



MATERIAL SAFETY DATA SHEET

Cairo star

IDENTIFICATION OF THE SUPPLIER:

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IDENTIFICATION OF THE PRODUCT:

Trade name: Cairo star
Uses: Insecticide
Type of formulation: Wettable powder (WP)
Common name: Cyromazine
Chemical name: N-cyclopropyl-1,3,5-triazine-2,4,6-triamine
Empirical formula: C₆H₁₀N₆

Composition:

Each 1 Kg contains the following:

Contents	CAS#	Amount in g/Kg
Cyromazine (a.i)	66215-27-8	750
Inert Materials : UP to 1 kg		

HAZARDS IDENTIFICATION:


1. Classification of the substance or mixture

Classification (REGULATION (EC) No 1272/2008)

Chronic aquatic toxicity, Category 1	H410: Very toxic to aquatic life with long lasting effects.
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2. Label elements

Labelling (REGULATION (EC) No 1272/2008)

Hazard pictograms:	
Signal word:	Warning
Hazard statements:	H410 Very toxic to aquatic life with long lasting effects.
Supplemental Hazard Statements:	EUH401 To avoid risks to human health and the environment, comply with the instructions for use.
Precautionary statements:	Response: P391 Collect spillage. Disposal: P501 Dispose of contents/ container to an approved waste disposal plant.

3. Other hazards

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

May form flammable dust-air mixture.

FIRST AID MEASURES:

1. Description of first aid measures

General advice:	Have the product container, label or Safety Data Sheet with you when calling the emergency number, a poison control center or physician, or going for treatment.
If inhaled:	Move the victim to fresh air. If breathing is irregular or stopped, administer artificial respiration. Keep patient warm and at rest. Call a physician or poison control center immediately.
In case of skin contact:	Take off all contaminated clothing immediately. Wash off immediately with plenty of water. If skin irritation persists, call a physician. Wash contaminated clothing before re-use.
In case of eye contact:	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses. Immediate medical attention is required.
If swallowed:	If swallowed, seek medical advice immediately and show this container or label. Do NOT induce vomiting.

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

Symptoms:	No information available.
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3. Indication of any immediate medical attention and special treatment needed

Treatment:	There is no specific antidote available. Treat symptomatically.
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FIREFIGHTING MEASURES:

1. Extinguishing media

Suitable extinguishing media:	Extinguishing media - small fires Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide. Extinguishing media - large fires Alcohol-resistant foam or Water spray
Unsuitable extinguishing media:	Do not use a solid water stream as it may scatter and spread fire.

2. Special hazards arising from the substance or mixture

Specific hazards during firefighting:	As the product contains combustible organic components, fire will produce dense black smoke containing hazardous products of combustion. Exposure to decomposition products may be a hazard to health.
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3. Advice for firefighters

Special protective equipment for firefighters:	Wear full protective clothing and self-contained breathing apparatus.
Further information:	Do not allow run-off from fire fighting to enter drains or water courses. Cool closed containers exposed to fire with water spray.

ACCIDENTAL RELEASE MEASURES:

1. Personal precautions, protective equipment and emergency procedures

Personal precautions:	Refer to protective measures. Avoid dust formation.
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2. Environmental precautions

Environmental precautions:	Do not flush into surface water or sanitary sewer system. If the product contaminates rivers and lakes or drains inform respective authorities.
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3. Methods and material for containment and cleaning up

Methods for cleaning up:	Contain spillage, pick up with an electrically protected vacuum cleaner or by wet-brushing and transfer to a container for disposal according to local regulations. Do not create a powder cloud by using a brush or compressed air. Clean contaminated surface thoroughly.
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4. Reference to other sections

For disposal considerations, Refer to protective measures.

HANDLING AND STORAGE:

1. Precautions for safe handling

Advice on safe handling:	<p>This material is capable of forming flammable dust clouds in air, which, if ignited, can produce a dust cloud explosion.</p> <p>Flames, hot surfaces, mechanical sparks and electrostatic discharges can serve as ignition sources for this material.</p> <p>Electrical equipment should be compatible with the flammability characteristics of this material. The flammability characteristics will be made worse if the material contains traces of flammable solvents or is handled in the presence of flammable solvents.</p> <p>Avoid contact with skin and eyes.</p> <p>When using do not eat, drink or smoke.</p> <p>For personal protection.</p>
Dust explosion class:	May form flammable dust-air mixture.

2. Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers:	<p>Keep containers tightly closed in a dry, cool and well ventilated place. Keep out of the reach of children.</p> <p>Keep away from food, drink and animal feedingstuffs.</p>
Other data:	Physically and chemically stable for at least 2 years when stored in the original unopened sales container at ambient temperatures.

3. Specific end use(s)

Specific use(s):	For proper and safe use of this product, please refer to the approval conditions laid down on the product label.
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EXPOSURE CONTROLS/PERSONAL PROTECTION:

1. Control parameters

Occupational Exposure Limits

Components	CAS-No.	Value type (Form of exposure)	Control parameters	Basis
cyromazine	66215-27-8	TWA	3 mg/m ³	Syngenta
silicon dioxide, chemically prepared	112926-00-8	TWA (inhalable dust)	4 mg/m ³	CH SUVA
Further information	Harm to the unborn child is not to be expected when the OEL-value is respected			
kaolin	1332-58-7	TWA (alveolate dust)	3 mg/m ³	CH SUVA
Further information	If the kaoline contains quartz, take its limit value into account			

2. Exposure controls

Engineering measures

Containment and/or segregation is the most reliable technical protection measure if exposure cannot be eliminated.

The extent of these protection measures depends on the actual risks in use.

Maintain air concentrations below occupational exposure standards.

Where necessary, seek additional occupational hygiene advice.

Personal protective equipment

Eye protection:	No special protective equipment required.
Hand protection	No special protective equipment required.
Remarks:	
Skin and body protection:	No special protective equipment required. Select skin and body protection based on the physical job requirements.
Respiratory protection:	No personal respiratory protective equipment normally required. When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.

Protective measures :	The use of technical measures should always have priority over the use of personal protective equipment. When selecting personal protective equipment, seek appropriate professional advice.
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PHYSICAL AND CHEMICAL PROPERTIES:

1. Information on basic physical and chemical properties

Appearance:	powder
Colour:	white to tan
Odour:	characteristic
pH:	6 - 10 Concentration: 1 % w/v
Flammability (solid, gas):	Not classified as a flammability hazard
Bulk density:	0.30 - 0.40 g/cm ³
Auto-ignition temperature:	250 °C
Explosive properties:	Not explosive
Oxidizing properties:	The substance or mixture is not classified as oxidizing.

2. Other information

Minimum ignition temperature:	800 °C
Self-heating substances:	The substance or mixture is not classified as self heating.
Burning number:	2 at 20 °C 3 at 100 °C
Dust explosion class:	May form flammable dust-air mixture.
Minimum ignition energy:	100 - 300 mJ

STABILITY AND REACTIVITY:

1. Reactivity

See section 3 "Possibility of hazardous reactions".

2. Chemical stability

Stable under normal conditions.

3. Possibility of hazardous reactions

Hazardous reactions:	No dangerous reaction known under conditions of normal use.
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4. Conditions to avoid

Conditions to avoid:	No decomposition if used as directed.
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5. Incompatible materials

Materials to avoid:	None known.
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6. Hazardous decomposition products

Combustion or thermal decomposition will evolve toxic and irritant vapours.

TOXICOLOGICAL INFORMATION:

1. Information on toxicological effects

Acute toxicity

Product:

Acute oral toxicity:	LD ₅₀ (Rat, male and female) : > 2,000 mg/kg
Acute inhalation toxicity:	LC ₅₀ (Rat, male and female) : > 4.18 mg/l Exposure time: 4 h Test atmosphere: dust/mist Assessment: The substance or mixture has no acute inhalation toxicity Remarks: Highest attainable concentration
Acute dermal toxicity :	LD ₅₀ (Rat, male and female): > 2,000 mg/kg Assessment: The substance or mixture has no acute dermal toxicity

Components:

Cyromazine:

Acute oral toxicity:	LD ₅₀ (Rat, male and female): 3,920 mg/kg
Acute inhalation toxicity:	LC ₅₀ (Rat, male and female): > 3.6 mg/l Exposure time: 4 h Test atmosphere: dust/mist Assessment: The substance or mixture has no acute inhalation toxicity
Acute dermal toxicity:	LD ₅₀ (Rat, male and female): > 2,000 mg/kg Assessment: The substance or mixture has no acute dermal toxicity

naphthalenesulfonic acids, polymers with formaldehyde and sulfonated phenol, sodium salts:

Acute oral toxicity:	LD ₅₀ (Rat): > 2,000 mg/kg Assessment: The substance or mixture has no acute oral toxicity
Acute dermal toxicity:	LD ₅₀ (Rat): > 2,000 mg/kg Assessment: The substance or mixture has no acute dermal toxicity

Sodium dodecyl sulphate:

Acute oral toxicity :	LD ₅₀ (Rat, male and female): > 1,800 mg/kg
Acute dermal toxicity:	LD ₅₀ (Rat, male and female): > 2,000 mg/kg Assessment: The substance or mixture has no acute dermal toxicity

Skin corrosion/irritation

Product:

Species: Rabbit

Result: No skin irritation

Components:

cyromazine:

Species: Rabbit

Result: No skin irritation

naphthalenesulfonic acids, polymers with formaldehyde and sulfonated phenol, sodium salts:

Species: Rabbit

Result: No skin irritation

Sodium dodecyl sulphate:

Assessment: Irritating to skin.

Serious eye damage/eye irritation

Product:

Species: Rabbit

Result: No eye irritation

Components:**cyromazine:**

Species: Rabbit

Result: No eye irritation

naphthalenesulfonic acids, polymers with formaldehyde and sulfonated phenol, sodium salts:

Species: Rabbit

Result: Eye irritation

Sodium dodecyl sulphate:

Assessment: Risk of serious damage to eyes.

Respiratory or skin sensitisation**Product:**

Species: Guinea pig

Result: Did not cause sensitisation on laboratory animals.

Components:**Cyromazine:**

Species: Guinea pig

Result: Did not cause sensitisation on laboratory animals.

Naphthalenesulfonic acids, polymers with formaldehyde and sulfonated phenol, sodium salts:

Species: Guinea pig

Result: Did not cause sensitisation on laboratory animals.

Sodium dodecyl sulphate:

Species: Guinea pig

Result: Did not cause sensitisation on laboratory animals.

Germ cell mutagenicity**Components:****Cyromazine:**

Germ cell mutagenicity Assessment:	Animal testing did not show any mutagenic effects.
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Sodium dodecyl sulphate:

Germ cell mutagenicity Assessment:	In vitro tests did not show mutagenic effects
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Carcinogenicity

Components:

Cyromazine:

Carcinogenicity Assessment:	No evidence of carcinogenicity in animal studies.
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Reproductive toxicity

Components:

Cyromazine:

Reproductive toxicity Assessment:	No toxicity to reproduction
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Repeated dose toxicity

Components:

Cyromazine:

Remarks: No adverse effect has been observed in chronic toxicity tests.

ECOLOGICAL INFORMATION:

1. Toxicity

Product:

Toxicity to fish:	LC ₅₀ (Oncorhynchus mykiss (rainbow trout)): > 100 mg/l Exposure time: 96 h
Toxicity to daphnia and other aquatic invertebrates:	EC ₅₀ (Daphnia magna Straus): 90 mg/l Exposure time: 48 h

<p>Toxicity to algae:</p>	<p>ErC₅₀ (Pseudokirchneriella subcapitata (green algae)): 110 mg/l Exposure time: 72 h NOEC (Pseudokirchneriella subcapitata (green algae)): 18 mg/l End point: Growth rate Exposure time: 72 h</p>
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Ecotoxicology Assessment

<p>Chronic aquatic toxicity:</p>	<p>Very toxic to aquatic life with long lasting effects., Classification of the product is based on the summation of the concentrations of classified components.</p>
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Components:

Cyromazine:

<p>Toxicity to fish:</p>	<p>LC₅₀ (Oncorhynchus mykiss (rainbow trout)): > 100 mg/l Exposure time: 96 h</p>
<p>Toxicity to daphnia and other aquatic invertebrates:</p>	<p>EC₅₀ (Daphnia magna (Water flea)): > 100 mg/l Exposure time: 48 h</p>
<p>Toxicity to algae:</p>	<p>ErC₅₀ (Pseudokirchneriella subcapitata (green algae)): > 124 mg/l Exposure time: 72 h NOEC (Pseudokirchneriella subcapitata (green algae)): 0.36 mg/l End point: Growth rate Exposure time: 72 h</p>
<p>Toxicity to daphnia and other aquatic invertebrates:</p>	<p>NOEC: 0.31 mg/l Exposure time: 21 d</p>
<p>(Chronic toxicity)</p>	<p>Species: Daphnia (water flea) NOEC: 0.25 mg/l Exposure time: 28 d Species: Americamysis bahia (Mysid shrimp) NOEC: 0.025 mg/l Exposure time: 26 d Species: Chironomus riparius (harlequin fly)</p>

M-Factor (Chronic aquatic toxicity):	1
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naphthalenesulfonic acids, polymers with formaldehyde and sulfonated phenol, sodium salts:

Toxicity to fish:	LC ₅₀ (Leuciscus idus (Golden orfe)): 45 mg/l Exposure time: 96 h
Toxicity to daphnia and other aquatic invertebrates:	EC ₅₀ (Daphnia magna (Water flea)): 4.7 mg/l Exposure time: 48 h Test Type: static test

Ecotoxicology Assessment

Acute aquatic toxicity:	This product has no known ecotoxicological effects.
Chronic aquatic toxicity:	Harmful to aquatic life with long lasting effects.

2. Persistence and degradability

Components:

Cyromazine:

Biodegradability:	Result: Not readily biodegradable.
Stability in water:	Degradation half life: 94 - 254 d Remarks: Persistent in water.

naphthalenesulfonic acids, polymers with formaldehyde and sulfonated phenol, sodium salts:

Biodegradability:	Result: Not readily biodegradable.
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3. Bioaccumulative potential

Components:

Cyromazine:

Bioaccumulation:	Remarks: Does not bioaccumulate.
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4. Mobility in soil

Components:

Cyromazine:

Distribution among environmental compartments:	Remarks: Cyromazine has low to high mobility in soil
Stability in soil :	Percentage dissipation: 50 % (DT ₅₀ : 50 d) Remarks: Product is not persistent.

5. Results of PBT and vPvB assessment

Product:

Assessment:	This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher..
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Components:

Cyromazine:

Assessment:	This substance is not considered to be persistent, bioaccumulating and toxic (PBT).. This substance is not considered to be very persistent and very bioaccumulating (vPvB)..
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naphthalenesulfonic acids, polymers with formaldehyde and sulfonated phenol, sodium salts:

Assessment:	This substance is not considered to be persistent, bioaccumulating and toxic (PBT)..
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6. Other adverse effects

Components:

Cyromazine:

Additional ecological information:	No data available
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naphthalenesulfonic acids, polymers with formaldehyde and sulfonated phenol, sodium salts:

Additional ecological information:	No data available
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Sodium dodecyl sulphate:

Additional ecological information:	No data available
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DISPOSAL CONSIDERATIONS:

1. Waste treatment methods

Product:	Do not contaminate ponds, waterways or ditches with chemical or used container. Do not dispose of waste into sewer. Where possible recycling is preferred to disposal or incineration. If recycling is not practicable, dispose of in compliance with local regulations.
Contaminated packaging:	Empty remaining contents. Triple rinse containers. Empty containers should be taken to an approved waste handling site for recycling or disposal. Do not re-use empty containers.

TRANSPORT INFORMATION:

1. UN number

ADN:	UN 3077
ADR:	UN 3077
RID:	UN 3077
IMDG:	UN 3077
IATA:	UN 3077

2. UN proper shipping name



ADN: ENVIRONMENTALLY HAZARDOUS SUBSTANCE,
SOLID, N.O.S.
(CYROMAZINE)
ADR: ENVIRONMENTALLY HAZARDOUS SUBSTANCE,
SOLID, N.O.S.
(CYROMAZINE)
RID: ENVIRONMENTALLY HAZARDOUS SUBSTANCE,
SOLID, N.O.S.
(CYROMAZINE)
IMDG : ENVIRONMENTALLY HAZARDOUS SUBSTANCE,
SOLID, N.O.S.
(CYROMAZINE)
IATA: ENVIRONMENTALLY HAZARDOUS SUBSTANCE,
SOLID, N.O.S.
(CYROMAZINE)

3. Transport hazard class (es)

ADN: 9
ADR: 9
RID: 9
IMDG: 9
IATA: 9

4. Packing group

AND

Packing group: III
Classification Code: M7
Hazard Identification Number: 90
Labels: 9

ADR

Packing group: III
Classification Code: M7
Hazard Identification Number: 90
Labels: 9
Tunnel restriction code: (E)

RID

Packing group: III
Classification Code: M7



Hazard Identification Number: 90
Labels: 9

IMDG

Packing group: III
Labels: 9
EmS Code : F-A, S-F

IATA (Cargo)

Packing instruction (cargo aircraft): 956
Packing instruction (LQ): Y956
Packing group : III
Labels: Miscellaneous

IATA (Passenger)

Packing instruction (Passenger aircraft): 956
Packing instruction (LQ): Y956
Packing group : III
Labels: Miscellaneous

5. Environmental hazards

ADN

Environmentally hazardous: yes

ADR

Environmentally hazardous: yes

RID

Environmentally hazardous: yes

IMDG

Marine pollutant: yes

IATA (Passenger)

Marine pollutant: yes

IATA (Cargo)

Marine pollutant: yes

6. Special precautions for user

Not applicable

7. Transport in bulk according to Annex II of Marpol and the IBC Code

Not applicable for product as supplied.