

CLAYTON PLANT PROTECTION

CLAYTON CHROME Safety Data Sheet according to Regulation (EC) No. 1907/2006 and Regulation (EU) No. 453/2010. Version 1/dsc 08/06/2015. This version replaces all previous versions.

SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

- 1.1 Product identifier :** Product name : **CLAYTON CHROME**
- 1.2 Relevant identified uses of the substance or mixture and uses advised against**
Use : Herbicide
- 1.3 Details of the supplier of the safety data sheet Company**
Clayton Plant Protection (UK) Ltd., Bracetown Business Park, Clonee, Dublin15. Ireland.
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2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

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

This product has not yet been classified under Regulation (EC) no. 1272/2008 [CLP/GHS]

Classification according to Directive 67/548/EEC or 1999/45/EC

This product has not been classified as hazardous.

Additional information : For abbreviations, refer to Section 16.

2.2 Label elements

Labelling according to Directive 67/548/EEC or 1999/45/EC

Hazard pictograms : No hazard pictogram has been assigned to the mixture

Indication of danger: No indication of danger has been assigned to the mixture

Risk phrases: No risk phrases have been assigned to the mixture

Safety advice:

S2: Keep out of reach of children.

S13: Keep away from food, drink and animal feeding stuffs.

S20/21: When using do not eat, drink or smoke.

2.3 Other hazards : None known

3. COMPOSITION / INFORMATION ON INGREDIENTS

3.2 Mixtures

Description of the mixture:

Mixture of clomazone and co-formulants.

Chemical Name	CAS-No.	EC-No	Index No.	Concentration (W/W)	67/548/EEC Classification	CLP (Reg. 1278/2008) Classification
Clomazone	81777-89-1	-	-	30.3 %	Xn; R20/22, N;R50/53	Acute Toxicity (oral and inhalation), Cat. 4; H302, H332. Hazardous to the aquatic environment: Acute hazard Cat.1; H400 Chronic hazard Cat. 1; H410
Calcium chloride	10043-52-4	233-140-8	017-013-00-2	>5.0<10.0 %	Xi; R36	Serious eye damage/eye irritation, Cat. 2; H319
Other ingredients				to 100%	Not classified	Not classified

Additional information : For full text of R and H phrases, see Section 16.

4. FIRST AID MEASURES

4.1 Description of first aid measures

General notes: If symptoms occur after exposure to this product, seek medical attention immediately and show the product label or this SDS. Remove to fresh air and keep at rest. Do not allow smoking or eating. Take off all contaminated clothing and footwear.

Following inhalation: Remove to fresh air and keep at rest in half-upright position. Seek medical attention if symptoms arise.

Following skin contact: Remove all contaminated clothing. Wash skin with soap and rinse with plenty of water. Seek medical attention if irritation arises. Wash clothes before re-use.

Following eye contact: Immediately rinse with water. Holding eyes open, continue rinsing for 15 minutes at least. Remove contact lenses as soon as possible. Seek medical attention if irritation arises.

Following ingestion: If swallowed, **DO NOT INDUCE VOMITING:** seek medical advice immediately and show this container or label. Remove any residues from mouth and rinse it with plenty of water. Offer the casualty 1 or 2 glasses of water to drink. Never give anything by mouth to an unconscious person.

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Self-protection of first aider Personal protective equipment for first aid responders is recommended according to potential for exposure (refer to Section 8).

Notes for the doctor: No specific antidote. Treat symptomatically (decontamination, vital functions). Call a Poison Centre immediately for treatment advice. In case of ingestion gastric lavage may be necessary (with proper laryngeal control). Before emptying the stomach, assess the potential danger arising from lung aspiration against the product toxicity.

4.2 Most important symptoms and effects, both acute and delayed

Following inhalation: Possible slight nasal irritation and discharge. No delayed effects expected.

Following skin contact: Possible slight transitory redness. No delayed effects expected.

Following eye contact: Possible slight transitory redness. No delayed effects expected.

Following ingestion: Possible mild gastrointestinal effects. No significant delayed effects expected.

4.3 Indication of immediate medical attention and special treatment needed

No need to provide any special means/medicinal products for immediate treatment at the workplace, no specific antidote available.

5. FIRE FIGHTING MEASURES

5.1 Extinguishing media

Suitable extinguishing media:

Carbon dioxide, water spray, alcohol-resistant foam, dry chemical for small fires, alcohol-resistant foam or water spray for large fires.

Unsuitable extinguishing media: Solid water jet.

5.2 Special hazards arising from the mixture. Hazardous combustion products ; Evolves toxic and irritant fumes in fire including nitrogen oxides and chlorine oxides.

5.3 Advice for fire-fighters ; Clothing conforming to EN469 should be sufficient to deal with fires involving the substance. However, a Self-Contained Breathing Apparatus (SCBA) may be required if there is a potential for exposure to combustion fumes.

5.4 Additional information ; Provide storage and work areas with suitable fire extinguishers. Call the Fire Brigade at once to deal with all fires involving pesticides unless the fire is small and immediately controllable. Spray unopened containers with a mist spray to keep cool. If without risk, remove intact containers from exposure to fire. Contain fire-fighting water, bunding if necessary with sand or earth. Do not allow contamination of public drains or surface or ground waters. Dispose of fire debris and contaminated water as advised in the MAFF/HSE "Pesticides: Code of Practice for the Safe Use of Pesticides on Farms and Holdings".

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

6.1.1 For non-emergency personnel ; Protective equipment: Remove immediately any contaminated clothing. Wear prescribed personal protective equipment to prevent contact with eyes and skin. A Self-Contained Breathing Apparatus (SCBA) may be required if there is an elevated risk for exposure.

Emergency procedures: Call the emergency services if the release is not immediately controllable. If the release is localized and immediately controllable, provide sufficient ventilation and control the release at its source.

6.1.2 For emergency responders ; Clothing conforming to EN469.

6.2 Environmental precautions ; Use appropriate containment to avoid environmental contamination. Control the release at its source. Contain the spill to prevent it from spreading, contaminating soil or entering sewage and drainage systems or any body of water. Inform the local water company if the release enters drains and the Environment Agency (England and Wales), the Scottish Environmental Protection Agency (Scotland) or the Environment and Heritage Service (Northern Ireland) if it enters surface or ground waters.

6.3 Methods and material for containment and cleaning up

For containment ; Clean up spills immediately and place in a compatible disposal container. Contain spill by diking with earth, sand or absorbent material and place into a compatible marked disposal container.

For cleaning up ; Scrub area with a hard water detergent. Soak up wash liquid with additional absorbent material and place into a compatible marked disposal container. Seal container and arrange for disposal.

Other information ; Not Applicable

6.4 Reference to other sections ; Refer to Section 8 for personal protective equipment and to Section 13 for disposal instructions.

7. HANDLING AND STORAGE

7.1 Precautions for safe handling

Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Provide suitable ventilation in the areas where the product is stored and used. Contaminated work clothing should not be allowed out of the workplace. Avoid all contact by mouth, with eyes and skin. Wear personal protective equipment as specified in Section 8. When using, do not eat, drink or smoke. Remove contaminated clothing and protective equipment before meals and after work. Wash hands and exposed skin before meals and after work. Wash all protective clothing thoroughly after use, especially the insides of gloves.

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7.2 Conditions for safe storage, including any incompatibilities : The material is stable under normal ambient conditions. Keep in original container, in a dry, cool and safe place. Store in a locked, suitable store. Keep away from any source of ignition. Keep out of the reach of children and unauthorised personnel. Keep away from food, drink and animal feeding stuffs.

7.3 Specific end use(s) : Herbicide for professional use as directed by the product label, every other use is hazardous.

8. EXPOSURE CONTROL/PERSONAL PROTECTION

8.1 Control Parameters

Occupational Exposure limit values : No Occupational Exposure limit values have been set for the mixture or its components:

Information on monitoring procedures : None available.

8.2 Exposure controls

8.2.1 Appropriate engineering controls : Engineering controls and appropriate work processes must be used to eliminate or reduce worker and environmental exposure in the areas where the substance is handled, transported, loaded, unloaded, stored and used. These measures must be adequate for the extent of the actual risk. Provide adequate local exhaust ventilation. Use specialized transfer systems if available.

8.2.2 Personal protection equipment

Eye and face protection : Avoid contact with eyes. If there is a significant potential for contact, wear suitable eye and face protection (EN 166).

Skin protection: Hand protection: Wear suitable protective gloves against chemicals (EN 374 part 1, 2, 3). Nitrile rubber min. 0.5mm thick and 300mm long gloves are the ones proven to be the most suitable according to tests on pesticide products. Wash the gloves thoroughly after each use, especially the insides. Replace gloves if damaged and before exceeding the breakthrough time.

Body protection: Avoid contact with skin. If there is a significant potential for contact, wear suitable coveralls (ISO 13982-1, Type 5, EN 13034, Type 6).

Other skin protection: None specified.

Respiratory protection: No special requirement when used as recommended. If a risk assessment shows that engineering controls do not provide adequate respiratory protection to exposure to spray particles, wear particle filtering half mask (EN 149) or half mask connected to particle filter (EN 140 + 143).

8.2.3 Environmental exposure controls

Implement all applicable local and community environmental protection legislation. Refer to Section 15. Use appropriate containment to avoid environmental contamination. Do not empty into drains. Do not contaminate water with the product or used container. Do not clean application equipment near surface water. Avoid contamination via drains from farmyards and roads. Refer to Section 12 and 13.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

All the data contained in this section are derived from actual test data on the mixture or its components unless otherwise stated.

- a) Appearance: Liquid. Colour: Off-white
- b) Odour: Faint amine
- c) Odour threshold: Not determined – not required under all applicable pesticide legislation
- d) pH: 9.78 (1% dilution in water)
- e) Melting point/freezing point: Not applicable – the mixture is a liquid at ambient temperature and must be protected from frost
- f) Initial boiling point and boiling range: Approximately 100 °C
- g) Flash point: None – the mixture is water-based
- h) Evaporation rate: Not available - not required under all applicable pesticide legislation
- i) Flammability (solid, gas): Not applicable (liquid)
- j) Upper/lower limits : flammability or explosive. Not applicable – the mixture is water-based
- k) Vapour pressure: Not applicable to the mixture – not required under all applicable pesticide legislation
Clomazone: 2.7×10^{-2} Pa
- l) Vapour density: Not applicable – not required under all applicable pesticide legislation
- m) Density: 1.19 g/cm³ at 20°C
- n) Solubility(ies) Solubility (water): Forms a stable dispersion in water
- o) Partition coefficient: n-octanol/water: Clomazone: Kow 2.58 @ pH7, 20°C
- p) Auto-ignition temperature: >400 °C
Minimum Ignition Temperature: Not available
Minimum Ignition Energy: Not available
- q) Decomposition temperature: Clomazone: >281°C
- r) Viscosity: 158 mPa.s at 20°C/ 188 mPa.s at 40°C
- s) Explosive properties: Explosion hazard: not explosive.
- t) Oxidising properties: Not an oxidising agent.

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9.2 Other information

Surface tension: 51.3 mNm⁻¹

Flammability (in contact with water): not flammable

10. STABILITY AND REACTIVITY

10.1 Reactivity : Non-reactive when stored in original container under normal conditions of storage and use.

10.2 Chemical stability : Stable when stored in original container under normal conditions of storage and use.

10.3 Possibility of hazardous reactions : No hazardous reactions when stored in original container under normal conditions of storage and use. May react with strong bases and strong oxidising substances.

10.4 Conditions to avoid : Do not store in proximity of sources of ignition and direct sunlight.

10.5 Incompatible materials : Avoid contact with strong bases and strong oxidising substances.

10.6 Hazardous decomposition products : During decomposition evolves toxic fumes; nitrogen oxides and chlorine oxides.

11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

11.1.1 Substances : Not Applicable

11.1.2 Mixtures : All the data contained in this section are derived from actual test data on the mixture unless otherwise stated.

a) Acute toxicity:

LD₅₀ oral, rat: >2000 mg/kg bw

LD₅₀ dermal, rabbit: >2000 mg/kg bw

LC₅₀ inhalation, rat: Not classified as hazardous under Directive 1999/45/EC

b) Irritation:

Skin: Not classified as a skin irritant under Directive 1999/45/EC

Eye: Not classified as an eye irritant under Directive 1999/45/EC

c) Corrosivity: Not classified as corrosive on the basis of skin and eye irritation studies

d) Sensitisation: Not classified as a skin sensitizer in animal studies. No data available for respiratory sensitization

e) Repeated dose toxicity: Not classified as hazardous for repeated dose toxicity on the basis of mixture component information taken from animal studies

f) Carcinogenicity: Not classified as carcinogenic on the basis of mixture component information

g) Mutagenicity: Not classified as mutagenic on the basis of mixture component information

h) Toxicity for reproduction: Not classified as a reproductive toxicant on the basis of mixture component information

Likely routes of exposure and related long and short term symptoms and health effects:

Inhalation: There is a low risk of exposure by inhalation.

Short-term symptoms and effects: Possible slight nasal irritation and discharge.

Long-term symptoms and effects: No evidence of long-term effects after prolonged or repeated exposure.

Eye contact: There is a risk of exposure by eye contact.

Short-term symptoms and effects: Possible slight transitory redness.

Long-term symptoms and effects: No evidence of long-term effects after prolonged or repeated exposure.

Skin contact: There is a risk of exposure by skin contact.

Short-term symptoms and effects: Possible slight transitory redness.

Long-term symptoms and effects: No evidence of long-term effects after prolonged or repeated exposure.

Ingestion: There is a very low risk of accidental exposure by ingestion.

Short-term symptoms and effects: Possible mild gastrointestinal effects.

Long-term symptoms and effects: No evidence of long-term effects after prolonged or repeated exposure.

12. ECOLOGICAL INFORMATION

All the information and data contained in this section are derived from actual test data on the mixture unless otherwise stated.

12.1 Toxicity

Acute Toxicity

LC₅₀ fish, *Oncorhynchus mykiss* (96h): 339.8 mg/l

Aquatic invertebrates:

EC₅₀ *Daphnia magna* (48h): 142.7 mg/l

EC₅₀ *Mysidopsis bahia*: Clomazone: 0.57 mg/l

EbC₅₀ *Navicula pelliculosa* (120h): Clomazone: 0.136 mg/l

ErC₅₀ algae, *Selenastrum capricornutum* (72h): 359.2 mg/l

LD₅₀ birds, Mallard duck: Clomazone: >2510 mg/kg

Honey bees:

LD₅₀ oral, *Apis mellifera*: Clomazone: >85.3 µg/bee

LD₅₀ contact, *Apis mellifera* : Clomazone: >100 µg/bee

12.2 Persistence and degradability: Clomazone: Half-life in soil: 77 d (mean value). Not readily biodegradable

12.3 Bioaccumulative potential: No significant potential for bioaccumulation

12.4 Mobility in soil: Low to medium mobility in soil

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12.5 Results of PBT and vPvB assessment: No PBT or vPvB assessments have been carried out on the mixture; please refer to 12.1, 12.2 & 12.3.

12.6 Other adverse effects: Not determined.

12.7 Additional Information: None

13. DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Disposal of waste product, contaminated packaging materials and any excess diluted spray should be in accordance with 'The Hazardous Waste (England and Wales) Regulations 2005' and any other applicable local or national legislation (for guidance refer to the MAFF/HSE "Pesticides: Code of Practice for the Safe Use of Pesticides on Farms and Holdings"). For the handling and management of accidental release, follow the information given under Section 6 and 7.

14. TRANSPORT INFORMATION : Not classified as hazardous for transport.

15. REGULATORY INFORMATION

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

EU Regulations

REGULATION (EC) No 1107/2009 of The European Parliament and of the Council of 21 October 2009 concerning the placing of plant protection products on the market and repealing Council Directives 79/117/EEC and 91/414/EEC.

Council Directive 67/548/EEC of 27 June 1967 on the approximation of laws, regulations and administrative provisions relating to the classification, packaging and labelling of dangerous substances

DIRECTIVE 1999/45/EC of the European Parliament and of the Council of 31 May 1999 concerning the approximation of the laws, regulations and administrative provisions of the Member States relating to the classification, packaging and labelling of dangerous preparations.

REGULATION (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006.

REGULATION (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), establishing a European Chemicals Agency, amending Directive 1999/45/EC and repealing Council Regulation (EEC) No 793/93 and Commission Regulation (EC) No 1488/94 as well as Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC, including amendments.

COMMISSION REGULATION (EU) No 453/2010 of 20 May 2010 amending Regulation (EC) No 1907/2006 of the European Parliament and of the Council on the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH)

National Regulations/legislation:

The Chemicals (Hazard Information & Packaging for Supply) Regulations 2009 (CHIP 4) Health and Safety at Work etc. Act 1974, as amended, the Control of Substances Hazardous to Health Regulations 1999 (COSHH), as amended.

15.2 Chemical Safety Assessment

No Chemical Safety Assessment under Regulation (EC) 1907/2006 is required and has not been carried out.

16. OTHER INFORMATION

Abbreviations and acronyms:

N: Dangerous for the environment.

Xn: Harmful.

Xi: Irritant

Classification and procedure used to derive the classification for mixtures according to Regulation (EC)

1272/2008 [CLP] : Not Applicable

Relevant R-phrases, H-statements and precautionary statements not written out in full under Sections 2 to 15:

R20/22 Harmful by inhalation and if swallowed.

R36 Irritating to eyes.

R50/53 Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

H302 Harmful if swallowed

H319 Causes serious eye irritation

H332 Harmful if inhaled

H400 Very toxic to aquatic life

H410 Very toxic 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.