

# Safety Data Sheet

## CYGNUS

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### 1. Identification

#### Product identifier used on the label

**CYGNUS**

#### Recommended use of the chemical and restriction on use

Recommended use\*: crop protection product, fungicide

\* The "Recommended use" identified for this product is provided solely to comply with a Federal requirement and is not part of the seller's published specification. The terms of this Safety Data Sheet (SDS) do not create or infer any warranty, express or implied, including by incorporation into or reference in the seller's sales agreement.

#### Details of the supplier of the safety data sheet

Company:  
BASF CORPORATION  
100 Park Avenue  
Florham Park, NJ 07932, USA

Telephone: +1 973 245-6000

#### Emergency telephone number

##### 24 Hour Emergency Response Information

CHEMTREC: 1-800-424-9300  
BASF HOTLINE: 1-800-832-HELP (4357)

#### Other means of identification

Substance number: 24436  
EPA Registration number: 7969-124  
Molecular formula: C(18) H(19) N O(4)  
Chemical family: strobilurine  
Synonyms: kresoxim methyl

### 2. Hazards Identification

**According to Regulation 2012 OSHA Hazard Communication Standard; 29 CFR Part 1910.1200**

#### Classification of the product

Carc.	2	Carcinogenicity
Aquatic Acute	1	Hazardous to the aquatic environment - acute
Aquatic Chronic	1	Hazardous to the aquatic environment - chronic

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Combustible Dust                      Combustible Dust (1)                      Combustible Dust

### Label elements

Pictogram:



Signal Word:  
Warning

Hazard Statement:

H351                      May form combustible dust concentration in air.  
H400                      Suspected of causing cancer.  
H410                      Very toxic to aquatic life.  
H410                      Very toxic to aquatic life with long lasting effects.

Precautionary Statements (Prevention):

P280                      Wear protective gloves, protective clothing and eye protection or face protection.  
P273                      Avoid release to the environment.  
P201                      Obtain special instructions before use.  
P202                      Do not handle until all safety precautions have been read and understood.

Precautionary Statements (Response):

P308 + P313                      IF exposed or concerned: Get medical attention.  
P391                      Collect spillage.

Precautionary Statements (Storage):

P405                      Store locked up.

Precautionary Statements (Disposal):

P501                      Dispose of contents/container in accordance with local regulations.

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### 3. Composition / Information on Ingredients

**According to Regulation 2012 OSHA Hazard Communication Standard; 29 CFR Part 1910.1200**

Ammonium sulphate

CAS Number: 7783-20-2  
Content (W/W): 7.0 - 15.0%  
Synonym: Sulfuric acid, diammonium salt

methyl (E)-2-methoxyimino-2-(2-(o-tolyloxymethyl)phenyl)acetate

CAS Number: 143390-89-0  
Content (W/W): 50.0 %  
Synonym: No data available.

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### 4. First-Aid Measures

**Description of first aid measures**

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### General advice:

Remove contaminated clothing.

### If inhaled:

Keep patient calm, remove to fresh air, seek medical attention.

### If on skin:

Wash thoroughly with soap and water

### If in eyes:

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

### If swallowed:

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

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

Symptoms: Information, i.e. additional information on symptoms and effects may be included in the GHS labeling phrases available in Section 2 and in the Toxicological assessments available in Section 11., (Further) symptoms and / or effects are not known so far

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

#### Note to physician

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

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## 5. Fire-Fighting Measures

### Extinguishing media

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

### Special hazards arising from the substance or mixture

Hazards during fire-fighting:  
carbon monoxide, carbon dioxide, Hydrogen chloride, nitrogen oxides, sulfur oxides, sodium oxides, silica compounds, halogenated compounds  
The substances/groups of substances mentioned can be released in case of fire.

### Advice for fire-fighters

Protective equipment for fire-fighting:  
Firefighters should be equipped with self-contained breathing apparatus and turn-out gear.

### Further information:

Evacuate area of all unnecessary personnel. Contain contaminated water/firefighting water. Do not allow to enter drains or waterways.

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## 6. Accidental release measures

### Personal precautions, protective equipment and emergency procedures

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Take appropriate protective measures. Clear area. Shut off source of leak only under safe conditions. Extinguish sources of ignition nearby and downwind. Ensure adequate ventilation. Wear suitable personal protective clothing and equipment.

### Environmental precautions

Do not discharge into the subsoil/soil. Do not discharge into drains/surface waters/groundwater. Contain contaminated water/firefighting water.

### Methods and material for containment and cleaning up

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

### Precautions for safe handling

RECOMMENDATIONS ARE FOR MANUFACTURING, COMMERCIAL BLENDING, AND PACKAGING WORKERS. PESTICIDE APPLICATORS & WORKERS must refer to the Product Label and Directions for Use attached to the product for Agricultural Use Requirements in accordance with the EPA Worker Protection Standard 40 CFR part 170. Ensure adequate ventilation. Provide good ventilation of working area (local exhaust ventilation if necessary). Keep away from sources of ignition - No smoking. Keep container tightly sealed. Protect contents from the effects of light. Protect against heat. Protect from air. Handle and open container with care. Do not open until ready to use. Once container is opened, content should be used as soon as possible. Avoid aerosol formation. Avoid dust formation. Provide means for controlling leaks and spills. Do not return residues to the storage containers. Follow label warnings even after container is emptied. The substance/ product may be handled only by appropriately trained personnel. Avoid all direct contact with the substance/product. Avoid contact with the skin, eyes and clothing. Avoid inhalation of dusts/mists/vapours. Wear suitable personal protective clothing and equipment.

### Protection against fire and explosion:

The relevant fire protection measures should be noted. Fire extinguishers should be kept handy. Avoid all sources of ignition: heat, sparks, open flame. Sources of ignition should be kept well clear. Avoid extreme heat. Keep away from oxidizable substances. Electrical equipment should conform to national electric code. Ground all transfer equipment properly to prevent electrostatic discharge. Electrostatic discharge may cause ignition.

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.

### Conditions for safe storage, including any incompatibilities

Segregate from foods and animal feeds.

Further information on storage conditions: Keep only in the original container in a cool, dry, well-ventilated place away from ignition sources, heat or flame. Protect containers from physical damage. Protect against contamination. The authority permits and storage regulations must be observed. 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.

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## 8. Exposure Controls/Personal Protection

**Users of a pesticidal product should refer to the product label for personal protective equipment requirements.**

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### **Advice on system design:**

Whenever possible, engineering controls should be used to minimize the need for personal protective equipment.

### **Personal protective equipment**

#### **RECOMMENDATIONS FOR MANUFACTURING, COMMERCIAL BLENDING, AND PACKAGING WORKERS:**

#### **Respiratory protection:**

Wear respiratory protection if ventilation is inadequate. Wear a NIOSH-certified (or equivalent) TC23C Chemical/Mechanical type filter system to remove a combination of particles, gas and vapours. For situations where the airborne concentrations may exceed the level for which an air purifying respirator is effective, or where the levels are unknown or Immediately Dangerous to Life or Health (IDLH), use NIOSH-certified full facepiece pressure demand self-contained breathing apparatus (SCBA) or a full facepiece pressure demand supplied-air respirator (SAR) with escape provisions.

#### **Hand protection:**

Chemical resistant protective gloves, Protective glove selection must be based on the user's assessment of the workplace hazards.

#### **Eye protection:**

Safety glasses with side-shields. Tightly fitting safety goggles (chemical goggles). Wear face shield if splashing hazard exists.

#### **Body protection:**

Body protection must be chosen depending on activity and possible exposure, e.g. head protection, apron, protective boots, chemical-protection suit.

#### **General safety and hygiene measures:**

Wear long sleeved work shirt and long work pants in addition to other stated personal protective equipment. Work place should be equipped with a shower and an eye wash. Handle in accordance with good industrial hygiene and safety practice. Personal protective equipment should be decontaminated prior to reuse. Gloves must be inspected regularly and prior to each use. Replace if necessary (e.g. pinhole leaks). Take off immediately all contaminated clothing. Store work clothing separately. Hands and/or face should be washed before breaks and at the end of the shift. No eating, drinking, smoking or tobacco use at the place of work. Keep away from food, drink and animal feeding stuffs.

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## 9. Physical and Chemical Properties

Form:	solid
Odour:	sulfur-like, mild
Odour threshold:	Not determined due to potential health hazard by inhalation.
Colour:	brown
pH value:	5.8 approx. 5 - 8 ( 20 °C)
Melting point:	Decomposes without melting.
Flash point:	not applicable, the product is a solid
Lower explosion limit:	(VDI 2263)

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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.	
Density:	approx. 1.30 g/cm <sup>3</sup> ( 20 °C)	(OECD Guideline 109)
Bulk density:	approx. 630 kg/m <sup>3</sup> ( 20 °C)	
Vapour density:	Apparent density after tamping	
Partitioning coefficient n-octanol/water (log Pow):	not applicable	
Self-ignition temperature:	not self-igniting	
Thermal decomposition:	No decomposition if stored and handled as prescribed/indicated.	
Solubility in water:	dispersible	
Molar mass:	313.8 g/mol	
Evaporation rate:	not applicable	

## 10. Stability and Reactivity

### Reactivity

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

Corrosion to metals:

Corrosive effects to metal are not anticipated. Not corrosive to: mild steel

Oxidizing properties:

not fire-propagating (UN Test O.1 (oxidizing solids))

### Chemical stability

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

### Possibility of hazardous reactions

The product is chemically stable.

### Conditions to avoid

Avoid all sources of ignition: heat, sparks, open flame. Avoid prolonged storage. Avoid electro-static discharge. Avoid contamination. Avoid prolonged exposure to extreme heat. Avoid extreme temperatures. This product may form an explosive mixture if: 1. the dust is suspended in the atmosphere as a dust cloud AND 2. the concentration of the dust is above the lower explosion limit (LEL) AND 3. the limiting oxygen concentration (LOC) is exceeded.

### Incompatible materials

strong oxidizing agents

### Hazardous decomposition products

Decomposition products:

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

Thermal decomposition:

No decomposition if stored and handled as prescribed/indicated.

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### 11. Toxicological information

#### Primary routes of exposure

Routes of entry for solids and liquids are ingestion and inhalation, but may include eye or skin contact. Routes of entry for gases include inhalation and eye contact. Skin contact may be a route of entry for liquefied gases.

#### Acute Toxicity/Effects

##### Acute toxicity

Assessment of acute toxicity: Relatively nontoxic after single ingestion. Slightly toxic after short-term skin contact. Relatively nontoxic after short-term inhalation.

##### Oral

Type of value: LD50

Species: rat (male/female)

Value: > 5,000 mg/kg (Directive 84/449/EEC, B.1)

No mortality was observed.

##### Inhalation

Type of value: LC50

Species: rat

Value: > 5.7 mg/l (OECD Guideline 403)

Exposure time: 4 h

Tested as dust aerosol.

No mortality was observed.

##### Dermal

Type of value: LD50

Species: rat (male/female)

Value: > 2,000 mg/kg (OECD Guideline 402)

No mortality was observed.

##### Assessment other acute effects

Assessment of STOT single:

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

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

##### Irritation / corrosion

Assessment of irritating effects: May cause slight irritation to the skin. May cause moderate but temporary irritation to the eyes.

##### Skin

Species: rabbit

Result: non-irritant

Method: Directive 84/449/EEC, B.4

##### Eye

Species: rabbit

Result: non-irritant

Method: Directive 84/449/EEC, B.5

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### Sensitization

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

Mouse Local Lymph Node Assay (LLNA)

Species: mouse

Result: Non-sensitizing.

Method: OECD Guideline 429

### Aspiration Hazard

No aspiration hazard expected. The product has not been tested. The statement has been derived from the properties of the individual components.

## **Chronic Toxicity/Effects**

### Repeated dose toxicity

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.

### Genetic toxicity

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: Kresoxim-methyl*

*Assessment of carcinogenicity: Limited evidence 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.

### Teratogenicity

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.

### Other Information

Misuse can be harmful to health.

### Medical conditions aggravated by overexposure

Individuals with pre-existing diseases of the respiratory system, skin or eyes may have increased susceptibility to excessive exposures.

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## **12. Ecological Information**

### **Toxicity**

Aquatic toxicity

Assessment of aquatic toxicity:

Very toxic (acute effect) to aquatic organisms.



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### Toxicity to fish

LC50 (96 h) approx. 0.19 mg/l, *Oncorhynchus mykiss*

### Aquatic invertebrates

EC50 (48 h) > 0,25 < 0,5 mg/l, *Daphnia magna*

### Aquatic plants

EC10 (72 h) 0.033 mg/l (growth rate), *Pseudokirchneriella subcapitata*

EC50 (72 h) 0.532 mg/l (growth rate), *Pseudokirchneriella subcapitata*

No observed effect concentration (72 h) 0.03 mg/l, *Pseudokirchneriella subcapitata*

### Chronic toxicity to fish

No observed effect concentration (28 d) 0.167 mg/l, *Oncorhynchus mykiss*

### Chronic toxicity to aquatic invertebrates

No observed effect concentration (21 d) 0.150 mg/l, *Daphnia magna*

### Toxicity to fish

#### *Information on: Kresoxim-methyl*

LC50 (96 h) 0.19 mg/l, *Oncorhynchus mykiss* (OPP 72-1 (EPA-Guideline), Flow through.)

The statement of the toxic effect relates to the analytically determined concentration.

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### Aquatic invertebrates

#### *Information on: Kresoxim-methyl*

EC50 (96 h) 0.059 mg/l, *Mysidopsis bahia*

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### Aquatic plants

#### *Information on: Kresoxim-methyl*

EC50 (72 h) 0.250 mg/l (growth rate), *Ankistrodesmus bibraianus*

EC10 (72 h) 0.007 mg/l (growth rate), *Ankistrodesmus bibraianus* (OECD Guideline 201)

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### Assessment of terrestrial toxicity

Acutely harmful to terrestrial organisms.

## **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.

## **Additional information**

### Other ecotoxicological advice:

The ecological data given are those of the active ingredient. Do not release untreated into natural waters.

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### 13. Disposal considerations

#### **Waste disposal of substance:**

Pesticide wastes are regulated. Improper disposal of excess pesticide, spray mix or rinsate is a violation of federal law. If pesticide wastes cannot be disposed of according to label instructions, contact the State Pesticide or Environmental Control Agency or the Hazardous Waste representative at the nearest EPA Regional Office for guidance.

#### **Container disposal:**

Rinse thoroughly at least three times (triple rinse) in accordance with EPA recommendations. Consult state or local disposal authorities for approved alternative procedures such as container recycling. Recommend crushing, puncturing or other means to prevent unauthorized use of used containers.

#### **RCRA:**

This product is not regulated by RCRA.

### 14. Transport Information

#### **Land transport**

USDOT

Not classified as a dangerous good under transport regulations

#### **Sea transport**

IMDG

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 KRESOXIM-METHYL 50%)

#### **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 KRESOXIM-METHYL 50%)

#### **Further information**

Product may be shipped as non-hazardous in suitable packages containing a net quantity of 5 kg or less under the provisions of various regulatory agencies: ADR, RID, ADN: Special Provision 375; IMDG: 2.10.2.7; IATA: A197; TDG: Special Provision 99(2); 49CFR: §171.4 (c) (2).

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Product may be shipped as non-hazardous in suitable packages containing a net quantity of 5 kg or less under the provisions of various regulatory agencies: ADR, RID, ADN: Special Provision 375; IMDG: 2.10.2.7; IATA: A197; TDG: Special Provision 99(2); 49CFR: §171.4 (c) (2).

## 15. Regulatory Information

### Federal Regulations

#### Registration status:

Chemical TSCA, US blocked / not listed

Crop Protection TSCA, US released / exempt

**EPCRA 311/312 (Hazard categories):** Refer to SDS section 2 for GHS hazard classes applicable for this product.

#### **Safe Drinking Water & Toxic Enforcement Act, CA Prop. 65:**

**WARNING:** This product can expose you to chemicals including ETHYLENE OXIDE, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information, go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

#### **NFPA Hazard codes:**

Health: 1 Fire: 2 Reactivity: 1 Special:

#### **Labeling requirements under FIFRA**

This chemical is a pesticide product registered by the Environmental Protection Agency and is subject to certain labeling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information required for safety data sheets, and workplace labels of non-pesticide chemicals. Following is the hazard information as required on the pesticide label.

CAUTION:

KEEP OUT OF REACH OF CHILDREN.

HARMFUL IF INHALED.

HARMFUL IF SWALLOWED.

HARMFUL IF ABSORBED THROUGH SKIN.

Causes eye irritation.

Do not get in eyes, on skin, or on clothing.

Avoid inhalation of mists/vapours.

## 16. Other Information

#### **SDS Prepared by:**

BASF NA Product Regulations

SDS Prepared on: 2021/02/08

We support worldwide Responsible Care® initiatives. We value the health and safety of our employees, customers, suppliers and neighbors, and the protection of the environment. Our commitment to Responsible Care is integral to conducting our business and operating our facilities in a safe and environmentally responsible fashion, supporting our customers and suppliers in ensuring

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the safe and environmentally sound handling of our products, and minimizing the impact of our operations on society and the environment during production, storage, transport, use and disposal of our products.

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IMPORTANT: WHILE THE DESCRIPTIONS, DESIGNS, DATA AND INFORMATION CONTAINED HEREIN ARE PRESENTED IN GOOD FAITH AND BELIEVED TO BE ACCURATE , IT IS PROVIDED FOR YOUR GUIDANCE ONLY. BECAUSE MANY FACTORS MAY AFFECT PROCESSING OR APPLICATION/USE, WE RECOMMEND THAT YOU MAKE TESTS TO DETERMINE THE SUITABILITY OF A PRODUCT FOR YOUR PARTICULAR PURPOSE PRIOR TO USE. NO WARRANTIES OF ANY KIND, EITHER EXPRESSED OR IMPLIED, INCLUDING WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, ARE MADE REGARDING PRODUCTS DESCRIBED OR DESIGNS, DATA OR INFORMATION SET FORTH, OR THAT THE PRODUCTS, DESIGNS, DATA OR INFORMATION MAY BE USED WITHOUT INFRINGING THE INTELLECTUAL PROPERTY RIGHTS OF OTHERS. IN NO CASE SHALL THE DESCRIPTIONS, INFORMATION, DATA OR DESIGNS PROVIDED BE CONSIDERED A PART OF OUR TERMS AND CONDITIONS OF SALE. FURTHER, YOU EXPRESSLY UNDERSTAND AND AGREE THAT THE DESCRIPTIONS, DESIGNS, DATA, AND INFORMATION FURNISHED BY OUR COMPANY HEREUNDER ARE GIVEN GRATIS AND WE ASSUME NO OBLIGATION OR LIABILITY FOR THE DESCRIPTION, DESIGNS, DATA AND INFORMATION GIVEN OR RESULTS OBTAINED, ALL SUCH BEING GIVEN AND ACCEPTED AT YOUR RISK.  
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