# Cyflamid Safety Data Sheet

**Date of issue:** 17/11/2016  
**Revision date:** 17/11/2016  
**Version:** 3.4

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

### 1.1. Product identifier

<table>
<thead>
<tr>
<th>Product name</th>
<th>Cyflamid</th>
</tr>
</thead>
<tbody>
<tr>
<td>Product form</td>
<td>Mixture</td>
</tr>
<tr>
<td>Type of formulation</td>
<td>Emulsion, oil in water (EW)</td>
</tr>
<tr>
<td>Active Ingredient</td>
<td>Cyflufenamid</td>
</tr>
<tr>
<td>Composition code</td>
<td>NI 022 C0060</td>
</tr>
</tbody>
</table>

### 1.2. Relevant identified uses of the substance or mixture and uses advised against

#### 2.1. Relevant identified uses

- **Main use category:** Plant protection product for professional use. Agriculture.
- **Use of the substance/mixture:** Fungicide.

#### 1.2.2. Uses advised against

No additional information available.

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

**Supplier:**
Nisso Chemical Europe GmbH  
Berliner Allee 42  
40212 Düsseldorf, Allemagne  
T.: +49(0) 211 130 66 86 0  
F.: +49(0) 211 328231  
sds@nisso-chem.de

**Distributor:**
Suite 5, 3 Riverside  
Granta Park  
Great Abington  
Cambridgeshire CB21 6AD  
United Kingdom  
Tel: +44 (0)845 373 0305  
Fax: +44 (0)1223 891210  
Email: certis@certiseurope.co.uk  
Website: www.certiseurope.co.uk

### 1.4. Emergency telephone number

**Emergency number**  
Certis Carechem24 multilingual 24 hours emergency number: +44 (0) 870 190 6777.  
For advice on medical emergencies, fires, spillages or chemical hazards only – phone: 0870 190 6777.  
For further advice for medical professionals - The National Poisons Information Service:  
Tel: 0870 600 6266 (UK only) or Dublin Tel: 0035 3 137 99 64/379966.  
For further advice for veterinary surgeons: 020 7635 9195.
SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Aquatic Chronic 2  H411

Full text of H-phrases: see section 16.

2.2. Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms (CLP):

GHS09

Signal word (CLP) : -

Hazard statements (CLP) : H411 - Toxic to aquatic life with long lasting effects.

Precautionary statements (CLP):

P273 - Avoid release to the environment.
P280 - Wear protective gloves.
P391 - Collect spillage.
P501 - Dispose of contents/container to a licensed hazardous-waste disposal contractor or collection site except for empty clean containers which can be disposed of as non-hazardous waste.

EUH phrases : EUH401 - To avoid risks to human health and the environment, comply with the instructions for use.

2.3. Other hazards

No additional information available

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

<table>
<thead>
<tr>
<th>Name</th>
<th>Product identifier</th>
<th>%</th>
<th>Classification according to Regulation (EC) No. 1272/2008 [CLP]</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cyflufenamid</td>
<td>(CAS No) 180409-60-3</td>
<td>5.3</td>
<td>Aquatic Chronic 1, H410</td>
</tr>
<tr>
<td></td>
<td>(EC no) -</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(EC index no) -</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hydrocarbons, C10-C13, aromatics, &lt;1% naphthalene</td>
<td>(CAS No) -</td>
<td>18</td>
<td>Asp. Tox. 1, H304</td>
</tr>
<tr>
<td></td>
<td>(EC no) 922-153-0</td>
<td></td>
<td>Aquatic Chronic 2, H411</td>
</tr>
<tr>
<td></td>
<td>(EC index no) -</td>
<td></td>
<td>EUH066</td>
</tr>
<tr>
<td>Sorbitane trioleate (Anhydro-D-glucitol trioleate)</td>
<td>(CAS No) 26266-58-0</td>
<td>10</td>
<td>Skin Irrit. 2, H315</td>
</tr>
<tr>
<td></td>
<td>(EC no) 247-569-3</td>
<td></td>
<td>Eye Irrit. 2, H319</td>
</tr>
<tr>
<td></td>
<td>(EC index no) -</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Polyoxyethylene oleylether</td>
<td>(CAS No) 9004-98-2</td>
<td>10</td>
<td>Skin Irrit. 2, H315</td>
</tr>
<tr>
<td></td>
<td>(CAS No) 500-016-2</td>
<td></td>
<td>Eye Irrit. 2, H319</td>
</tr>
<tr>
<td></td>
<td>(EC index no) -</td>
<td></td>
<td>Aquatic Acute 1, H400</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Aquatic Chronic 1, H410</td>
</tr>
</tbody>
</table>
## SECTION 4: First aid measures

### 4.1. Description of first aid measures

**First-aid measures general:** In the event of any complaints or symptoms, avoid further exposure.

**First-aid measures after inhalation:** IF INHALED: If breathing is difficult, remove to fresh air and keep at rest in a position comfortable for breathing. If symptoms persist call a doctor.

**First-aid measures after skin contact:** IF ON SKIN: Wash with plenty of soap and water. Remove contaminated clothing and shoes. If skin irritation or rash occurs: Get medical advice/attention.

**First-aid measures after eye contact:** IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Consult an eye specialist.

**First-aid measures after ingestion:** IF SWALLOWED: Immediately call a POISON CENTER or doctor. Never give anything by mouth to an unconscious person.

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

**Symptoms/injuries:** No data available.

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

Treat symptomatically.

## SECTION 5: Firefighting measures

### 5.1. Extinguishing media

**Suitable extinguishing media:** Water spray  
Dry chemical powder  
Alcohol resistant foam  
Carbon dioxide (CO<sub>2</sub>).

**Unsuitable extinguishing media:** Jet of water.

### 5.2. Special hazards arising from the substance or mixture

**Fire hazard:** Combustion or thermal decomposition may generate toxic vapours: chlorine compounds, nitrogen oxides, carbon monoxide, hydrocarbons.
5.3. Advice for firefighters

Firefighting instructions:
- Exercise caution when fighting any chemical fire.
- Fight fire from safe distance and protected location.
- Do not breathe fumes
- Cool closed containers exposed to fire with water spray
- If possible, take the containers out of dangerous zone.
- Contain fire-fighting water with dikes or absorbents to prevent migration and entry into sewers or streams.

Protection during firefighting:
- Wear suitable protective clothing, gloves, eye/face protection and respiratory protection
- Wear a self-contained breathing apparatus.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Protective equipment:
- Wear suitable protective clothing, gloves, eye or face protection.

Emergency procedures:
- Evacuate area.
- Ensure adequate ventilation.
- Avoid direct contact with the substance.
- Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams.

6.2. Environmental precautions

Prevent entry to sewers and public waters.
Notify the authorities if product enters sewers or public waters.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up:
- Clean up any spills as soon as possible, using an absorbent material to collect it.
- Once absorbed collect spilled material with shovels, buckets and place in closed containers and label properly.
- Remove as chemical waste, according to national or local legislation.
- In the event of major spillage: contact an expert.

6.4. Reference to other sections

Reference to other sections (8, 13).

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling:
- Read label before use.
- Avoid contact with eyes, skin, nose and mouth.
- Wear suitable protective clothing, gloves and eye/face protection.
- Opened containers must be carefully closed and kept upright to avoid leakage.

Hygiene measures:
- Always wash your hands immediately after handling this product, and once again before leaving the workplace.
- Contaminated work clothing should not be allowed out of the workplace.
- Do not eat, drink or smoke when using this product.
- Wash contaminated clothing before reuse.
7.2. Conditions for safe storage, including any incompatibilities

Technical measures : Provide adequate ventilation.

Storage conditions : Prevent unauthorised access.

Keep locked up and out of the reach of children.

Keep in original containers, tightly closed.

Keep away from food, drink and animal feedingstuffs.

Protect against frost.

Keep away from heat and direct sunlight.

7.3. Specific end use(s)

Fungicide for agricultural use. Refer to the label.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

No additional information available

8.2. Exposure controls

Appropriate engineering controls : Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure.


Hand protection : Wear impervious gloves resistant to chemical. Gloves material; e.g. outside Rubber, Vinyl chloride resin; inside: cotton, rayon.

Eye protection : Safety goggles or a face shield.

Skin and body protection : Protective clothing with long sleeves waterproof and resistant to chemicals. Rubber boots.

Respiratory protection : Wear appropriate respirator for dust / organic vapors.

Hygiene measures : Do not eat, drink or smoke while handling the product.

Clean gloves with soap and water before removing.

Wash hands and face with soap and water before eating, drinking or smoking.

Clean equipment, premises and work clothes regularly.

Work clothing should remain on the work area and stored separately from street clothes.

Environmental exposure controls : Discharge into the environment must be avoided.

Do not contaminate surface and groundwater.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state : Liquid

Colour : Off-white to pale yellow.

Odour : Aromatic.

Odour threshold : No data available

pH : No data available

Relative evaporation rate (butylacetate=1) : No data available

Melting point : No data available

Freezing point : No data available

Boiling point : 103 °C

Flash point : 112 °C (Cleaveland open cup)
Self ignition temperature : No data available
Decomposition temperature : >140 °C (Cyflufenamid)
Flammability (solid, gas) : No data available
Vapour pressure at 20 °C : 3.54 x 10^-5 Pa (Cyflufenamid)
Relative vapour density : No data available
Relative density : 1.027 (20°C)
Solubility : Insoluble.
Partition Coefficient n-Octanol/H2O : Log Pow = 4.7 (25°C, pH6.75)
Log Kow : No data available
Viscosity, kinematic : 3.7 x 10^-5 m²/sec (40°C)
Viscosity, dynamic : No data available
Explosive properties : Not explosive.
Oxidising properties : No oxidising properties.
Explosive limits : No data available

9.2. Other information
Surface tension : 31.9 mN/m (25°C)

SECTION 10: Stability and reactivity
10.1. Reactivity
The product is stable at normal handling and storage conditions.
10.2. Chemical stability
The product is stable at normal handling and storage conditions.
10.3. Possibility of hazardous reactions
Hazardous polymerization does not occur.
Is not explosive and does not exhibit oxidant properties.
10.4. Conditions to avoid
High temperature.
10.5. Incompatible materials
Strong oxidizing agents, strong acids or bases.
10.6. Hazardous decomposition products
Combustion or thermal decomposition may generate toxic vapours: chlorine compounds, nitrogen oxides, carbon monoxide, hydrocarbons.

SECTION 11: Toxicological information
11.1. Information on toxicological effects
Acute toxicity : Not classified

<table>
<thead>
<tr>
<th>CYFLUFENAMID 5% EW</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>LD50 oral rat</td>
<td>&gt; 5000 mg/kg</td>
</tr>
<tr>
<td>LD50 dermal rat</td>
<td>&gt; 2000 mg/kg</td>
</tr>
<tr>
<td>LC50 inhalation rat</td>
<td>&gt; 4.41 mg/l/4h</td>
</tr>
</tbody>
</table>

Skin Irritation : Moderate to severe irritation in rabbits.
Eye Irritation : Very slight irritation in rabbits.
Sensitisation : Not a skin sensitizer in guinea pigs.
Carcinogenicity : Not carcinogenic in rats and mice (Cyflufenamid)
Mutagenicity : Ames test: Negative. (Cyflufenamid)
Chromosomal aberration test: Negative. (Cyflufenamid)
Cytogenetic test (mouse lymphoma): Negative (Cyflufenamid)
Toxicity for reproduction : Negative (Cyflufenamid)

Tetraotenicity : Negative in rats and rabbits (Cyflufenamid).

Chronic Toxicity :
- NOAEL (rat, 2 years) : 4,4 mg/kg/day (male), 5,5 mg/kg/day (female)
- NOAEL (mice, 1.5 years) : 62,8 mg/kg/day (male), 9,0 mg/kg/jour (female)

Subchronic Toxicity :
- NOAEL (rat, 90 days, repeated dose) : 20,1 mg/kg/day (male), 24,7 mg/kg/day (female)

SECTION 12: Ecological information

12.1. Toxicity

<table>
<thead>
<tr>
<th>CYFLUFENAMID 5% EW</th>
</tr>
</thead>
<tbody>
<tr>
<td>LC50 Fishes (Oncorhynchus mykiss)</td>
</tr>
<tr>
<td>EC50 Daphnia (Daphnia magna)</td>
</tr>
<tr>
<td>ErC50 Algae (Selenastrum capricornutum)</td>
</tr>
<tr>
<td>Chronic Toxicity for Algae (NOEC)</td>
</tr>
</tbody>
</table>

12.2. Persistence and degradability

Cyflufenamid (180409-60-3)
- Persistence and degradability : Not readily biodegradable.

12.3. Bioaccumulative potential

Cyflufenamid (180409-60-3)
- BCF : BCF = 528 at 10 μg/L (Mean of 10 - 28 days)
- Log Pow : Log Pow = 4,7 (25°C, pH 6.75)

12.4. Mobility in soil

Cyflufenamid
- Log Koc : 1003 - 2100

12.5. Results of PBT and vPvB assessment

This mixture contains no substance considered to be persistent, bioaccumulating nor toxic (PBT).
This mixture contains no substance considered to be very persistent and very bioaccumulative (vPvB).

12.6. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste treatment methods : Apply triple washing procedure of the empty container and place the rinse water in the tank or container where the mixture is prepared. Handle empty containers and waste as established by the competent authorities.

SECTION 14: Transport information

In accordance with ADR / RID / ADNR / IMDG / ICAO / IATA

14.1. UN number

UN-No. : 3082

14.2. UN proper shipping name

Proper Shipping Name : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. ("Cyflufenamid"/ "Solvent naphtha (petroleum), heavy arom."
Transport document description : UN 3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S., 9, III, (E)
14.3. Transport hazard class(es)
Class (UN) : 9
Hazard labels (UN) : 9

14.4. Packing group
Packing group (UN) : III

14.5. Environmental hazards
Dangerous for the environment :

Other information : No supplementary information available.

14.6. Special precautions for user

14.6.1. Overland transport
Hazard identification number (Kemler No.) : 90
Classification code (UN) : M6
Orange plates :
Special provision (ADR) : 274, 335, 601
Transport category (ADR) : 3
Tunnel restriction code : E
Limited quantities (ADR) : 5L
Excepted quantities (ADR) : E1
EAC code : •3Z

14.6.2. Transport by sea
No additional information available

14.6.3. Air transport
No additional information available

14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code
Not applicable

SECTION 15: Regulatory information

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

15.1.1. EU-Regulations
No REACH Annex XVII restrictions
Contains no REACH candidate substance

15.1.2. National regulations
No additional information available

15.2. Chemical safety assessment
No additional information available

SECTION 16: Other information

<table>
<thead>
<tr>
<th>Change date</th>
<th>Previous Version</th>
<th>Section</th>
<th>Changed Item</th>
<th>Change</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>04/02/2014</td>
<td>1.1</td>
<td>2</td>
<td>CLP classification and label elements</td>
<td>Added</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>R51/S3</td>
<td>Removed.</td>
<td></td>
</tr>
</tbody>
</table>
Full text of H- and EUH-phrases:

**Acute Tox. 4 (Dermal)**
Acute toxicity (dermal) Category 4

**Acute Tox. 4 (Inhalation:dust,mist)**
Acute toxicity (inhalation:dust,mist) Category 4

**Acute Tox. 4 (Oral)**
Acute toxicity (oral) Category 4

**Aquatic Acute 1**
Hazardous to the aquatic environment - Acute Hazard Category 1

**Aquatic Chronic 2**
Hazardous to the aquatic environment - Chronic Hazard Category 2

**Aquatic Chronic 3**
Hazardous to the aquatic environment - Chronic Hazard Category 3

**Asp. Tox. 1**
Aspiration hazard Category 1

**Eye Dam. 1**
Serious eye damage/eye irritation Category 1

**Eye Irrit. 2**
Serious eye damage/eye irritation Category 2

**Skin Corr. 1B**
Skin corrosion/irritation Category 1B

**Skin Irrit. 2**
Skin corrosion/irritation Category 2

**Skin Sens. 1**
Skin sensitisation Category 1

H302
Harmful if swallowed

H304
May be fatal if swallowed and enters airways

H312
Harmful in contact with skin

H314
Causes severe skin burns and eye damage

H315
Causes skin irritation

H317
May cause an allergic skin reaction

H318
Causes serious eye damage

H319
Causes serious eye irritation

H332
Harmful if inhaled

H400
Very toxic to aquatic life

H411
Toxic to aquatic life with long lasting effects

H412
Harmful to aquatic life with long lasting effects

---

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.