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

1.1 Product identifier
Trade name DECIS
Product code (UVP) 80183062

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

1.3 Details of the supplier of the safety data sheet
Supplier Bayer CropScience Ltd
Bayer Ltd
The Atrium, Blackthorn Road
Sandyford
Dublin 18
Ireland
Telephone +353-1-2999313
Responsible Department Email: ukinfo@bayercropscience.com

1.4 Emergency telephone no.
Emergency telephone no. 1800-409-399 (24 hr)

SECTION 2: HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture
Classification in accordance with Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures, as amended.

Flammable liquids: Category 3
H226 Flammable liquid and vapour.

Acute toxicity: Category 4
H302 Harmful if swallowed.
Aspiration hazard: Category 1
H304 May be fatal if swallowed and enters airways.

Skin irritation: Category 2
H315 Causes skin irritation.

Serious eye damage: Category 1
H318 Causes serious eye damage.

Acute toxicity: Category 4
H332 Harmful if inhaled.
Specific target organ toxicity - single exposure: Category 3
H335 May cause respiratory irritation.
Specific target organ toxicity - single exposure: Category 3
H336 May cause drowsiness or dizziness.

Acute aquatic toxicity: Category 1
DECIS
Version 5 / IRL
Revision Date: 17.08.2017
Print Date: 14.09.2017

H400 Very toxic to aquatic life.
Chronic aquatic toxicity: Category 1
H410 Very toxic to aquatic life with long lasting effects.

2.2 Label elements
Labelling in accordance with Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures, as amended.
Hazard label for supply/use required.

Hazardous components which must be listed on the label:
- Deltamethrin
- Solvent Naphtha (petroleum), light aromatic

Signal word: Danger

Hazard statements
H226 Flammable liquid and vapour.
H302 Harmful if swallowed.
H304 May be fatal if swallowed and enters airways.
H315 Causes skin irritation.
H318 Causes serious eye damage.
H332 Harmful if inhaled.
H335 May cause respiratory irritation.
H336 May cause drowsiness or dizziness.
H410 Very toxic to aquatic life with long lasting effects.
EUH401 To avoid risks to human health and the environment, comply with the instructions for use.

Precautionary statements
P240 Ground/bond container and receiving equipment.
P280 Wear protective gloves/ protective clothing/ eye protection.
P305 + P351 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P308 + P311 IF exposed or concerned: Call a POISON CENTER/ doctor/ physician.
P501 Dispose of contents/container to a licensed waste disposal contractor or collection site, except for triple rinsed empty containers which can be disposed of as non-hazardous waste.

2.3 Other hazards
Cutaneous sensations may occur, such as burning or stinging on the face and mucosae. However, these sensations cause no lesions and are of a transitory nature (max. 24 hours).

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS
3.2 Mixtures
Chemical nature
Emulsifilable concentrate (EC)
Deltamethrin 25 g/l

**Hazardous components**

Hazard statements according to Regulation (EC) No. 1272/2008

<table>
<thead>
<tr>
<th>Name</th>
<th>CAS-No. / EC-No. / REACH Reg. No.</th>
<th>Classification</th>
<th>Conc. [%]</th>
</tr>
</thead>
<tbody>
<tr>
<td>Deltamethrin</td>
<td>52918-63-5 258-256-6</td>
<td>Aquatic Chronic 1, H410 Aquatic Acute 1, H400 Acute Tox. 3, H301 Acute Tox. 3, H331</td>
<td>2.81</td>
</tr>
<tr>
<td>Tetrapropylene benzene sulfonate, calcium salt</td>
<td>11117-11-6 234-360-7</td>
<td>Acute Tox. 4, H312 Skin Irrit. 2, H315 Eye Dam. 1, H318 Aquatic Chronic 3, H412</td>
<td>&gt; 1.00 – &lt; 5.00</td>
</tr>
<tr>
<td>2-Methylpropan-1-ol</td>
<td>78-83-1 201-148-0</td>
<td>Flam. Liq. 3, H226 STOT SE 3, H335 Skin Irrit. 2, H315 Eye Dam. 1, H318 STOT SE 3, H336</td>
<td>&gt; 1.00 – &lt; 5.00</td>
</tr>
<tr>
<td>2,6-Di-tert-butyl-4-methylphenol</td>
<td>128-37-0 204-881-4 01-2119555270-46-xxxx</td>
<td>Aquatic Chronic 1, H400 Aquatic Chronic 1, H410</td>
<td>&gt; 0.10 – &lt; 0.25</td>
</tr>
<tr>
<td>Solvent Naphtha (petroleum), light aromatic</td>
<td>64742-95-6 265-199-0 01-2119486773-24-xxxx</td>
<td>Flam. Liq. 3, H226 STOT SE 3, H335 STOT SE 3, H336 Asp. Tox. 1, H304 Aquatic Chronic 2, H411</td>
<td>&gt; 25.00</td>
</tr>
</tbody>
</table>

**Further information**

| Deltamethrin | 52918-63-5 | M-Factor: 1,000,000 (acute), 1,000,000 (chronic) |

For the full text of the H-Statements mentioned in this Section, see Section 16.

**SECTION 4: FIRST AID MEASURES**

4.1 Description of first aid measures

**General advice**

Move out of dangerous area. Place and transport victim in stable position (lying sideways). Remove contaminated clothing immediately and dispose of safely.

**Inhalation**

Move the victim to fresh air and keep at rest. Call a physician or poison control center immediately.

**Skin contact**

Immediately wash with plenty of soap and water for at least 15 minutes. Warm water may increase the subjective severity of the irritation/paresthesia. This is not a sign of systemic poisoning. In case of skin irritation, application of oils or lotions containing vitamin E may be considered. If symptoms persist, call a physician.
Eye contact
Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Warm water may increase the subjective severity of the irritation/paresthesia. This is not a sign of systemic poisoning. Apply soothing eye drops, if needed anaesthetic eye drops. Get medical attention if irritation develops and persists.

Ingestion
Rinse out mouth and give water in small sips to drink. Do NOT induce vomiting. Do not leave victim unattended. Call a physician or poison control center immediately.

4.2 Most important symptoms and effects, both acute and delayed
Symptoms
Local: Skin and eye paraesthesia which may be severe, Usually transient with resolution within 24 hours, Skin, eye and mucous membrane irritation, Cough, Sneezing
Systemic: discomfort in the chest, Tachycardia, Hypotension, Nausea, Abdominal pain, Diarrhoea, Vomiting, Blurred vision, Headache, Anorexia, Somnolence, Coma, Convulsions, Tremors, Prostration, Airway hyperreaction, Pulmonary oedema, Palpitation, Muscular fasciculation, Apathy, Dizziness

4.3 Indication of any immediate medical attention and special treatment needed
Risks
This product contains a pyrethroid. Pyrethroid poisoning should not be confused with carbamate or organophosphate poisoning.

Treatment
Systemic treatment: Initial treatment: symptomatic. Monitor: respiratory and cardiac functions. In case of ingestion gastric lavage should be considered in cases of significant ingestions only within the first 2 hours. However, the application of activated charcoal and sodium sulphate is always advisable. Keep respiratory tract clear. Oxygen or artificial respiration if needed. In case of convulsions, a benzodiazepine (e.g. diazepam) should be given according to standard regimens. If not effective, phenobarbital may be used. Contraindication: atropine. Contraindication: derivatives of adrenaline. There is no specific antidote. Recovery is spontaneous and without sequelae.

SECTION 5: FIREFIGHTING MEASURES

5.1 Extinguishing media
Suitable
Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.
Unsuitable
High volume water jet

5.2 Special hazards arising from the substance or mixture
Dangerous gases are evolved in the event of a fire.

5.3 Advice for firefighters
Special protective equipment for firefighters
In the event of fire and/or explosion do not breathe fumes. In the event of fire, wear self-contained breathing apparatus.
Further information

Remove product from areas of fire, or otherwise cool containers with water in order to avoid pressure being built up due to heat. Whenever possible, contain fire-fighting water by diking area with sand or earth.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Precautions
Avoid contact with spilled product or contaminated surfaces. Remove all sources of ignition. Use personal protective equipment.

6.2 Environmental precautions
Do not allow to get into surface water, drains and ground water. If the product contaminates rivers and lakes or drains inform respective authorities.

6.3 Methods and materials for containment and cleaning up

Methods for cleaning up
Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Keep in suitable, closed containers for disposal. Clean floors and contaminated objects with plenty of water.

Additional advice
Check also for any local site procedures.

6.4 Reference to other sections
Information regarding safe handling, see section 7.
Information regarding personal protective equipment, see section 8.
Information regarding waste disposal, see section 13.

SECTION 7: HANDLING AND STORAGE

7.1 Precautions for safe handling

Advice on safe handling
No specific precautions required when handling unopened packs/containers; follow relevant manual handling advice. Ensure adequate ventilation.

Advice on protection against fire and explosion
Keep away from heat and sources of ignition. Vapours may form explosive mixture with air. Take measures to prevent the build up of electrostatic charge. Use only explosion-proof equipment.

Hygiene measures
When using, do not eat, drink or smoke. Remove soiled clothing immediately and clean thoroughly before using again. Contaminated work clothing should not be allowed out of the workplace. Wash hands thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, using the toilet or applying cosmetics. Wash hands immediately after work, if necessary take a shower.

7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers
Store in a place accessible by authorized persons only. Keep containers tightly closed in a dry, cool and well-ventilated place. Protect from freezing. Keep away from direct sunlight.

Advice on common storage
Keep away from food, drink and animal feedingstuffs.
Suitable materials

Coextruded containers with an internal barrier layer made of ethylene vinyl alcohol copolymer (EVOH)
Black mild steel sheet with interior coating

7.3 Specific end use(s)

Refer to the label and/or leaflet.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

<table>
<thead>
<tr>
<th>Components</th>
<th>CAS-No.</th>
<th>Control parameters</th>
<th>Update</th>
<th>Basis</th>
</tr>
</thead>
<tbody>
<tr>
<td>2-Methylpropan-1-ol</td>
<td>78-83-1</td>
<td>225 mg/m3/75 ppm (STEL)</td>
<td>2011</td>
<td>ELV (IE)</td>
</tr>
<tr>
<td>2-Methylpropan-1-ol</td>
<td>78-83-1</td>
<td>150 mg/m3/50 ppm (TWA)</td>
<td>2011</td>
<td>ELV (IE)</td>
</tr>
<tr>
<td>2,6-Di-tert-butyl-4-methylphenol</td>
<td>128-37-0</td>
<td>10 mg/m3 (TWA)</td>
<td>2011</td>
<td>ELV (IE)</td>
</tr>
<tr>
<td>2,6-Di-tert-butyl-4-methylphenol</td>
<td>128-37-0</td>
<td>2 mg/m3 (TLV)</td>
<td></td>
<td>OES BCS*</td>
</tr>
<tr>
<td>Solvent Naphtha (petroleum), light aromatic</td>
<td>64742-95-6</td>
<td>116 mg/m3/20 ppm (TWA)</td>
<td>2014</td>
<td>EU SCOELS</td>
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<tr>
<td>Solvent Naphtha (petroleum), light aromatic</td>
<td>64742-95-6</td>
<td>290 mg/m3/50 ppm (STEL)</td>
<td>2014</td>
<td>EU SCOELS</td>
</tr>
<tr>
<td>Deltamethrin</td>
<td>52918-63-5</td>
<td>0.02 mg/m3 (TWA)</td>
<td></td>
<td>OES BCS*</td>
</tr>
</tbody>
</table>

*OES BCS: Internal Bayer AG, Crop Science Division "Occupational Exposure Standard"

8.2 Exposure controls

Personal protective equipment

In normal use and handling conditions please refer to the label and/or leaflet. In all other cases the following recommendations would apply.

Respiratory protection

Wear respirator with an organic vapours and gas filter mask (protection factor 10) conforming to EN140 type A or equivalent. Respiratory protection should only be used to control residual risk of short duration activities, when all reasonably practicable steps have been taken to reduce exposure at source e.g. containment and/or local extract ventilation. Always follow respirator manufacturer's instructions regarding wearing and maintenance.

Hand protection

Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. Also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion, and the contact time.

Wash gloves when contaminated. Dispose of when contaminated inside, when perforated or when contamination on the outside cannot be removed. Wash hands frequently and always before eating, drinking, smoking or using the toilet.
Material: Nitrile rubber
Rate of permeability: > 480 min
Glove thickness: > 0.4 mm
Protective index: Class 6

Eye protection
Wear goggles (conforming to EN166, Field of Use = 5 or equivalent).

Skin and body protection
Wear standard coveralls and Category 3 Type 6 suit.
If there is a risk of significant exposure, consider a higher protective type suit.
Wear two layers of clothing wherever possible. Polyester/cotton or cotton overalls should be worn under chemical protection suit and should be professionally laundered frequently.
If chemical protection suit is splashed, sprayed or significantly contaminated, decontaminate as far as possible, then carefully remove and dispose of as advised by manufacturer.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Form</td>
<td>Liquid</td>
</tr>
<tr>
<td>Colour</td>
<td>yellow</td>
</tr>
<tr>
<td>Odour</td>
<td>aromatic</td>
</tr>
<tr>
<td>pH</td>
<td>4.0 - 6.0 at 1 % (23 °C) (deionized water)</td>
</tr>
<tr>
<td>Flash point</td>
<td>48 °C</td>
</tr>
<tr>
<td>Ignition temperature</td>
<td>&gt; 450 °C</td>
</tr>
<tr>
<td>Upper explosion limit</td>
<td>7.00 % (V)</td>
</tr>
<tr>
<td>Lower explosion limit</td>
<td>0.8 % (V)</td>
</tr>
<tr>
<td>Relative vapour density</td>
<td>1.00</td>
</tr>
<tr>
<td>Density</td>
<td>ca. 0.89 g/cm³ at 20 °C</td>
</tr>
<tr>
<td>Water solubility</td>
<td>miscible</td>
</tr>
<tr>
<td>Partition coefficient: n-octanol/water</td>
<td>Deltamethrin: log Pow: 6.4 at 25 °C</td>
</tr>
</tbody>
</table>

9.2 Other information
Further safety related physical-chemical data are not known.
SECTION 10: STABILITY AND REACTIVITY

10.1 Reactivity
Thermal decomposition Stable under normal conditions.
10.2 Chemical stability Stable under recommended storage conditions.
10.3 Possibility of hazardous reactions No hazardous reactions when stored and handled according to prescribed instructions.
10.4 Conditions to avoid Extremes of temperature and direct sunlight.
10.5 Incompatible materials Store only in the original container.
10.6 Hazardous decomposition products No decomposition products expected under normal conditions of use.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects
Acute oral toxicity LD50 (Rat) 416 mg/kg
Acute inhalation toxicity LC50 (Rat) 2.69 mg/l
Exposure time: 4 h
Irritating to respiratory system.
Acute dermal toxicity LD50 (Rat) > 2,000 mg/kg
Skin irritation Irritating to skin. (Rabbit)
Eye irritation Severe eye irritation. (Rabbit)
Sensitisation Non-sensitizing. (Guinea pig)

Assessment STOT Specific target organ toxicity – single exposure
Deltamethrin: Based on available data, the classification criteria are not met.

Assessment STOT Specific target organ toxicity – repeated exposure
Deltamethrin caused neurobehavioral effects and/or neuropathological changes in animal studies. The toxic effects of Deltamethrin are related to transient hyperactivity typical for pyrethroid neurotoxicity.

Assessment mutagenicity
Deltamethrin was not mutagenic or genotoxic in a battery of in vitro and in vivo tests.

Assessment carcinogenicity
Deltamethrin was not carcinogenic in lifetime feeding studies in rats and mice.

Assessment toxicity to reproduction
Deltamethrin did not cause reproductive toxicity in a two-generation study in rats.

Assessment developmental toxicity
Deltamethrin caused developmental toxicity only at dose levels toxic to the dams. The developmental effects seen with Deltamethrin are related to maternal toxicity.
Aspiration hazard
May be fatal if swallowed and enters airways.

Further information
The toxicological data refer to a similar formulation.

SECTION 12: ECOLOGICAL INFORMATION

12.1 Toxicity
Toxicity to fish
LC50 (Oncorhynchus mykiss (rainbow trout)) 0.00925 mg/l
Exposure time: 96 h
Test conducted with a similar formulation.

Toxicity to aquatic invertebrates
EC50 (Daphnia magna (Water flea)) 0.00011 mg/l
Exposure time: 48 h
Test conducted with a similar formulation.

Toxicity to aquatic plants
EC50 (Raphidocelis subcapitata (freshwater green alga)) 60.5 mg/l
Exposure time: 96 h
Test conducted with a similar formulation.

12.2 Persistence and degradability
Biodegradability
Deltamethrin:
Not rapidly biodegradable

Koc
Deltamethrin: Koc: 10240000

12.3 Bioaccumulative potential
Bioaccumulation
Deltamethrin: Bioconcentration factor (BCF) 1,400
Does not bioaccumulate.

12.4 Mobility in soil
Mobility in soil
Deltamethrin: Immobile in soil

12.5 Results of PBT and vPvB assessment
PBT and vPvB assessment
Deltamethrin: This substance is not considered to be persistent, bioaccumulative and toxic (PBT). This substance is not considered to be very persistent and very bioaccumulative (vPvB).

12.6 Other adverse effects
Additional ecological information
No other effects to be mentioned.

SECTION 13: DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods
Product
It is best to use all of the product in accordance with label directions. If it is necessary to dispose of unused product, please follow container label instructions and applicable local guidelines.
Contaminated packaging
Small containers (< 10 l or < 10 kg) should be rinsed thoroughly using an integrated pressure rinsing device, or, by manually rinsing three times. Add washings to sprayer at time of filling. Dispose of empty and cleaned packaging safely. Follow advice on product label and/or leaflet.

Waste key for the unused product
02 01 08* agrochemical waste containing hazardous substances

SECTION 14: TRANSPORT INFORMATION

ADR/RID/ADN
14.1 UN number 1993
14.2 Proper shipping name FLAMMABLE LIQUID, N.O.S. (DELTAMETHRIN, SOLVENT NAPHTHA (PETROLEUM) LIGHT AROMATIC SOLUTION)
14.3 Transport hazard class(es) 3
14.4 Packing group III
14.5 Environm. Hazardous Mark YES
Hazard no. 30
Tunnel Code D/E

This classification is in principle not valid for carriage by tank vessel on inland waterways. Please refer to the manufacturer for further information.

IMDG
14.1 UN number 1993
14.2 Proper shipping name FLAMMABLE LIQUID, N.O.S. (DELTAMETHRIN, SOLVENT NAPHTHA (PETROLEUM) LIGHT AROMATIC SOLUTION)
14.3 Transport hazard class(es) 3
14.4 Packing group III
14.5 Marine pollutant YES

IATA
14.1 UN number 1993
14.2 Proper shipping name FLAMMABLE LIQUID, N.O.S. (DELTAMETHRIN, SOLVENT NAPHTHA (PETROLEUM) LIGHT AROMATIC SOLUTION)
14.3 Transport hazard class(es) 3
14.4 Packing group III
14.5 Environm. Hazardous Mark NO

14.6 Special precautions for user
See sections 6 to 8 of this Safety Data Sheet.

14.7 Transport in bulk according to Annex II of MARPOL and the IBC Code
No transport in bulk according to the IBC Code.
SAFETY DATA SHEET according to Regulation (EC) No. 1907/2006

SECTION 15: REGULATORY INFORMATION

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

Republic of Ireland Regulations
This material may be subject to some or all of the following regulations (and any subsequent amendments). Users must ensure that any uses and restrictions as indicated on the label and/or leaflet are followed.

Supply and Use
European Communities (Classification, Packaging and Labelling of Plant Protection Products and Biocide Products) Regulations 2001 (SI No 624/2001)

Waste Treatment
Landfill Directive
Regulation on Substances That Deplete the Ozone Layer 1994 (EEC/3093/94)

Further information
WHO-classification: II (Moderately hazardous)

15.2 Chemical safety assessment
A chemical safety assessment is not required.

SECTION 16: OTHER INFORMATION

Text of the hazard statements mentioned in Section 3

H226 Flammable liquid and vapour.
H301 Toxic if swallowed.
H304 May be fatal if swallowed and enters airways.
H312 Harmful in contact with skin.
H315 Causes skin irritation.
H318 Causes serious eye damage.
H331 Toxic if inhaled.
H335 May cause respiratory irritation.
H336 May cause drowsiness or dizziness.
H400 Very toxic to aquatic life.
H410 Very toxic to aquatic life with long lasting effects.
H411 Toxic to aquatic life with long lasting effects.
H412 Harmful to aquatic life with long lasting effects.

Abbreviations and acronyms
ADN European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
ADR European Agreement concerning the International Carriage of Dangerous Goods by Road
ATE | Acute toxicity estimate
---|---
CAS-Nr. | Chemical Abstracts Service number
Conc. | Concentration
EC-No. | European community number
ECx | Effective concentration to x %
EINECS | European inventory of existing commercial substances
ELINCS | European list of notified chemical substances
ELV | Exposure Limit Value
EN | European Standard
EU | European Union
IATA | International Air Transport Association
IBC | International Code for the Construction and Equipment of Ships Carrying Dangerous Chemicals in Bulk (IBC Code)
ICx | Inhibition concentration to x %
IMDG | International Maritime Dangerous Goods
LCx | Lethal concentration to x %
LDx | Lethal dose to x %
LOEC/LOEL | Lowest observed effect concentration/level
MARPOL | MARPOL: International Convention for the prevention of marine pollution from ships
N.O.S. | Not otherwise specified
NOEC/NOEL | No observed effect concentration/level
OECD | Organization for Economic Co-operation and Development
RID | Regulations concerning the International Carriage of Dangerous Goods by Rail
SI | Statutory Instrument
TWA | Time weighted average
UN | United Nations
WHO | World health organisation

The information contained within this Safety Data Sheet is in accordance with the guidelines established by Regulation (EU) 1907/2006 and Regulation (EU) 2015/830 amending Regulation (EU) No 1907/2006 and any subsequent amendments. This data sheet complements the user's instructions, but does not replace them. The information it contains is based on the knowledge available about the product concerned at the time it was compiled. Users are further reminded of the possible risks of using a product for purposes other than those for which it was intended. The required information complies with current EEC legislation. Addressees are requested to observe any additional national requirements.

**Reason for Revision:**
Safety Data Sheet according to Regulation (EU) No. 2015/830. The following sections have been revised: Section 2: Hazards Identification. Section 3: Composition / Information on Ingredients. Section 8: Exposure Controls / Personal Protection.

Changes since the last version are highlighted in the margin. This version replaces all previous versions.