

CLAYTON PLANT PROTECTION

CLAYTON NFP Safety Data Sheet according to Regulation (EU) No. 453/2010. Version 1/dsc 18/05/2017.
This version replaces all previous versions.

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

1.1. Product identifier CLAYTON NFP.

Applicable REACH registration number(s): - principal component, 01-2119488053-38
- other components, see section 3 below.

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

Agricultural/horticultural spray adjuvant.

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.cpp.ag Email: info@cpp.ag

Section 2: Hazards identification

2.1 Classification of the substance or mixture

CLP Classification (Regulation (EC) 1272/2008):

- Skin Irritant Category 2
- Skin Sensitisation Category 1
- Aquatic Acute Category 1
- Aquatic Chronic Category 1

DSD Classification (67/548/EEC):

- Xi; R38 (Irritating to skin)
- R43 (May cause sensitisation by skin contact)
- N; R50-53 (Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment).

2.2 Label elements

CLP label elements



SIGNAL WORD: WARNING

H315 Causes skin irritation

H317 May cause an allergic skin reaction

H400 Very toxic to aquatic life

H410 Very toxic to aquatic life with long-lasting effects

P261 Avoid breathing dust/fume/gas/mist/vapours/spray. Wear respiratory protection (vapour mask).

P280 Wear protective gloves. Manufacturer/supplier or the competent authority to specify type of equipment.

P302 + P353 If on skin: Wash with plenty of soap and water.

P333 + P313 If skin irritation or rash occurs: Get medical advice/attention.

P362 Take off contaminated clothing and wash before reuse.

P391 Collect spillage

P501 Dispose of container as hazardous waste.

2.3 Other hazards The properties of the substance do not meet the specific criteria detailed in Annex XIII of Regulation (EC) No. 1907/2006 or do not allow a direct comparison with all the criteria in Annex XIII, but nevertheless indicate that the substance would not have PBT/vPvB properties so the substance is not considered a PBT/vPvB.

Section 3: Composition/information on ingredients

Component	CAS RN	EC No.	REACH Registration No.	Concentration	Classification: [1] DSD 67/548 [2] CLP 1272/2008
Pinene Oligomers Also known as Pinolene (Poly-1-p-menthene)	34363-01-4	417-870-6	01-2119488053-38	96% w/w	[1] Xi;R38, N;R50-53, R43 [2] Skin Irritant Cat. 2, Skin Sens. Cat. 1, Aquatic Acute Cat. 1, Aquatic Chronic Cat. 1

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Alcohols, C12-16, ethoxylated	68551-12-2	-	Polymer (not subject to registration)	1 – 2.5% w/w	[1] Xi; R41, N; R50 [2] Eye damage Cat.1, Aquatic acute Cat. 1.
Benzenesulph onic acid, 4- C10-14 alkyl derivates., calcium salts	90194-26-6	290-635-1	01-2119560592- 37	0.5 – 1.5 % w/w	[1] Xi; R41, R38 [2] Eye damage Cat. 1, Skin irritant Cat.2

Section 4: First aid measures

4.1 Description of first aid measures

Eye contact: Flush immediately with copious amounts of water or saline, including under eyelids.

Skin contact: Wash affected area with soap and water

Inhalation: Remove promptly to air. If not breathing, administer artificial respiration. Administer oxygen if breathing is difficult.

Ingestion: Do not induce vomiting and seek immediate medical assistance from a doctor.

4.2 Most important symptoms and effects

Localised skin irritation or contact sensitisation may be possible following significant, prolonged or repeated skin contact.

4.3 Indication of any immediate medical attention and special treatment needed

If ingestion occurs seek immediate medical assistance from a doctor.

Section 5: Fire fighting measures

5.1 Extinguishing media

Suitable extinguishing media: Dry powder, carbon dioxide, foam

Unsuitable extinguishing media: None specified

5.2 Special hazards arising from the substance or mixture

None known, but may produce oxides of carbon

5.3 Advice for fire-fighters

Full protection by suitable clothing and positive pressure, self-contained breathing apparatus.

Section 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Wear suitable personal protection as specified in section 8.2.

6.2 Environmental precautions

Contain spillage. Avoid contamination of surface waters or release into drains.

6.3 Methods and material for containment and cleaning up

Collect spillage directly or after absorption into dry sand or other suitable material.

Section 7: Handling and storage

7.1 Precautions for safe handling

When mixing spray formulations, avoid splashing/aerosol generation. When spraying diluted formulation, observe all specified restrictions and wear appropriate protective equipment: see section 7.3.

7.2 Conditions for safe storage, including any incompatibilities

Store and use in the open air, or in well ventilated areas.

Store in tightly sealed containers.

Store at ambient temperatures.

7.3 Specific end use(s)

Spray application onto agricultural or horticultural crops: spray away from surface waters including no-spray buffer zones.

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Section 8: Exposure controls/personal protection

8.1 Control parameters No occupational exposure limits have been established. DNEL and PNEC values for pinene oligomers are given below:

Worker Derived No-Effect Level (DNEL) values:

- **Inhalation:** 2493 mg/m³ (acute, systemic), 12.2 mg/m³ (chronic, systemic)
- **Dermal:** 1526 mg/kg (acute, systemic), 3.47 mg/kg/day (chronic, systemic)

General population Derived No-Effect Level (DNEL) values:

- **Inhalation:** 1772 mg/m³ (acute, systemic), 3.63 mg/m³ (chronic, systemic)
- **Dermal:** 727 mg/kg (acute, systemic), 2.08 mg/kg/day (chronic, systemic)

Predicted No-Effect Concentration (PNEC) values:

- PNEC_{Freshwater}: 2 µg/l
- PNEC_{Intermittent}: 2.4 µg/l
- PNEC_{STP}: 1000 µg/l
- PNEC_{Freshwater Sediment}: 1.26 mg/kg dw
- PNEC_{Soil}: 1 mg/kg dw
- PNEC_{Oral}: 33.3 mg/kg

8.2 Exposure controls

Engineering controls: not applicable (mix in the open or a well-ventilated work area).

Eye/face protection: Use goggles/glasses with sideshield (e.g. EN166), or full-face respirator.

Skin/hand protection: Use impermeable gloves (e.g. EN374, nitrile) and wear suitable protective clothing (e.g. EN368 chemical protection suit).

Respiratory protection: Use respiratory protection with vapour/aerosol filter cartridges e.g. EN405 FFA1 half-face respirator or EN136 full-face respirator).

Section 9: Physical and Chemical properties

9.1 Information on basic physical and chemical properties

- **Appearance:** Yellow viscous liquid
- **Odour:** not specified
- **pH:** 7.5 – 7.7 at solubility limit in water
- **Melting point/freezing point:** < -12 °C
- **Initial boiling point:** 325 °C (pinene oligomers)
- **Flash point:** > 100 °C (not considered flammable)
- **Vapour pressure:** 0.0212 Pa at 25 °C
- **Relative density:** 0.92 – 0.95 g/cm³ at 20 °C
- **Solubility:** 8.84E-04 g/l at 20 °C in water (pinene oligomers)
- **Partition coefficient, n-octanol/water:** > 6.5 at 30 °C (pinene oligomers)
- **Auto-ignition temperature:** 268 °C
- **Viscosity:** 500 – 1400 cps at 23 °C
- **Explosive properties:** Chemical structure suggests no explosive properties
- **Oxidising properties:** Chemical structure suggests no oxidising properties

Section 10: Stability and reactivity

- 10.1 Reactivity Not considered chemically reactive
- 10.2 Chemical stability Stable under normal ambient conditions and under the anticipated conditions of use
- 10.3 Possibility of hazardous reactions None known
- 10.4 Conditions to avoid None known
- 10.5 Incompatible materials None known
- 10.6 Hazardous decomposition products None known

Section 11: Toxicological information

11.1 Information in toxicological effects

Acute toxicity: low

- Inhalation LC50: >4.43 mg/l (rat, OECD 403 study)
- Dermal LD50: > 4000 mg/kg (rat, OECD 402 study)
- Oral LD50: > 16000 mg/kg rat, OECD 401 study)

Skin corrosion/irritation: Irritant (in rabbit study following EPA OPP 81-5).

Serious eye damage/irritation: Non-irritant (in rabbit study following EPA OPP 81-4).



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Respiratory or skin sensitisation: did not cause contact sensitisation in Guinea pigs (OECD 406 Enhanced Buehler test) or human volunteers (Closed Patch Test in 53 volunteers: pinene oligomers tested). Positive in Guinea Pig maximisation test (EU Method B.6), which used intradermal injection and adjuvant (immune system stimulant). Risk of dermal sensitisation for man therefore uncertain, but classified as sensitising.

Germ cell mutagenicity: negative in vitro (Ames test, OECD 471 and cytogenetic test, OECD 473). Negative in vivo (mouse micronucleus test, EU Method B.12 and rat liver UDS test, OECD486).

Carcinogenicity: predicted not carcinogenic (based on read-across to close chemical analogue, rat and mouse oral oncogenicity studies).

Reproductive toxicity: Not considered to cause reprotoxic effects (based on read-across to close chemical analogues, rat and rabbit oral studies).

STOT-single exposure: acute studies revealed no toxic effects at doses up to 16000 mg/kg in rats.

STOT-repeated exposure: in a 4-week rat study, no toxic effects were observed at 1000 mg/kg (rats, OECD guideline 407).

Aspiration hazard: Not considered to be an aspiration hazard.

Section 12: Ecological information

12.1 Toxicity

Acute toxicity to fish: - *Oncorhynchus mykiss*, (OECD guideline 203) 96h LC50: 5.7 mg/l
- *Oncorhynchus mykiss*, (OECD guideline 203) 96h LC50: 7.5 mg/l
- *Oncorhynchus mykiss*, (OECD guideline 203) 96h LC50: > 6.5 mg/l

Acute toxicity to aquatic invertebrates: - *Daphnia magna*, (OECD guideline 202) 48h EC50: 0.26 mg/l
- *Daphnia magna*, (EU Method C.2) 48h EC50: $\geq 2.16 - \leq 9.74$ mg/l

Toxicity to algae: - *Pseudokirchnerella subcapitata*, (OECD guideline 201) 72h ErC50: 0.24 mg/l, 72h EbC50: 0.18 mg/l, 72h NOEC: 0.1 mg/l.

Toxicity to bacteria: - Activated sludge (growth inhibition), (OECD guideline 209) EC50: >100 mg/l

Chronic toxicity to aquatic invertebrates:

- *Daphnia magna*, 21d NOEC: 0.12 mg/l (read-across to close chemical analogue)

- *Daphnia magna*, 21d NOEC: 0.27 mg/l (read-across to close chemical analogue)

Aqueous spray application onto water surface (giving nominal test water concentrations 10.7 mg/l *Daphnia*, 25 mg/l fish) at approximately 1 g/sq.m water surface caused no evident toxicity in fish. In *Daphnia* physical entrapment and a maximum of 40% immobilisation was observed.

Toxicity to soil macroorganisms except arthropods: - *Eisenia fetida*, 14d LC50: > 1000 mg/kg

Toxicity to honeybees: - *Apis mellifera* 48h LD50: > 200 µg per animal (for both ingestion and direct contact)

Toxicity to terrestrial plants: - No adverse effects were observed after spray application of the substance to orange trees, grapevines and cereal crops (wheat and barley).

12.2 Persistence and degradability Not readily biodegradable: 8% degradation over 28 days in OECD 301D Closed Bottle test. Not rapidly biodegraded in a test for inherent biodegradability (3% degradation over 28 days, OECD 301B method using acclimated, mixed soil/sludge inoculum). Slow biodegradation predicted, based on chemical analogy to ubiquitous phytoterpenes.

12.3 Bioaccumulative potential Not determined experimentally. QSAR calculations of BCF based on chemical structure and physical properties give BCF values of 175 (based on QSAR-estimated log Kow, 9.29) and 6295 (based on log Kow 6.5). BCF indicator for bioaccumulation is concluded to be >2000 but <5000.

12.4 Mobility in soil

Koc: >28840 (Log Koc: >4.46)

Method: HPLC estimation method

Remarks: Pinene oligomers are expected to bind strongly to organic matter.

12.5 Results of PBT and vPvB assessment

Pinene oligomers are not considered to be persistent, bioaccumulating or toxic (neither PBT or vPvB).

Section 13: Disposal considerations

13.1 Waste treatment methods

National, local and EU regulations concerning waste disposal must be respected. Disposal by incineration is recommended.

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Section 14: Transport information

- 14.1 UN number UN 3082
- 14.2 UN proper shipping name Environmentally Hazardous Substance, Liquid, N.O.S. (Terpenoid)
- 14.3 Transport hazard class(es) Class 9 hazard diamond applies
- 14.4 Packing group Packing group III
- 14.5 Environmental hazards Environmentally hazardous substance: Marine Pollutant
- 14.6 Special precautions for user None known
- 14.7 Transport in bulk Drums with non-removable heads should be used if containers holding more than 250 litres are shipped.

Section 15: Regulatory information

- 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture: No substance-specific regulations apply.
- 15.2 Chemical safety assessment A chemical safety assessment has been carried out for pinene oligomers. Exposure scenarios for the two supported product uses (mixing and spray applications) are attached as Annex 1 to this safety data sheet.

Section 16: Other information

Further information :

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 guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The above information relates only to the specific material(s) designated herein and may not be valid for such material(s) used in combination with any other materials or in any process or if the material is altered or processed, unless specified in the text.