

Material Safety Data Sheet Mixture:

SECTION 1: Identification of the Substance/Mixture and of the Company/Undertaking

1.1 Product Identifier

Substance name: Appeal

Number: MAPP 12713

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

1.2.1 Relevant identified uses

Molluscicide

1.2.2 Uses advised against

No specific uses advised against.

1.3 Details of the supplier of the SDS

Supplier: Chiltern Farm Chemicals Ltd.

Address: East Mellwaters
Stainmore Road
Bowes
Barnard Castle
DL12 9RH

Email address chilternfarm@aol.com

Telephone/fax number Tel +44 (0)1833 628282

Fax +44 (0)1833 628020

1.4 Emergency telephone number

Emergency use only +44 (0) 1865 407 333 (24 hour)

SECTION 2: Hazards Identification

2.1 Classification of the substance or mixture

2.1.1 Classification according to Regulation (EC) 1272/2008 [CLP/GHS]

Not classified as hazardous

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2.1.2 Classification according to Directive 67/548/EEC

Not classified as hazardous

2.2 Label Elements

2.2.1 According to Regulation (EC) 1272/2008 [CLP/GHS]

Pictograms: None - Not classified as hazardous

Signal Word: None - Not classified as hazardous

Hazard Statements: None - Not classified as hazardous

Precautionary statements: None - Not classified as hazardous

Additional Statements:

EUH 401: To avoid risks to human health and the environment, comply with instructions for use.

SP1: 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).

2.2.2 According to Directive 67/548/EEC

Not applicable

2.3 Other hazards

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

SECTION 3: Composition/Information on Ingredients

3.2 Mixtures

| Chemical name | CAS Number | EC Number | Index Number in CLP Annex VI | % w/w | Classification (EU Reg. 1272/2008) | Classification (67/548/EEC) |
|---------------|------------|-----------|------------------------------|-------|---|-------------------------------------|
| Metaldehyde | 108-62-3 | 203-600-2 | 605-005-00-7 | 1-5 | Flam Sol. 2: H228 Acute Tox. 4: H302 STOT RE 2: H373 Aquatic Chronic 3: H412 | F: R11 Xn: R22, R48/22 R52/53 |

For the full text of R-phrases and H-Statements see Section 16

SECTION 4: First Aid Measures

4.1 Description of First Aid Measures

General notes: Treat exposure symptomatically. Seek medical attention if symptoms develop or persist.

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|--|---|---|

Following inhalation: Remove to fresh air from exposure. Keep warm and at rest. If symptoms persist obtain medical attention.

Following skin contact: Immediately remove contaminated clothing and wash skin with plenty of soap and water. If symptoms develop, consult a physician. Contaminated clothing should be thoroughly cleaned.

Following ingestion: Do not induce vomiting. Wash out mouth and give 200-300 ml of water to drink. Obtain immediate medical attention.

Following eye contact: Immediately rinse eye with water for at least 15 minutes. If symptoms persist obtain medical attention.

4.2 Most important symptoms and effects, both acute and delayed

May cause skin and eye irritation. Exposure should be treated symptomatically.

4.3 Indication of any immediate medical attention and special treatment needed

Not known. Exposure should be treated symptomatically.

SECTION 5: Fire Fighting Measures

5.1 Suitable extinguishing media

Use extinguishing media appropriate to the situation of the fire and its surrounding area. Water spray, foam, dry powder and CO₂ are all suitable media.

Unsuitable extinguishing media: Do not use water jet.

5.2 Special Hazards arising from the substance or mixture

Thermal decomposition may lead to release of irritating and toxic gases and vapours.

5.3 Advice for firefighters

Wear self-contained breathing apparatus and a chemical protective suit. Do not allow extinguishing water to reach ground water or sewage system. Fight fire from a distance and stay upwind.

Water spray should be used to cool containers.

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| Material Safety Data Sheet : Appeal | In accordance with Commission Regulation (EU) 453/2010 | Date Issued: 10/03/2014 Version 3.0 |
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SECTION 6: Accidental Release Measures

6.1 Personal precautions, protective equipment and emergency procedures

Restrict access to the area as appropriate until clean-up operations are complete.
Eliminate sources of ignition. Take precautionary measures against static discharges.
Ensure adequate earthing. Use non-sparking hand tools and explosion-proof electrical equipment. Ensure adequate ventilation.
Avoid contact with skin and eyes. Use the personal protective equipment recommended in Section 8 (Exposure controls).

6.2 Environmental precautions

Prevent material from entering drains or waterways. If drains, streams, soil or sewers become contaminated then notify local authority and any other appropriate regulatory body.

6.3 Methods and materials for containment and cleaning up

Shovel into a container for disposal. Wash spill area with soapy water. Disposal should be in accordance with local, state or national legislation. Contaminated clothing should be thoroughly cleaned.

6.4 Reference to other sections

Refer to sections 8 and 13 for guidance on personal protective equipment and disposal considerations.

SECTION 7: Handling and Storage

7.1 Precautions for safe handling

7.1.1 Protective measures

Eliminate sources of ignition.
Take precautionary measures against static discharges.
Ensure adequate earthing.
Use non-sparking hand tools and explosion-proof electrical equipment.
Ensure adequate ventilation.
Avoid direct contact with the mixture.
Wash hands and exposed skin after use.
Standard occupational safety procedures should be followed.

7.1.2 Advice on general occupational hygiene

Use of the personal protective equipment referred to in Section 8 is required.
Do not breathe vapours/gases/dust. Do not get in eyes, on skin or on clothing.
Wash hands and change clothes after use. Wash the contaminated clothing separately from others.

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| Material Safety Data Sheet : Appeal | In accordance with Commission Regulation (EU) 453/2010 | Date Issued: 10/03/2014 Version 3.0 |
|--|---|---|

7.2 Conditions for safe storage including any incompatibilities

Keep container tightly closed. Keep away from heat and sources of ignition. Keep containers in a clean, cool and dry area away from heat sources.

7.3 Specific End use

Molluscicide

SECTION 8: Exposure Controls/ Personal Protection

8.1 Control Parameters

The conclusion of the peer review of the pesticide risk assessment of the active substance metaldehyde produced by the European Food Safety Authority concludes that the Acceptable Operator Exposure Level (AOEL) for metaldehyde is 0.1 mg/kg bw/day

8.2 Exposure Controls

8.2.1 Appropriate engineering controls

Use adequate ventilation to keep airborne concentrations low.

8.2.2 Personal protection

Eye/face protection: Safety goggles should be worn.

Skin protection: Plastic or rubber gloves, and long sleeved clothing.

Respiratory protection: No special protective equipment required.

8.2.3 Environmental exposure controls.

Use the product in accordance with label instructions. Avoid unnecessary release to the environment.

SECTION 9: Physical and Chemical Properties

Property

| | |
|---|---|
| Appearance | Turquoise blue in colour, opaque, cylindrical, hard free flowing granules |
| Odour | Weak odour |
| Odour threshold | Not reported |
| pH | 5.20 (1% dispersion) |
| Melting point/Freezing point | Not applicable |
| Boiling point | Not applicable |
| Flash point | Not applicable |
| Evaporation rate | Not applicable |
| Flammability | Not highly flammable |
| Upper lower flammability/explosive limits | No explosive properties |
| Vapour pressure | Not applicable |
| Vapour density | Not applicable |
| Bulk density | 0.765 g/ml (pour density) 0.808 g/ml (tap density) |
| Solubility in water | Not applicable |
| Solubility in organic solvents | Not applicable |
| Partition coefficient (n-octanol/water) | Not applicable |

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| Material Safety Data Sheet : Appeal | In accordance with Commission Regulation (EU) 453/2010 | Date Issued: 10/03/2014 Version 3.0 |
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| Auto-ignition temperature | 251°C |
| Decomposition temperature | Not applicable |
| Viscosity | Not applicable |
| Explosive properties | Not explosive |
| Oxidising properties | Not oxidising |

SECTION 10: Stability and Reactivity

10.1 Reactivity

Stable under normal conditions.

10.2 Chemical Stability

Stable under normal conditions.

10.3 Possibility of hazardous reactions

No data available.

10.4 Conditions to avoid

None known.

10.5 Incompatible materials

Not known.

10.6 Hazardous decomposition products

Decomposes in a fire giving off toxic fumes including carbon monoxide and carbon dioxide.

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SECTION 11: Toxicological Information

| Toxicological Endpoint | Value |
|-----------------------------------|--|
| Acute Oral Toxicity | LD50 = 2000 mg/kg bw |
| Acute Dermal Toxicity | LD50 > 2000 mg/kg bw |
| Acute Inhalation toxicity | Not classified based on physio-chemical properties |
| Skin irritation | Not irritating to skin |
| Eye irritation | Not irritating to eyes |
| Skin sensitisation | Not sensitising to skin |
| Repeat dose toxicity (Short term) | Negative |
| Germ cell mutagenicity | Negative |
| Carcinogenicity | Negative |
| Reproductive toxicity | Negative |
| STOT Single exposure | Negative |
| STOT Repeated exposure | Not classified |
| Aspiration Hazard | Negative |

SECTION 12: Ecotoxicological Information

12.1 Toxicity

| Species | Timescale | Endpoint | Value |
|--|--------------------|------------------------|---|
| Bobwhite Quail | Acute | LD ₅₀ | 445 mg/kg bw (Metaldehyde) |
| Bobwhite Quail | Short-term dietary | LC ₅₀ | 3460 mg/kg feed (Metaldehyde) |
| Mallard | Short-term dietary | LC ₅₀ | 3450 mg/kg feed (Metaldehyde) |
| Bobwhite quail | Reproduction | NOEC | 400 ppm (equivalent to 34 mg/kg/day) (Metaldehyde) |
| <i>Oncorhynchus mykiss</i> | 96 hour | LD ₅₀ | 75 mg/L (Metaldehyde) |
| | 21 day | NOEC | 37.5 mg/L (Metaldehyde) |
| <i>Danio rerio</i> | 96 hour | LC ₅₀ | >100 mg/L (Metaldehyde) |
| <i>Daphnia magna</i> | 48 hour | EC ₅₀ | > 78.4 mg/L (Metaldehyde) |
| <i>Daphnia magna</i> | 21 day | NOEC (Reproduction) | 90 mg/L (Metaldehyde) |
| <i>Gyraulius chinensis</i> | 96 hour | LC ₅₀ | >100 mg/L (Metaldehyde) |
| <i>Desmodesmus subspicatus</i> | 72 hour | EC ₅₀ | >200 mg/L (Metaldehyde) |
| <i>Pseudokirchneriella subcapitata</i> | 72 hour | LC ₅₀ | >100 mg/L |

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|--|---|---|

| Species | Timescale | Endpoint | Value |
|---|----------------|---|--|
| | | | (Metaldehyde) |
| <i>Apis mellifera</i> | 48 hours | Contact LD ₅₀ Oral LD ₅₀ | > 100 µg/bee > 106.1 µg/bee (Metaldehyde) |
| <i>Aphidius rhopalosiphi</i> | 48 hours | LR ₅₀ | > 350 g/ ha (Metaldehyde) |
| <i>Typhlodromus pyri</i> | 7 days | LR ₅₀ | > 350 g/ha (Metaldehyde) |
| <i>Eisenia fetida</i> | 14 day | EC ₅₀ | > 1000 mg/kg dw soil (Metaldehyde) |
| Carabid beetle <i>Poecilus cupreus</i> | Extended study | Mortality feeding activity or behaviour | No significant effects on mortality, feeding activity or behaviour |
| Rove beetle <i>Aleochara bilineata</i> | Extended study | Reproduction | No significant effect on reproduction |

Appeal is not considered an aquatic hazard based on the calculation method.

12.2 Persistence and degradability

DT₅₀ Soil: 11.9 days (geometric mean for Metaldehyde)

DT₅₀ Water: 11.2 – 11.8 days (water phase of water/sediment study for Metaldehyde)

Koc: 116.5 L/kg (mean) (Range 75-173 L/kg for Metaldehyde)

12.3 Bioaccumulative potential

Bioconcentration factor (BCF): 11 (whole fish at steady state for Metaldehyde)

12.4 Mobility in soil

Metaldehyde exhibited high to moderate mobility in soil. There is no evidence of pH dependent absorption.

12.5 Results of PBT and vPvB assessment

Appeal is not considered to be PBT or vPvB.

12.6 Other adverse effects

No other adverse effects reported

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SECTION 13: Disposal Considerations

13.1 Waste treatment methods

13.1.1 Product/Packaging disposal

Disposal should be in accordance with local, state or national legislation.

13.1.2 Waste treatment information

Disposal should be according to appropriate legislation.

13.2 Additional information

Ensure compliance with EC, national and local regulations. Do not dispose of wastes in the local sewer or drainage system.

SECTION 14: Transport Information

Not classified as hazardous for transport.

SECTION 15: Regulatory Information

15.1 Safety health and environmental regulations specific for the substance

This safety data sheet has been compiled according to the requirements of Regulation (EC) No 1907/2006.

As metaldehyde is an active substance in Plant Protection Products it has been reviewed by the European Food Safety Authority in accordance with Council Directive 91/414/EEC.

15.2 Chemical Safety Assessment

No Chemical Safety Assessment has been carried out.

SECTION 16: Other Information

16.1 Indication of changes

Updates have been made to all sections of this Safety data sheet written in accordance with Commission Regulation (EU) 453/2010.

| | |
|----------------|--------------|
| Date of Issue: | 10/03/2014 |
| Revision Note | All sections |

16.2 Abbreviations and acronyms

CAS: Chemical Abstracts Service

IUPAC: International Union of Pure and Applied Chemistry

PBT: Persistent Bioaccumulative Toxic

vPvB: Very persistent very bioaccumulative

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16.3 Key literature references and sources for data

Endpoints used for this Safety Data Sheet have been taken from the Conclusion on the peer review of the pesticide risk assessment of the active substance metaldehyde, published by the European Food Safety Authority (EFSA Journal 2010; 8 (10):1856).

16.4 Classification and procedure used to derive the classification according to Regulation (EC) 1272/2008 (CLP)

The classification has been derived from data on the components.

16.5 Relevant R-phrases and/or H statements

Hazard Statements:

H228: Flammable solid

H302 Harmful if swallowed

H373: May cause damage to organs through prolonged or repeated exposure if swallowed

H412: Harmful to aquatic life with long lasting effects

EUH 401: To avoid risks to human health and the environment, comply with the instructions for use.

R Phrases:

R11: Highly Flammable

R22: Harmful if swallowed

R48/22: Harmful: danger of serious damage to health by prolonged exposure if swallowed

R52/53: Harmful to aquatic organisms. May cause long-term adverse effects in the aquatic environment

16.6 Training advice

This substance should be handled and used by professionals and those trained in its use.

16.7 Further information

This data is accurate to the best of our knowledge at the time of printing.