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

- 1.1. Product identifier CLAYTON APT MAPP19861
- 1.2. Relevant identified uses of the substance or mixture and uses advised : Herbicide
- 1.3. Details of the supplier of the safety data sheet : Marketing Company in UK Clayton Plant Protection (UK) Ltd., Bracetown Business Park, Clonee, Dublin15. Ireland. Tel: (00 353) 1 8210127 www.claytonpp.com

SECTION 2: Hazards Identification

2.1. Classification of the substance or mixture

Classified as dangerous according to the criteria of Regulation (EC) No 1272/2008

| Class | Category | Hazard statements |
|-----------------|------------|---|
| Aquatic Acute | category 1 | H400: Very toxic to aquatic life. |
| Aquatic Chronic | category 1 | H410: Very toxic to aquatic life with long lasting effects. |

2.2. Label elements Signal word : Warning



H-statements H410 Very toxic to aquatic life with long

lasting effects. P-statements

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

Supplemental information

EUH210 Safety data sheet available on request.

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

2.3. Other hazards : No other hazards known

SECTION 3: Composition/information on ingredients

3.1. Substances : Not applicable 3.2.

| Name REACH Registration No | CAS No EC | Conc. (C) | Classification according to | Note | Remark |
|--------------------------------------|-------------|-----------|-----------------------------|------|-------------|
| | No | | CLP | | |
| flazasulfuron | 104040-78-0 | 26.6 % | Aquatic Acute 1; H400 | (1) | Constituent |
| | | | Aquatic Chronic 1; H410 | | |
| methylnaphthalenesulfonic | 81065-51-2 | 4.9%<=C | Eye Dam. 1; H318 | (1) | Constituent |
| acid/formaldehyde, copolymer, sodium | | <5.6% | | | |
| salt | | | | | |
| sodium | 1322-93-6 | C < 5 % | Acute Tox. 4; H332 | (1) | Constituent |
| diisopropylnaphthalenesulphonate | 215-343-3 | | Acute Tox. 4; H302 | | |
| | | | Eye Irrit. 2; H319 | | |
| | | | STOT SE 3; H335 | | |

(1) For H-statements in full: see heading 16

SECTION 4: First aid measures

4.1. Description of first aid measures

General: If you feel unwell, seek medical advice.

After inhalation: Remove the victim into fresh air. Respiratory problems: consult a doctor/medical service.

After skin contact: Rinse with water. Soap may be used. Take victim to a doctor if irritation persists.

After eye contact: Rinse with water. Take victim to an ophthalmologist if irritation persists.

After ingestion: Rinse mouth with water. Do not induce vomiting. Consult a doctor/medical service if you feel unwell. 4.2. Most important symptoms and effects, both acute and delayed

4.2.1 Acute symptoms After inhalation: Unlikely to cause harmful effects. After skin contact: Not irritating. After eye contact: Not irritating. After ingestion: Unlikely to cause harmful effects.

4.2.2 Delayed symptoms No effects known.

4.3. Indication of any immediate medical attention and special treatment needed if applicable and available it will be listed below.



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SECTION 5: Firefighting measures

5.1. Extinguishing media

5.1.1 Suitable extinguishing media: Polyvalent foam. ABC powder. Carbon dioxide. MAJOR FIRE: Water spray. 5.1.2 Unsuitable extinguishing media: Solid water jet ineffective as extinguishing medium.

5.2. Special hazards arising from the substance or mixture On heating/burning: release of toxic and corrosive gases/vapours e.g.: nitrous vapours, hydrofluoric acid, sulphur oxides, carbon monoxide - carbon dioxide. 5.3. Advice for firefighters

5.3.1 Instructions: Dilute toxic gases with water spray. Take account of environmentally hazardous firefighting water. Use water moderately and if possible collect or contain it.

5.3.2 Special protective equipment for fire-fighters: Gloves. Protective clothing. Dust cloud production: compressed air/oxygen apparatus. Heat/fire exposure: compressed air/oxygen apparatus.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures Prevent dust cloud formation. No naked flames.

6.1.1 Protective equipment for non-emergency personnel See heading 8.2

6.1.2 Protective equipment for emergency responders Gloves. Protective clothing. Dust cloud production: compressed air/oxygen apparatus. Suitable protective clothing See heading 8.2

6.2. Environmental precautions Contain released product, pump into suitable containers. Plug the leak, cut off the supply. Dam up the solid spill. Knock down/dilute dust cloud with water spray. Prevent soil and water pollution. Prevent spreading in sewers.

6.3. Methods and material for containment and cleaning up Stop dust cloud by covering with sand/earth. Scoop solid spill into closing containers. Carefully collect the spill/leftovers. Clean contaminated surfaces with an excess of water. Wash clothing and equipment after handling.

6.4. Reference to other sections See heading 13.

SECTION 7: Handling and storage

The information in this section is a general description. If applicable and available, exposure scenarios are attached in annex. Always use the relevant exposure scenarios that correspond to your identified use.

7.1. Precautions for safe handling Avoid raising dust. Keep away from naked flames/heat. Observe normal hygiene standards. Keep container tightly closed. Do not discharge the waste into the drain.

7.2. Conditions for safe storage, including any incompatibilities

7.2.1 Safe storage requirements: Keep only in the original container. Meet the legal requirements.

7.2.2 Keep away from: Heat sources.

7.2.3 Suitable packaging material: No data available

7.2.4 Non suitable packaging material: No data available

7.3. Specific end use(s) If applicable and available, exposure scenarios are attached in annex. See information supplied by the manufacturer. The product will only be used as herbicide.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

8.1.1 Occupational exposure a) Occupational exposure limit values If limit values are applicable and available these will be listed below. b) National biological limit values If limit values are applicable and available these will be listed below.

8.1.2 Sampling methods If applicable and available it will be listed below.

8.1.3 Applicable limit values when using the substance or mixture as intended If limit values are applicable and available these will be listed below.

8.1.4 DNEL/PNEC values If applicable and available it will be listed below.

8.1.5 Control banding If applicable and available it will be listed below.

8.2. Exposure controls The information in this section is a general description. If applicable and available, exposure scenarios are attached in annex. Always use the relevant exposure scenarios that correspond to your identified use. 8.2.1 Appropriate engineering controls. Avoid raising dust. Keep away from naked flames/heat. Carry operations in the open/under local exhaust/ventilation or with respiratory protection.

8.2.2 Individual protection measures, such as personal protective equipment Observe normal hygiene standards. Keep container tightly closed. Do not eat, drink or smoke during work.

a) Respiratory protection: Dust production: dust mask with filter type P1. b) Hand protection: Gloves. - materials (good resistance) Rubber, PVC, plastics. c) Eye protection: Safety glasses. In case of dust production: protective goggles. d) Skin protection: Protective clothing.

8.2.3 Environmental exposure controls: See headings 6.2, 6.3 and 13

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SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

| Flash point No data available |
|--|
| Evaporation rate ether ; No data available |
| Relative vapour density No data available |
| Vapour pressure No data available Solubility |
| No data available |
| Relative density 0.84 ; Bulk density |
| Decomposition temperature No data available |
| Auto-ignition temperature No data available |
| Explosive properties No chemical group associated with |
| explosive properties |
| Oxidising properties No chemical group associated |
| with oxidising properties pH 5.1 ; 1 % 9.2. |
| |

Other information : Absolute density 840 kg/m³

SECTION 10: Stability and reactivity

10.1. Reactivity Substance has acid reaction.

10.2. Chemical stability Stable under normal conditions.

10.3. Possibility of hazardous reactions No data available.

10.4. Conditions to avoid Avoid raising dust. Keep away from naked flames/heat.

10.5. Incompatible materials No data available.

10.6. Hazardous decomposition products On heating/burning: release of toxic and corrosive gases/vapours e.g.: nitrous vapours, hydrofluoric acid, sulphur oxides, carbon monoxide - carbon dioxide.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

11.1.1 Test results

Acute toxicity

Clayton Apt

| e | | | | | | | |
|------------|-----------|--------|--------------|----------|---------|--------------------|--------|
| Route of | Parameter | Method | Value | Exposure | Species | Value | Remark |
| exposure | | | | time | | determination | |
| Oral | LD50 | | 4800 mg/kg | | Rat | Experimental value | |
| Dermal | LD50 | | > 2000 mg/kg | | Rat | Experimental value | |
| Inhalation | LC50 | 4 h | > 6.17 mg/l | 4 h | Rat | Experimental value | |

flazasulfuron

| Route of | Parameter | Method | Value | Exposure | Species | Value | Remark |
|------------|-----------|--------|--------------|----------|-------------------|--------------------|--------|
| exposure | | | | time | | determination | |
| Oral | LD50 | | > 5000 mg/kg | | Rat (male/female) | Experimental value | |
| Dermal | LD50 | | > 2000 mg/kg | | Rat | Experimental value | |
| Inhalation | LC50 | | > 5.99 mg/l | 4h | Rat | Experimental value | |

Judgement of the mixture is based on test data on the mixture as a whole Conclusion Not classified for acute toxicity

Corrosion/irritation

Clayton Apt

| Route of | Result | Method | Exposure time | Time point | Species | Value determination | Remark |
|----------|----------------|--------|---------------|------------|---------|---------------------|--------|
| exposure | | | | | | | |
| Eye | Not irritating | | | | | Literature study | |
| Skin | Not irritating | | | | | Literature study | |

Judgement of the mixture is based on test data on the mixture as a whole

Conclusion Not classified as irritating to the skin Not classified as irritating to the eyes

Respiratory or skin sensitisation

Clayton Apt

| Route of | Result | Method | Exposure | Observation | Species | Value determination | Remark |
|----------|--------|--------|----------|-------------|---------|---------------------|--------|
| exposure | | | time | time point | | | |



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| Skin | Not sensitizing | | | Literature study | |
|------|-----------------|--|--|------------------|--|
| | | | | | |

flazasulfuron

| Route of | Result | Method | Exposure | Observation | Species | Value | Remark |
|----------|-----------------|--------|----------|-------------|---------|------------------|--------|
| exposure | | | time | time point | | determination | |
| Skin | Not sensitizing | | | | | Literature study | |

Judgement of the mixture is based on test data on the mixture as a whole Conclusion

Not classified as sensitizing for skin

Specific target organ toxicity : Clayton Apt No (test)data on the mixture available Judgement is based on the relevant ingredients Conclusion Not classified for subchronic toxicity

Mutagenicity (in vitro) : Clayton Apt No (test)data on the mixture available

Mutagenicity (in vivo) : Clayton Apt No (test)data on the mixture available Judgement is based on the relevant ingredients

Conclusion Not classified for mutagenic or genotoxic toxicity

Carcinogenicity : Clayton Apt No (test)data on the mixture available Judgement is based on the relevant ingredients Conclusion Not classified for carcinogenicity

Reproductive toxicity : Clayton Apt No (test)data on the mixture available Judgement is based on the relevant ingredients

Conclusion Not classified for reprotoxic or developmental toxicity

Toxicity other effects : Clayton Apt No (test)data on the mixture available

Chronic effects from short and long-term exposure : Clayton Apt No effects known.

SECTION 12: Ecological information

12.1. Toxicity Clayton

| Apt |
|-----|
|-----|

| | Parameter | Method | Value | Duration | Species | Test | Fresh/salt | Value |
|---|-----------|--------|------------|----------|------------------------------|--------|------------|-----------------------|
| | | | | | | design | water | determination |
| Acute toxicity fishes | LC50 | | > 100 mg/l | 96 h | Oncorhynchus mykiss | | | Experimental value |
| | LC50 | | > 400 mg/l | 96 h | Lepomis macrochirus | | | Experimental value |
| Acute toxicity invertebrates | EC50 | | > 100 mg/l | 48 h | Daphnia magna | | | Experimental value |
| Toxicity algae and other aquatic plants | EC50 | | 0.025 mg/l | 72 h | Selenastrum capricornutum | | | Experimental value |

flazasulfuron

| | Parameter | Method | Value | Duration | Species | Test | Fresh/salt | Value |
|---|-----------|--------|---------------|----------|---------------------------|----------------------------|------------|-----------------------|
| | | | | | | design | water | determination |
| Acute toxicity fishes | LC50 | | 22 mg/l | 96 h | Oncorhynchus mykiss | Flow- through system | | Experimental value |
| | LC50 | | > 98 mg/l | 96 h | Lepomis macrochirus | Flow- through system | | Experimental value |
| Acute toxicity invertebrates | EC50 | | > 106 mg/l | 48 h | Daphnia magna | | | Experimental value |
| | EC50 | | 0.045 mg/l | 72 h | Selenastrum capricornutum | | | Experimental value |
| Toxicity algae and other aquatic plants | NOEC | | 0.02 µg/l | 7 day(s) | Lemna gibba | | | Experimental value |
| Toxicity aquatic microorganisms | OECD 209 | | 100 mg/l | | Activated sludge | | | Experimental value |

Classification of the mixture is based on test data on the mixture as a whole

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Conclusion : Slightly harmful to fishes Slightly harmful to crustacea Very toxic to algae Very toxic to aquatic life with long lasting effects.

12.2. Persistence and degradability. Flazasulfuron : Half-life soil (t1/2 soil)

| Method | Value | Primary degradation/mineralisation | Value determination |
|--------|---------------------------|------------------------------------|---------------------|
| | 12.8 day(s) - 15.9 day(s) | | |

Conclusion : Contains non readily biodegradable component(s)

 12.3. Bioaccumulative potential . Clayton Apt : Log Kow

 Method
 Remark
 Value
 Temperature
 Value determination

 Not applicable (mixture)
 Value
 Value
 Value
 Value

flazasulfuron : Log Kow

| Method | Remark | Value | Temperature | Value determination |
|--------|--------|-------|-------------|---------------------|
| | | < 1.5 | | |

methylnaphthalenesulfonic

| acid/formaldehyde, | copolymer, sodium salt : Log Kow |
|--------------------|----------------------------------|
| | |

| Method | Remark | Value | Temperature | Value determination |
|--------|--------|-------------------|-------------|---------------------|
| | | No data available | | |

Conclusion No straightforward conclusion can be drawn based upon th + available numerical values

12.4. Mobility in soil . flazasulfuron (log) Koc

| Parameter | Method | Value | Value determination |
|-----------|--------|-------|-----------------------------|
| Кос | | 46.16 | Expe r imental value |

Conclusion No straightforward conclusion can be drawn based upon the available numerical values

12.5. Results of PBT and vPvB assessment. Does not contain component(s) that meet(s) the criteria of PBT and/or vPvB as listed in Annex XIII of Regulation (EC) No 1907/2006.

12.6. Other adverse effects

Clayton Apt : Fluorinated greenhouse gases (Regulation (EU) No 517/2014) None of the known components is included in the list of fluorinated greenhouse gases (Regulation (EU) No 517/2014)

Ozone-depleting potential (ODP) Not classified as dangerous for the ozone layer (Regulation (EC) No 1005/2009) **SECTION 13: Disposal considerations**

The information in this section is a general description. If applicable and available, exposure scenarios are attached in annex. Always use the relevant exposure scenarios that correspond to your identified use.

13.1. Waste treatment methods

13.1.1 Provisions relating to waste Hazardous waste according to Directive 2008/98/EC, as amended by Regulation (EU) No 1357/2014. Waste material code (Directive 2008/98/EC, Decision 2000/0532/EC). 02 01 08* (wastes from agriculture, horticulture, aquaculture, forestry, hunting and fishing: agrochemical waste containing hazardous substances).

13.1.2 Disposal methods Remove to an authorized incinerator equipped with an afterburner and a flue gas scrubber with energy recovery. Remove waste in accordance with local and/or national regulations. Hazardous waste shall not be mixed together with other waste. Different types of hazardous waste shall not be mixed together if this may entail a risk of pollution or create problems for the further management of the waste. Hazardous waste shall be managed responsibly. All entities that store, transport or handle hazardous waste shall take the necessary measures to prevent risks of pollution or damage to people or animals. Do not discharge into surface water.

13.1.3 Packaging/Container Waste material code packaging (Directive 2008/98/EC). 15 01 10* (packaging containing residues of or contaminated by dangerous substances).

SECTION 14: Transport information Road (ADR)

- 14.1. UN number UN number 3077
- 14.2. UN proper shipping name Environmentally hazardous substance, solid, n.o.s. (flazasulfuron)
- 14.3. Transport hazard class(es) Hazard identification number 90 Class 9 Classification code M7
- 14.4. Packing group Packing group III Labels 9
- 14.5. Environmental hazards Environmentally hazardous substance mark yes



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14.6. Special precautions for user Special provisions 274 Special provisions 335 Special provisions 375 Special provisions 601 Limited quantities Combination packagings: not more than 5 kg per inner packaging for solids. A package shall not weigh more than 30 kg. (gross mass)

Rail (RID)

- 14.1. UN number UN number 3077
- 14.2. UN proper shipping name Environmentally hazardous substance, solid, n.o.s. (flazasulfuron)
- 14.3. Transport hazard class(es) Hazard identification number 90 Class 9 Classification code M7
- 14.4. Packing group Packing group III Labels 9
- 14.5. Environmental hazards Environmentally hazardous substance mark yes

14.6. Special precautions for user Special provisions 274 Special provisions 335 Special provisions 375 Special provisions 601 Limited quantities Combination packagings: not more than 5 kg per inner packaging for solids. A package shall not weigh more than 30 kg. (gross mass)

Inland waterways (ADN)

- 14.1. UN number UN number 3077
- 14.2. UN proper shipping name Environmentally hazardous substance, solid, n.o.s. (flazasulfuron)
- 14.3. Transport hazard class(es) Class 9 Classification code M7
- 14.4. Packing group Packing group III Labels 9
- 14.5. Environmental hazards Environmentally hazardous substance mark yes
- 14.6. Special precautions for user Special provisions 274 ; Special provisions 335 ; Special provisions 375 ; Special provisions 601

Limited quantities : Combination packagings: not more than 5 kg per inner packaging for solids. A package shall not weigh more than 30 kg. (gross mass)

Sea (IMDG/IMSBC)

- 14.1. UN number UN number 3077
- 14.2. UN proper shipping name : Proper shipping name Environmentally hazardous substance, solid, n.o.s. (flazasulfuron)
- 14.3. Transport hazard class(es) Class 9
- 14.4. Packing group Packing group III Labels 9
- 14.5. Environmental hazards Marine pollutant P Environmentally hazardous substance mark yes
- 14.6. Special precautions for user Special provisions 274 Special provisions 335 Special provisions 966 Special provisions 967 Special provisions 969 Limited quantities Combination packagings: not more than 5 kg per inner packaging for solids. A package shall not weigh more than 30 kg. (gross mass)
- 14.7. Transport in bulk according to Annex II of Marpol and the IBC Code . Annex II of MARPOL 73/78 Not applicable

Air (ICAO-TI/IATA-DGR)

- 14.1. UN number UN number 3077
- 14.2. UN proper shipping name Environmentally hazardous substance, solid, n.o.s. (flazasulfuron)
- 14.3. Transport hazard class(es) Class 9
- 14.4. Packing group Packing group III Labels 9
- 14.5. Environmental hazards Environmentally hazardous substance mark yes
- 14.6. Special precautions for user Special provisions A97 Special provisions A158 Special provisions A179 Special provisions A197

Passenger and cargo transport: limited quantities: maximum net quantity per packaging 30 kg G

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture European legislation: VOC content Directive 2010/75/EU

VOC content 0 % Remark -

European drinking water standards (Directive 98/83/EC) : flazasulfuron

| Parameter | Parametric value | Note | Reference |
|--------------------|------------------|------|---|
| Pesticides | 0,1 µg/l | | Listed in Annex I, Part B, of Directive 98/83/EC on the quality |
| | | | of water intended for human consumption |
| Pesticides — Total | 0,5 µg/l | | Listed in Annex I, Part B, of Directive 98/83/EC on the quality |
| | | | of water intended for human consumption. |

National legislation Belgium Clayton Apt No data available

National legislation The Netherlands Clayton Apt Waste identification (the Netherlands) LWCA (the Netherlands): KGA category 03 Waterbezwaarlijkheid 4



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National legislation France Clayton Apt No data available

National legislation Germany Clayton Apt Lagerklasse (TRGS510) 13: Nicht brennbare Feststoffe WGK 2; Classification water polluting based on the components in compliance with Verwaltungsvorschrift wassergefährdender Stoffe (VwVwS) of 27 July 2005 (Anhang 4)

National legislation United Kingdom Clayton Apt No data available

Other relevant data Clayton Apt No data available 15.2. Chemical safety assessment : No chemical safety assessment has been conducted.

SECTION 16: Other information

Full text of any H-statements referred to under headings 2 and 3:
H302 Harmful if swallowed.
H318 Causes serious eye damage. H319
Causes serious eye irritation.
H332 Harmful if inhaled.
H335 May cause respiratory irritation.
H400 Very toxic to aquatic life.
H410 Very toxic to aquatic life with long lasting effects.

(*) = INTERNAL CLASSIFICATION BY BIG

PBT-substances = persistent, bioaccumulative and toxic substances CLP (EU-GHS) Classification, labelling and packaging (Globally Harmonised System in Europe

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