

# Safety data sheet

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BASF Safety data sheet  
Date / Revised: 10.02.2017  
Product: **LIGHTNING®**

Version: 3.0

(30643825/SDS\_CPA\_AU/EN)

Date of print 11.02.2017

## 1. Substance/preparation and manufacturer/supplier identification

### **LIGHTNING®**

Use: herbicide

Manufacturer/supplier:

BASF Australia Limited (ABN 62 008 437 867)  
Level 12, 28 Freshwater Place Southbank  
Victoria 3006, AUSTRALIA  
Telephone: +61 3 8855-6600  
Telefax number: +61 3 8855-6511

Emergency information:

BASF Emergency Advice Number: 1800 803 440 (24h) [within Australia]  
BASF Emergency Advice Number: + 61 3 8855 6666 [outside Australia]

## 2. Hazard identification

Classification of the substance and mixture:

| Serious eye damage/eye irritation: Cat. 2A

| Hazardous to the aquatic environment - acute: Cat. 1

| Hazardous to the aquatic environment - chronic: Cat. 1

Label elements and precautionary statement:

Pictogram:



Signal Word:

| Warning

**Hazard Statement:**

Causes serious eye irritation. Very toxic to aquatic life. Very toxic to aquatic life with long lasting effects.

**Precautionary Statement:**

If medical advice is needed, have product container or label at hand. Keep out of reach of children. Read label before use.

**Precautionary Statements (Prevention):**

Wear eye/face protection. Wash contaminated body parts thoroughly after handling.

**Precautionary Statements (Response):**

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Collect spillage. If eye irritation persists: Call a POISON CENTER or doctor/physician.

**Precautionary Statements (Disposal):**

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

**Other hazards which do not result in classification:**

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.

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### 3. Composition/information on ingredients

**Chemical nature**

herbicide, water dispersible granules

**Hazardous ingredients**

3-Pyridinecarboxylic acid, 2-[4,5-dihydro-4-methyl-4-(1-methylethyl)-5-oxo-1H-imidazol-2-yl]-5-ethyl-

Content (W/W): 52.5 %

Aquatic Acute: Cat. 1

CAS Number: 81335-77-5

Aquatic Chronic: Cat. 1

Imazapyr technical

Content (W/W): 17.5 %

Eye Dam./Irrit.: Cat. 2A

CAS Number: 81334-34-1

Aquatic Acute: Cat. 3

Aquatic Chronic: Cat. 3

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### 4. First-Aid Measures

**General advice:**

Remove contaminated clothing.

**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:

Wash affected eyes for at least 15 minutes under running water with eyelids held open, consult an eye specialist.

On ingestion:

Immediately rinse mouth and then drink 200-300 ml of water, seek medical attention.

Note to physician:

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.

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

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## 5. Fire-Fighting Measures

Suitable extinguishing media:

dry powder, foam, water spray

Unsuitable extinguishing media for safety reasons:

carbon dioxide

Specific hazards:

carbon monoxide, carbon dioxide, nitrogen oxides

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

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.

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## 6. Accidental Release Measures

Personal precautions:

Avoid dust formation. Use personal protective clothing. Avoid contact with the skin, eyes and clothing.

Environmental precautions:

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

Methods for cleaning up or taking up:

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

For large amounts: Sweep/shovel up.

Avoid raising dust. 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.

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## 7. Handling and Storage

### 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:

Avoid dust formation. Dust can form an explosive mixture with air. Prevent electrostatic charge - sources of ignition should be kept well clear - fire extinguishers should be kept handy.

### Storage

Segregate from foods and animal feeds.

Further information on storage conditions: Keep away from heat. Protect from direct sunlight. Store protected against freezing. Protect against moisture.

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## 8. Exposure controls and personal protection

### Components with occupational exposure limits

| No occupational exposure limits known.

### Personal protective equipment

Respiratory protection:

Respiratory protection not required.

Hand protection:

Hand protection not required.

Eye protection:

Eye protection not required.

Body protection:

Body protection not required.

General safety and hygiene measures:

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

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## 9. Physical and Chemical Properties

Form:	granules
Colour:	tan
Odour:	faint odour
Odour threshold:	Not determined due to potential health hazard by inhalation.
pH value:	approx. 2 - 4 (water, 2 %(m), 20 °C)
Melting point:	The product has not been tested.
Boiling point:	The product has not been tested.
Flash point:	not applicable, the product is a solid
Evaporation rate:	not applicable
Flammability (solid/gas):	not highly flammable
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.
Thermal decomposition:	No decomposition if stored and handled as prescribed/indicated.
Self ignition:	not self-igniting
Self heating ability:	It is not a substance capable of spontaneous heating.
Explosion hazard:	not explosive
Fire promoting properties:	not fire-propagating
Vapour pressure:	approx. < 0.0001 hPa (20 °C) negligible
Bulk density:	506 kg/m <sup>3</sup>
Relative vapour density (air):	not applicable

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Solubility in water: dispersible

Information on: 3-Pyridinecarboxylic acid, 2-[4,5-dihydro-4-methyl-4-(1-methylethyl)-5-oxo-1H-imidazol-2-yl]-5-ethyl-

Partitioning coefficient n-octanol/water (log Pow): 1.49  
(25 °C; pH value: 7)

Viscosity, dynamic:  
not applicable, the product is a solid

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## 10. Stability and Reactivity

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

Thermal decomposition: No decomposition if stored and handled as prescribed/indicated.

Substances to avoid:  
strong acids, strong bases, strong oxidizing agents

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

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

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## 11. Toxicological Information

### Acute toxicity

Assessment of acute toxicity:  
Virtually nontoxic after a single ingestion. Virtually nontoxic by inhalation. Virtually nontoxic after a single skin contact.

Experimental/calculated data:  
LD50 rat (oral): > 5,000 mg/kg  
No mortality was observed.

LC50 rat (by inhalation): > 2.5 mg/l 4 h  
No mortality was observed.

LD50 rabbit (dermal): > 2,000 mg/kg  
No mortality was observed.

### Irritation

Assessment of irritating effects:  
Not irritating to the skin. Eye contact causes irritation.

Experimental/calculated data:  
Skin corrosion/irritation rabbit: (OECD Guideline 404)

Serious eye damage/irritation rabbit:

### **Respiratory/Skin sensitization**

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

Experimental/calculated data:  
Buehler test guinea pig:

### **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: Kaolin

Assessment of carcinogenicity:

Indication of possible carcinogenic effect in animal tests. However, the relevance of this result for humans is unclear.

### **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:  
Based on the available information there is no specific target organ toxicity to be expected after a single exposure.

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

### **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. The respiratory fraction is < 1 %, therefore the classification regarding inhalation toxicity does not apply.

**Information on: Kaolin****Assessment of repeated dose toxicity:**

Repeated inhalative uptake of particles/dust reaching the alveoli may cause damage to the lungs.

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**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.

**12. Ecological Information****Ecotoxicity****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 the properties of the individual components.

Information on: 3-Pyridinecarboxylic acid, 2-[4,5-dihydro-4-methyl-4-(1-methylethyl)-5-oxo-1H-imidazol-2-yl]-5-ethyl-

Toxicity to fish:

LC50 (96 h) 240 mg/l, *Ictalurus punctatus*, syn: *I. robustus*

Information on: imazapyr, 2-[4,5-dihydro-4-methyl-4-(1-methylethyl)-5-oxo-1H-imidazol-2-yl]-3-pyridine carboxylate

Toxicity to fish:

LC50 (96 h) > 100 mg/l, *Oncorhynchus mykiss*

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Information on: 3-Pyridinecarboxylic acid, 2-[4,5-dihydro-4-methyl-4-(1-methylethyl)-5-oxo-1H-imidazol-2-yl]-5-ethyl-

Aquatic invertebrates:

LC50 (96 h) > 109 mg/l, *Crassostrea virginica*

Information on: imazapyr, 2-[4,5-dihydro-4-methyl-4-(1-methylethyl)-5-oxo-1H-imidazol-2-yl]-3-pyridine carboxylate

Aquatic invertebrates:

EC50 (48 h) > 100 mg/l, *Daphnia magna*

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Information on: 3-Pyridinecarboxylic acid, 2-[4,5-dihydro-4-methyl-4-(1-methylethyl)-5-oxo-1H-imidazol-2-yl]-5-ethyl-

Aquatic plants:

EC50 (14 d) 0.0101 mg/l, Lemna gibba

No observed effect concentration 0.00438 mg/l, Lemna gibba

EC50 (96 h) 71 mg/l, Selenastrum capricornutum

No observed effect concentration (96 h) 50 mg/l, Selenastrum capricornutum

Information on: imazapyr, 2-[4,5-dihydro-4-methyl-4-(1-methylethyl)-5-oxo-1H-imidazol-2-yl]-3-pyridine carboxylate

Aquatic plants:

EC50 (7 d) 11.7 mg/l, Anabaena flos-aquae

No observed effect concentration 5.26 mg/l, Anabaena flos-aquae

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## Mobility

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: 3-Pyridinecarboxylic acid, 2-[4,5-dihydro-4-methyl-4-(1-methylethyl)-5-oxo-1H-imidazol-2-yl]-5-ethyl-

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: imazapyr, 2-[4,5-dihydro-4-methyl-4-(1-methylethyl)-5-oxo-1H-imidazol-2-yl]-3-pyridine carboxylate

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.

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## Persistence and degradability

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

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

Information on: 3-Pyridinecarboxylic acid, 2-[4,5-dihydro-4-methyl-4-(1-methylethyl)-5-oxo-1H-imidazol-2-yl]-5-ethyl-

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

Not readily biodegradable (by OECD criteria).

Information on: imazapyr, 2-[4,5-dihydro-4-methyl-4-(1-methylethyl)-5-oxo-1H-imidazol-2-yl]-3-pyridine carboxylate

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

Not readily biodegradable (by OECD criteria).

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### Bioaccumulation potential

Assessment bioaccumulation potential:

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

Information on: 3-Pyridinecarboxylic acid, 2-[4,5-dihydro-4-methyl-4-(1-methylethyl)-5-oxo-1H-imidazol-2-yl]-5-ethyl-

Bioaccumulation potential:

Because of the n-octanol/water distribution coefficient (log Pow) accumulation in organisms is not to be expected.

Information on: imazapyr, 2-[4,5-dihydro-4-methyl-4-(1-methylethyl)-5-oxo-1H-imidazol-2-yl]-3-pyridine carboxylate

Bioaccumulation potential:

Bioconcentration factor: < 1.0, Lepomis macrochirus

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### Additional information

Other ecotoxicological advice:

Do not discharge product into the environment without control.

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## 13. Disposal Considerations

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.

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## 14. Transport Information

### Domestic transport:

Hazard class:	9
Packing group:	III
ID number:	UN 3077
Hazard label:	9, EHSM
Proper shipping name:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (contains IMAZAPYR, IMAZETHAPYR)

### Further information

Hazchem Code:2Z

IERG Number:47

### Sea transport

IMDG

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Hazard class: 9  
Packing group: III  
ID number: UN 3077  
Hazard label: 9, EHSM  
Marine pollutant: YES  
Proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.  
(contains IMAZAPYR, IMAZETHAPYR)

**Air transport**

IATA/ICAO

Hazard class: 9  
Packing group: III  
ID number: UN 3077  
Hazard label: 9, EHSM  
Proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.  
(contains IMAZAPYR, IMAZETHAPYR)

**Further information**

Environmentally Hazardous Substances meeting the description of UN 3077 or UN 3082 are not subjected to the Australian Dangerous Goods Code when transported by road or rail in packagings not exceeding 500 kg(L) or IBCs.

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**15. Regulatory Information****Other regulations**

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

Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP): Schedule 5

**Registration status:**

AICS, AU released w/o restriction f. BASF / not listed  
APVMA Approval 52742

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**16. Other Information**

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

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