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

1.1. Product identifier **CLAYTON MIDAS Cyflufenamid mixture : oil in water emulsion (EW)**
1.2. Relevant identified uses of the substance or mixture and uses advised. Fungicide
1.3. Details of the supplier of the safety data sheet : Marketing Company
Clayton Plant Protection Ltd., Bracetown Business Park, Clonee, Dublin15. Ireland.
Tel: (00 353) 1 8210127 www.claytonpp.com Email: info@claytonpp.com

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) :

Signal word (CLP) : Not signal word.
Hazard statements (CLP) : H411 - Toxic to aquatic life with long lasting effects.
Precautionary statements (CLP) : P273 - Avoid release to the environment.
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.
SP 1 - Do not contaminate water with the product or its container (Do not clean application equipment near surface water/Avoid contamination via drains from farmyards and roads).
EUH phrases : EUH401 - To avoid risks to human health and the environment, comply with the instructions for use.
EUH208 - Contains 1,2-Benzisothiazolin-3-one. May produce an allergic reaction.

2.3. Other hazards No additional information available

SECTION 3: Composition/information on ingredients

3.1. Substances Not applicable

3.2. Mixtures

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Cyflufenamid	(CAS No) 180409-60-3 (EC no) – (EC index no) -	5,0	Aquatic Chronic 1, H410
Hydrocarbons, C10-C13, aromatics, <1% naphthalene	(CAS No) – (EC no) 922-153-0 (EC index no) -	18	Asp. Tox. 1, H304 Aquatic Chronic 2, H411 EUH066
Sorbitane trioleate (Anhydro-D-glucitol trioleate)	(CAS No) 26266-58-0 (EC no) 247-569-3 (EC index no) -	10	Skin Irrit. 2, H315 Eye Irrit. 2, H319
Polyoxyethylene oleylether (CAS No) 9004-98-2	(CAS No) 9004-98-2 (EC no) 500-016-2 (EC index no) -	10	Skin Irrit. 2, H315 Eye Irrit. 2, H319 Aquatic Acute 1, H400 Aquatic Chronic 1, H410
Poly(oxy-1,2-ethanediyl), a-[2,4,6-tris(1phenylethyl)phenyl]-whydroxy-	(CAS No) 99734-09-5	5	Aquatic Chronic 3, H412
Polyoxyethylene tristylylphenylether phosphate	(CAS No) 90093-37-1	1	Eye Irrit. 2, H319
1,2-Benzisothiazole-3-(2H)-one	(CAS No) 2634-33-5 (EC no) 220-120-9 (EC index no) 613-088-00-6	0,2	Acute Tox. 4 (Oral), H302 Skin Irrit. 2, H315 Eye Dam. 1, H318 Skin Sens. 1, H317 * Aquatic Acute 1, H400

*Specific Conc. Limits and M factors: C≥0,05% Skin Sens.1; H317.
Full text of H- and EUH-phrases: see section 16.

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 CENTRE 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 (CO2).
Unsuitable extinguishing media : Not known.
5.2. Special hazards arising from the substance or mixture Fire hazard : Combustion or thermal decomposition may generate toxic vapours: carbon dioxide, carbon monoxide, hydrogen fluoride and nitrogen oxides. **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 dykes 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 and eye or face protection.
Emergency procedures : Evacuate area. Ensure adequate ventilation. Avoid direct contact with the substance. Contain any spills with dykes or absorbents to prevent migration and entry into sewers or streams. Keep away from all ignitions sources. Avoid breathing the mist or vapour.
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. For large quantities: remove with vacuum truck. For small quantities: e.g. sand or vermiculite. Once absorbed collect spilled material with shovels, buckets and place in closed containers and label properly. Wash spill site with soap and plenty of water after material pick-up is complete. 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. Do not breathe mist or vapour.
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. Store in a cool, dry, well-ventilated place.
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 feeding stuffs. Protect against frost. Avoid direct contact with water, acids or bases. 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: Active ingredient: TLV/ACGIH not listed.
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.
Personal protective equipment : Protective clothing. Protective goggles. Gloves. Dust/aerosol mask.
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 vapours.
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	Flammability (solid, gas)	No data available
Colour	Off-white to pale yellow	Vapour pressure at 20 °C	3,54 × 10-5 Pa (Cyflufenamid)
Odour	Aromatic.	Relative vapour density	No data available
Odour threshold	No data available	Specific gravity (H2O = 1)	1.027 (20°C
pH	No data available	Solubility	Insoluble
Relative evaporation rate (butylacetate=1	No data available	Partition Coefficient n-Octanol/H2O	Log Pow = 4.7 (25°C, pH6.75
Melting point	No data available	Log Kow	No data available
Freezing point	No data available	Viscosity, kinematic	3.7 x 10-5 m2/sec (40°C)
Boiling point	103 °C	Viscosity, dynamic	No data available
Flash point	112 °C (Cleaveland open cup)	Explosive properties	Not explosive
Self ignition temperature	No data available	Oxidising properties	No oxidising properties
Decomposition temperature	>140 °C (Cyflufenamid)	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: carbon oxides, nitrogen oxides, methyl sulphide, sulphur dioxide and hydrogen chloride.

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

CYFLUFENAMID 5% EW LD50 oral rat > 5000 mg/kg
CYFLUFENAMID 5% EW LD50 dermal rat > 2000 mg/kg LC50 inhalation rat > 4.41 mg/l/4h 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)
Tetratogenicity : Negative in rats and rabbits (Cyflufenamid).
Chronic Toxicity : Cyflufenamid 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 : Cyflufenamid 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
CYFLUFENAMID 5% EW
LC50 Fishes (Oncorhynchus mykiss) 9.84 mg/l (96 h)
EC50 Daphnia (Daphnia magna) 9.48 mg/l (48 h)
ErC50 Algae (Selenastrum capricornutum) 1.628 mg/l (72h)
Chronic Toxicity for Algae (NOEC) 0,395 mg/l (72h)
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
Cyflufénamid 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 :
1) Waste disposal according to 91/689/EEC in the corresponding versions (hazardous waste).
2) Consider classifications (European waste catalogue) 02 01 or 07 04.
3) Consult the appropriate local authorities about special requirement.
4) Dispose of contents/container in accordance with local /national/international regulations

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 and Polyoxyethylene oleylether mixture) Transport document description : UN 3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. . (Cyflufenamid and Polyoxyethylene oleylether mixture), 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 Orange plates :
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 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

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.