxidizing agents

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

11. Toxicological Information

**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.

Experimental/calculated data:
LD50 rat (oral): > 5,000 mg/kg (OECD Guideline 401)
LC50 rat (by inhalation): > 6.18 mg/l 4 h (OECD Guideline 403)
LD50 rabbit (dermal): > 5,000 mg/kg (OECD Guideline 402)

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

Experimental/calculated data:
Skin corrosion/irritation rabbit: non-irritant

Serious eye damage/irritation rabbit: Slightly irritating. (OECD Guideline 405)

Respiratory/Skin sensitization

Assessment of sensitization:
There is no evidence of a skin-sensitizing potential.

Experimental/calculated data:
Buehler test guinea pig: Non-sensitizing. (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. 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 organtoxicity was observed after repeated administration to animals.

Other relevant toxicity information

Misuse can be harmful to health.
12. Ecological Information

Toxicity

Assessment of aquatic toxicity:
Acutely harmful for aquatic organisms. May cause long-term adverse effects in the aquatic environment.

Toxicity to fish:
LC50 (96 h) > 83.2 mg/l, Oncorhynchus mykiss (EPA 72-1, Flow through.)

Aquatic invertebrates:
EC50 (48 h) > 86.6 mg/l, Daphnia magna (OPP 72-2 (EPA-guideline), static)

Aquatic plants:
EC50 (72 h) > 90.6 mg/l (growth rate), Pseudokirchneriella subcapitata (OECD Guideline 201, static)

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: imazapyr, 2-[4,5-dihydro-4-methyl-4-(1-methylethyl)-5-oxo-1 H-imidazol-2-yl]-3-pyridine carboxylate
Assessment biodegradation and elimination (H2O):
Not readily biodegradable (by OECD criteria).

Information on: imazamox
Assessment biodegradation and elimination (H2O):
Not readily biodegradable (by OECD criteria).

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
Bioaccumulation potential:
Bioconcentration factor: < 1, Lepomis macrochirus (OECD-Guideline 305)
Does not accumulate in organisms.

Information on: imazapyr, 2-[4,5-dihydro-4-methyl-4-(1-methylethyl)-5-oxo-1 H-imidazol-2-yl]-3-pyridine carboxylate
Bioaccumulation potential:
Bioconcentration factor: < 1.0, Lepomis macrochirus
Does not accumulate in organisms.
Mobility in soil (and other compartments if available)

Assessment transport between environmental compartments:
The product has not been tested. The statement has been derived from the properties of the individual components.

Information on: imazapyr, 2-[4,5-dihydro-4-methyl-4-(1-methylethyl)-5-oxo-1 H-imidazol-2-yl]-3-pyridine carboxylate
Assessment transport between environmental compartments:
Following exposure to soil, the product trickles away and can - dependant on degradation - be transported to deeper soil areas with larger water loads.

Information on: imazamox
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.

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.

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.

Additional information

Other ecotoxicological advice:
Do not discharge product into the environment without control.

13. Disposal Considerations

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.

14. Transport Information
**Land transport**

**ADR**

- UN number: Not applicable
- UN proper shipping name: Not applicable
- Transport hazard class(es): Not applicable
- Packing group: Not applicable
- Environmental hazards: Not applicable
- Special precautions for user: None known

**RID**

- UN number: Not applicable
- UN proper shipping name: Not applicable
- Transport hazard class(es): Not applicable
- Packing group: Not applicable
- Environmental hazards: Not applicable
- Special precautions for user: None known

**Inland waterway transport**

**ADN**

- UN number: Not applicable
- UN proper shipping name: Not applicable
- Transport hazard class(es): Not applicable
- Packing group: Not applicable
- Environmental hazards: Not applicable
- Special precautions for user: None known
- Transport in inland waterway vessel: Not evaluated

**Sea transport**

**IMDG**

- UN number: Not applicable
- UN proper shipping name: Not applicable
- Transport hazard class(es): Not applicable
- Packing group: Not applicable
- Environmental hazards: Not applicable
- Special precautions for user: None known
Air transport

IATA/ICAO

UN number: Not applicable
UN proper shipping name: Not applicable
Transport hazard class(es): Not applicable
Packing group: Not applicable
Environmental hazards: Not applicable
Special precautions for user: None known

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

15. Regulatory Information

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)

Chemical Safety Assessment

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

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.
Xi  Irritant.
50/53  Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
36  Irritating to eyes.
52/53  Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
Aquatic Chronic  Hazardous to the aquatic environment - chronic
Aquatic Acute  Hazardous to the aquatic environment - acute
Eye Dam./Irrit. Serious eye damage/eye irritation
H400  Very toxic to aquatic life.
H410  Very toxic to aquatic life with long lasting effects.
H319  Causes serious eye irritation.
H412  Harmful to aquatic life with long lasting effects.

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.