



SAFETY DATA SHEET

Armor All® Air Freshener Card Island Retreat

According to Regulation (EC) No 1907/2006, Annex II, as amended.

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

1.1. Product identifier

Product name Armor All® Air Freshener Card Island Retreat
Product number 17202ML

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

Identified uses Hanging air freshener.
Uses advised against No specific uses advised against are identified.

1.3. Details of the supplier of the safety data sheet

Supplier

Armored Auto UK Ltd
 Unit 16, Rassau Industrial Estate
 Ebbw Vale
 Gwent NP23 5SD
 UK
 Tel: +44 1495 350234
 Fax: + 44 1495 350431
 euregulatory@eu.spectrumbrands.com

1.4. Emergency telephone number

Emergency telephone +44 1495 350234
 Monday - Thursday: 0830 - 1700
 Friday: 0830 - 1530

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification (EC 1272/2008)

Physical hazards Not Classified
Health hazards Skin Sens. 1 - H317
Environmental hazards Aquatic Chronic 2 - H411

Environmental

The product contains a substance which is very toxic to aquatic organisms and which may cause long-term adverse effects in the aquatic environment.

2.2. Label elements

Pictogram



Signal word

Warning

Armor All® Air Freshener Card Island Retreat

Hazard statements	H317 May cause an allergic skin reaction. H411 Toxic to aquatic life with long lasting effects.
Exemptions from CLP Article 17 [Article 29(2)]	The following are not required for labelling: H411 Toxic to aquatic life with long lasting effects. - 1.5.2.1. Labelling of packages where the contents do not exceed 125 ml]
Precautionary statements	P101 If medical advice is needed, have product container or label at hand. P102 Keep out of reach of children. P302+P352 IF ON SKIN: Wash with plenty of water. P333+P313 If skin irritation or rash occurs: Get medical advice/ attention.
Contains	allyl 3-cyclohexylpropionate, tetramethyl acetyloctahydronaphthalenes, butylphenyl methylpropional, coumarin
Supplementary precautionary statements	P272 Contaminated work clothing should not be allowed out of the workplace. P362+P364 Take off contaminated clothing and wash it before reuse.

2.3. Other hazards

This product does not contain any substances classified as PBT or vPvB.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

allyl 3-cyclohexylpropionate 1 - <2.5%		
CAS number: 2705-87-5	EC number: 220-292-5	REACH registration number: 01-2119976355-27-XXXX
M factor (Acute) = 1	M factor (Chronic) = 1	
Classification Acute Tox. 4 - H302 Acute Tox. 4 - H312 Acute Tox. 4 - H332 Skin Sens. 1B - H317 Aquatic Acute 1 - H400 Aquatic Chronic 1 - H410		
2-tert-butylcyclohexyl acetate 1 - <2.5%		
CAS number: 88-41-5	EC number: 233-732-6	
Classification Aquatic Chronic 2 - H411		

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allyl hexanoate		0.5 - <1%
CAS number: 123-68-2	EC number: 205-527-1	REACH registration number: 01-2119983573-26-XXXX
M factor (Acute) = 1		
Classification		
Acute Tox. 3 - H301		
Acute Tox. 3 - H311		
Acute Tox. 3 - H331		
Aquatic Acute 1 - H400		
Aquatic Chronic 3 - H412		
tetramethyl acetyloctahydronaphthalenes		0.5 - <1%
CAS number: 54464-57-2	EC number: 259-174-3	
Classification		
Skin Irrit. 2 - H315		
Skin Sens. 1 - H317		
Aquatic Chronic 2 - H411		
1,3,4,6,7,8-hexahydro-4,6,6,7,8,8-hexamethylindeno[5,6-c]pyran		0.5 - <1%
CAS number: 1222-05-5	EC number: 214-946-9	
M factor (Acute) = 1	M factor (Chronic) = 1	
Classification		
Aquatic Acute 1 - H400		
Aquatic Chronic 1 - H410		
allyl heptanoate		0.5 - <1%
CAS number: 142-19-8	EC number: 205-527-1	REACH registration number: 01-2119488961-23-XXXX
M factor (Acute) = 1	M factor (Chronic) = 1	
Classification		
Acute Tox. 4 - H302		
Acute Tox. 3 - H311		
Skin Irrit. 2 - H315		
Aquatic Acute 1 - H400		
Aquatic Chronic 1 - H410		

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butylphenyl methylpropional	0.25 - <0.5%
CAS number: 80-54-6	EC number: 201-289-8
Classification	
Acute Tox. 4 - H302	
Skin Irrit. 2 - H315	
Skin Sens. 1 - H317	
Repr. 2 - H361f	
coumarin	0.025 - <0.25%
CAS number: 91-64-5	EC number: 202-086-7
Classification	
Acute Tox. 4 - H302	
Skin Sens. 1 - H317	
STOT RE 2 - H373	
(E)-anethole	0.025 - <0.25%
CAS number: 4180-23-8	EC number: 224-052-0
Classification	
Skin Sens. 1 - H317	

The Full Text for all R-Phrases and Hazard Statements are Displayed in Section 16.

SECTION 4: First aid measures

4.1. Description of first aid measures

Inhalation	Move affected person to fresh air and keep warm and at rest in a position comfortable for breathing.
Ingestion	Rinse mouth thoroughly with water. Give plenty of water to drink. Move affected person to fresh air and keep warm and at rest in a position comfortable for breathing.
Skin contact	Wash skin thoroughly with soap and water.
Eye contact	Remove any contact lenses and open eyelids wide apart. Continue to rinse.

4.2. Most important symptoms and effects, both acute and delayed

Inhalation	Vapours may cause drowsiness and dizziness.
Ingestion	May cause discomfort if swallowed.
Skin contact	Prolonged skin contact may cause redness and irritation.
Eye contact	May cause temporary eye irritation.

4.3. Indication of any immediate medical attention and special treatment needed

Notes for the doctor	The severity of the symptoms described will vary dependent on the concentration and the length of exposure.
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SECTION 5: Firefighting measures

5.1. Extinguishing media

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Suitable extinguishing media Extinguish with alcohol-resistant foam, carbon dioxide, dry powder or water fog. Use fire-extinguishing media suitable for the surrounding fire.

Unsuitable extinguishing media Do not use water jet as an extinguisher, as this will spread the fire.

5.2. Special hazards arising from the substance or mixture

Hazardous combustion products Thermal decomposition or combustion products may include the following substances: Oxides of carbon. Toxic gases or vapours.

5.3. Advice for firefighters

Protective actions during firefighting Control run-off water by containing and keeping it out of sewers and watercourses.

Special protective equipment for firefighters Use protective equipment appropriate for surrounding materials.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions Wear protective clothing as described in Section 8 of this safety data sheet.

6.2. Environmental precautions

Environmental precautions Avoid discharge into drains or watercourses or onto the ground.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up Absorb in vermiculite, dry sand or earth and place into containers. Containers with collected spillage must be properly labelled with correct contents and hazard symbol.

6.4. Reference to other sections

Reference to other sections See Section 11 for additional information on health hazards. For waste disposal, see Section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Usage precautions Read and follow manufacturer's recommendations.

Advice on general occupational hygiene Avoid contact with eyes and prolonged skin contact.

7.2. Conditions for safe storage, including any incompatibilities

Storage precautions Store in a cool and well-ventilated place.

7.3. Specific end use(s)

Specific end use(s) The identified uses for this product are detailed in Section 1.2.

SECTION 8: Exposure Controls/personal protection

8.1. Control parameters

Ingredient comments No exposure limits known for ingredient(s).

8.2. Exposure controls

Eye/face protection No specific eye protection required during normal use.

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Hand protection	The most suitable glove should be chosen in consultation with the glove supplier/manufacturer, who can provide information about the breakthrough time of the glove material.
Hygiene measures	No specific hygiene procedures recommended but good personal hygiene practices should always be observed when working with chemical products.

SECTION 9: Physical and Chemical Properties

9.1. Information on basic physical and chemical properties

Appearance	Solid.
Colour	Various colours.
Odour	Characteristic.
Odour threshold	Not determined.
pH	Not determined.
Melting point	Not determined.
Initial boiling point and range	Not determined.
Flash point	Not determined.
Evaporation rate	Not determined.
Evaporation factor	Not determined.
Flammability (solid, gas)	Not determined.
Upper/lower flammability or explosive limits	Not determined.
Vapour pressure	Not determined.
Vapour density	Not determined.
Relative density	Not determined.
Bulk density	Not determined.
Partition coefficient	Not determined.
Auto-ignition temperature	Not determined.
Decomposition Temperature	Not determined.
Viscosity	Not determined.
Explosive properties	Not considered to be explosive.
Oxidising properties	The mixture itself has not been tested but none of the ingredient substances meet the criteria for classification as oxidising.

9.2. Other information

Other information	No information required.
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SECTION 10: Stability and reactivity

10.1. Reactivity

Reactivity	There are no known reactivity hazards associated with this product.
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10.2. Chemical stability

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Stability Stable at normal ambient temperatures and when used as recommended.

10.3. Possibility of hazardous reactions

Possibility of hazardous reactions Will not polymerise.

10.4. Conditions to avoid

Conditions to avoid Avoid excessive heat for prolonged periods of time.

10.5. Incompatible materials

Materials to avoid No specific material or group of materials is likely to react with the product to produce a hazardous situation.

10.6. Hazardous decomposition products

Hazardous decomposition products None at ambient temperatures.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity - oral

Notes (oral LD₅₀) Based on available data the classification criteria are not met.

ATE oral (mg/kg) 9,857.88

Acute toxicity - dermal

Notes (dermal LD₅₀) Based on available data the classification criteria are not met.

ATE dermal (mg/kg) 16,366.16

Acute toxicity - inhalation

Notes (inhalation LC₅₀) Based on available data the classification criteria are not met.

ATE inhalation (vapours mg/l) 178.51

Skin corrosion/irritation

Animal data Based on available data the classification criteria are not met.

Serious eye damage/irritation

Serious eye damage/irritation Based on available data the classification criteria are not met.

Respiratory sensitisation

Respiratory sensitisation Based on available data the classification criteria are not met.

Skin sensitisation

Skin sensitisation Skin Sens. 1 - H317

Germ cell mutagenicity

Genotoxicity - in vitro Based on available data the classification criteria are not met.

Genotoxicity - in vivo Based on available data the classification criteria are not met.

Carcinogenicity

Carcinogenicity Based on available data the classification criteria are not met.

Reproductive toxicity

Reproductive toxicity - fertility Based on available data the classification criteria are not met.

Specific target organ toxicity - single exposure

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STOT - single exposure Based on available data the classification criteria are not met.

Specific target organ toxicity - repeated exposure

STOT - repeated exposure Based on available data the classification criteria are not met.

Aspiration hazard

Aspiration hazard Not anticipated to present an aspiration hazard, based on chemical structure.

allyl 3-cyclohexylpropionate

Acute toxicity - oral

Acute toxicity oral (LD₅₀ mg/kg) 380.0

Species Guinea pig

Notes (oral LD₅₀) REACH dossier information.

ATE oral (mg/kg) 380.0

Acute toxicity - dermal

Acute toxicity dermal (LD₅₀ mg/kg) 1,600.0

Species Rabbit

Notes (dermal LD₅₀) REACH dossier information.

ATE dermal (mg/kg) 1,600.0

Acute toxicity - inhalation

Notes (inhalation LC₅₀) REACH dossier information. Converted acute toxicity point estimate (cATpE)

ATE inhalation (vapours mg/l) 11.0

Skin corrosion/irritation

Animal data Dose: 10 µl, 15 minutes, REACH dossier information. Not irritating.

Serious eye damage/irritation

Serious eye damage/irritation Dose: 0.1 ml, 24 hours, Rabbit REACH dossier information. Not irritating.

Skin sensitisation

Skin sensitisation Guinea pig maximization test (GPMT) - Guinea pig: Sensitising. REACH dossier information.

Germ cell mutagenicity

Genotoxicity - in vitro Chromosome aberration: Negative. REACH dossier information.

Reproductive toxicity

Reproductive toxicity - fertility One-generation study - NOAEL < 75 mg/kg/day, Oral, Rat P REACH dossier information.

Reproductive toxicity - development Developmental toxicity: - NOAEL: 10 mg/kg/day, Oral, Rat REACH dossier information.

allyl hexanoate

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Acute toxicity - oral

Acute toxicity oral (LD₅₀ mg/kg) 280.0

Species Guinea pig

Notes (oral LD₅₀) REACH dossier information.

ATE oral (mg/kg) 280.0

Acute toxicity - dermal

Acute toxicity dermal (LD₅₀ mg/kg) 820.0

Species Rabbit

Notes (dermal LD₅₀) REACH dossier information.

ATE dermal (mg/kg) 820.0

Acute toxicity - inhalation

Notes (inhalation LC₅₀) Converted acute toxicity point estimate (cATpE) Acute Tox. 3 - H331 Toxic if inhaled.

ATE inhalation (vapours mg/l) 3.0

Skin corrosion/irritation

Human skin model test Cell Viability (79.8%) 15 minutes REACH dossier information. Not irritating.

Serious eye damage/irritation

Serious eye damage/irritation Dose: 0.1 ml, 24 hours, Rabbit REACH dossier information. Not irritating.

Skin sensitisation

Skin sensitisation Guinea pig maximization test (GPMT) - Guinea pig: Not sensitising. REACH dossier information. Read across data.

Germ cell mutagenicity

Genotoxicity - in vitro Bacterial reverse mutation test: Negative. REACH dossier information.

tetramethyl acetyloctahydronaphthalenes

Skin corrosion/irritation

Animal data Skin Irrit. 2 - H315 Causes skin irritation.

Skin sensitisation

Skin sensitisation Skin Sens. 1 - H317 May cause an allergic skin reaction.

1,3,4,6,7,8-hexahydro-4,6,6,7,8,8-hexamethylindeno[5,6-c]pyran

Acute toxicity - oral

Acute toxicity oral (LD₅₀ mg/kg) 4,640.0

Species Rat

Notes (oral LD₅₀) REACH dossier information.

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ATE oral (mg/kg) 4,640.0

Acute toxicity - dermal

Acute toxicity dermal (LD₅₀ mg/kg) 10,000.0

Species Rat

Notes (dermal LD₅₀) REACH dossier information.

ATE dermal (mg/kg) 10,000.0

Skin corrosion/irritation

Animal data Dose: 0.5 ml, 1 hour, Rabbit Erythema/eschar score: Well defined erythema (2). Oedema score: Very slight oedema - barely perceptible (1). REACH dossier information. Not irritating.

Serious eye damage/irritation

Serious eye damage/irritation Dose: 0.1 ml, 7 days, Rabbit REACH dossier information. Not irritating.

Skin sensitisation

Skin sensitisation Guinea pig maximization test (GPMT) - Guinea pig: Not sensitising. REACH dossier information.

Germ cell mutagenicity

Genotoxicity - in vitro Chromosome aberration: Negative. REACH dossier information.

Reproductive toxicity

Reproductive toxicity - development Developmental toxicity: - NOAEL: 150 mg/kg/day, Oral, Rat Developmental toxicity: - LOAEL: 500 mg/kg/day, Oral, Rat REACH dossier information.

allyl heptanoate

Acute toxicity - oral

Acute toxicity oral (LD₅₀ mg/kg) 500.0

Species Rat

Notes (oral LD₅₀) Converted acute toxicity point estimate (cATpE) Acute Tox. 4 - H302 Harmful if swallowed.

ATE oral (mg/kg) 500.0

Acute toxicity - dermal

Acute toxicity dermal (LD₅₀ mg/kg) 300.0

Species Rat

Notes (dermal LD₅₀) REACH dossier information.

ATE dermal (mg/kg) 300.0

Skin corrosion/irritation

Animal data Skin Irrit. 2 - H315 Causes skin irritation.

Serious eye damage/irritation

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Serious eye damage/irritation	Dose: 0.1 ml, 1 hour, Rabbit Eye Irrit. 2 - H319 Causes serious eye irritation. REACH dossier information. Not irritating.
<u>Skin sensitisation</u>	
Skin sensitisation	Guinea pig maximization test (GPMT) - Guinea pig: Not sensitising. REACH dossier information.
<u>Germ cell mutagenicity</u>	
Genotoxicity - in vitro	Bacterial reverse mutation test: Negative. REACH dossier information.
<u>Reproductive toxicity</u>	
Reproductive toxicity - fertility	Screening - NOEL 30 mg/kg/day, Oral, Rat P REACH dossier information.
Reproductive toxicity - development	Developmental toxicity: - NOAEL: 10 mg/kg/day, Oral, Rat REACH dossier information. Read across data.

butylphenyl methylpropional

<u>Acute toxicity - oral</u>	
Acute toxicity oral (LD₅₀ mg/kg)	1,390.0
Species	Rat
Notes (oral LD₅₀)	REACH dossier information.
ATE oral (mg/kg)	1,390.0
<u>Acute toxicity - dermal</u>	
Acute toxicity dermal (LD₅₀ mg/kg)	2,001.0
Species	Rabbit
Notes (dermal LD₅₀)	REACH dossier information.
ATE dermal (mg/kg)	2,001.0
<u>Skin corrosion/irritation</u>	
Animal data	Dose: 0.5 ml, 4 hours, Rabbit Erythema/eschar score: Well defined erythema (2). Oedema score: Moderate oedema - raised approximately 1 mm (3). REACH dossier information. Irritating.
<u>Serious eye damage/irritation</u>	
Serious eye damage/irritation	REACH dossier information. Not irritating.
<u>Skin sensitisation</u>	
Skin sensitisation	Skin Sens. 1 - H317
<u>Germ cell mutagenicity</u>	
Genotoxicity - in vitro	Chromosome aberration: Negative. REACH dossier information.
Genotoxicity - in vivo	Chromosome aberration: Negative. REACH dossier information.
<u>Reproductive toxicity</u>	

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Reproductive toxicity - fertility Repr. 2 - H361f Suspected of damaging fertility.

Reproductive toxicity - development Developmental toxicity: - NOAEL: 4.1 mg/kg/day, Oral, Rat REACH dossier information.

coumarin

Acute toxicity - oral

Notes (oral LD₅₀) REACH dossier information. Converted acute toxicity point estimate (cATpE)

ATE oral (mg/kg) 500.0

Skin corrosion/irritation

Animal data Primary dermal irritation index: 1.15 REACH dossier information. Read across data. Not irritating.

Serious eye damage/irritation

Serious eye damage/irritation REACH dossier information. Read across data. Not irritating.

Skin sensitisation

Skin sensitisation Sensitising. REACH dossier information.

Germ cell mutagenicity

Genotoxicity - in vitro Chromosome aberration: Negative. REACH dossier information.

Genotoxicity - in vivo Chromosome aberration: Negative. REACH dossier information.

Carcinogenicity

IARC carcinogenicity IARC Group 3 Not classifiable as to its carcinogenicity to humans.

Reproductive toxicity

Reproductive toxicity - fertility Two-generation study - NOEC > 0.25 %, Oral, Mouse P, F1 REACH dossier information.

(E)-anethole

Acute toxicity - oral

Acute toxicity oral (LD₅₀ mg/kg) 2,001.0

Species Rat

Notes (oral LD₅₀) REACH dossier information.

ATE oral (mg/kg) 2,001.0

Acute toxicity - dermal

Acute toxicity dermal (LD₅₀ mg/kg) 4,900.0

Species Rabbit

Notes (dermal LD₅₀) REACH dossier information.

ATE dermal (mg/kg) 4,900.0

Skin corrosion/irritation

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Animal data	Dose: 0.5 ml, 4 hours, Rabbit Erythema/eschar score: Very slight erythema - barely perceptible (1). REACH dossier information. Not irritating.
<u>Serious eye damage/irritation</u>	
Serious eye damage/irritation	Dose: 0.1 ml, Rabbit, Not irritating. REACH dossier information.
<u>Skin sensitisation</u>	
Skin sensitisation	Local Lymph Node Assay (LLNA) - Mouse: Sensitising. REACH dossier information.
<u>Germ cell mutagenicity</u>	
Genotoxicity - in vitro	DNA damage and/or repair: Negative. REACH dossier information.
<u>Reproductive toxicity</u>	
Reproductive toxicity - fertility	One-generation study - Dose level: 600-1500 mg/kg/day, Oral, Rat F1 REACH dossier information.
Reproductive toxicity - development	Developmental toxicity: - NOAEL: ~ 175 mg/kg/day, Oral, Rat REACH dossier information.

SECTION 12: Ecological Information

12.1. Toxicity

Toxicity Aquatic Chronic 2 - H411

allyl 3-cyclohexylpropionate

Acute aquatic toxicity

LE(C)₅₀ 0.1 < L(E)C₅₀ ≤ 1

M factor (Acute) 1

Acute toxicity - fish LC₅₀, 96 hours: 0.13 mg/l, Pimephales promelas (Fat-head Minnow)
LC₀, 96 hours: 0.058 mg/l, Pimephales promelas (Fat-head Minnow)
LC₁₀₀, 96 hours: 0.26 mg/l, Pimephales promelas (Fat-head Minnow)
REACH dossier information.

Acute toxicity - aquatic invertebrates EC₅₀, 48 hours: 3.8 mg/l, Daphnia magna
EC₀, 48 hours: 1.5 mg/l, Daphnia magna
NOEC, 48 hours: 0.86 mg/l, Daphnia magna
EC₅₀, 24 hours: 7.7 mg/l, Daphnia magna
REACH dossier information.

Acute toxicity - aquatic plants EC₅₀, 72 hours: 3 mg/l, Pseudokirchneriella subcapitata
NOEC, 72 hours: 0.74 mg/l, Pseudokirchneriella subcapitata
EC₅₀, 96 hours: 4.6 mg/l, Pseudokirchneriella subcapitata
NOEC, 96 hours: 1.9 mg/l, Pseudokirchneriella subcapitata
REACH dossier information.

Chronic aquatic toxicity

M factor (Chronic) 1

2-tert-butylcyclohexyl acetate

Toxicity Aquatic Chronic 2 - H411 Toxic to aquatic life with long lasting effects.

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allyl hexanoate

Acute aquatic toxicity

LE(C)₅₀ 0.1 < L(E)C₅₀ ≤ 1

M factor (Acute) 1

Acute toxicity - fish LC₅₀, 24 hours: 0.201 mg/l, Brachydanio rerio (Zebra Fish)
LC₅₀, 48 hours: 0.117 mg/l, Brachydanio rerio (Zebra Fish)
LC₅₀, 72 hours: 0.117 mg/l, Brachydanio rerio (Zebra Fish)
LC₅₀, 96 hours: 0.117 mg/l, Brachydanio rerio (Zebra Fish)
REACH dossier information.

Acute toxicity - aquatic invertebrates EC₅₀, 48 hours: 2 mg/l, Daphnia magna
REACH dossier information.

Acute toxicity - aquatic plants NOEC, 72 hours: 0.158 mg/l, Desmodemus subspicatus
EC₅₀, 72 hours: > 4.6 mg/l, Desmodemus subspicatus
REACH dossier information.

tetramethyl acetyloctahydronaphthalenes

Toxicity Aquatic Chronic 2 - H411 Toxic to aquatic life with long lasting effects.

1,3,4,6,7,8-hexahydro-4,6,6,7,8,8-hexamethylindeno[5,6-c]pyran

Acute aquatic toxicity

LE(C)₅₀ 0.1 < L(E)C₅₀ ≤ 1

M factor (Acute) 1

Acute toxicity - fish NOEC, 21 days: 0.093 mg/l, Lepomis macrochirus (Bluegill)
LOEC, 21 days: 0.182 mg/l, Lepomis macrochirus (Bluegill)
LC₅₀, 96 hours: 1.36 mg/l, Lepomis macrochirus (Bluegill)
REACH dossier information.

Acute toxicity - aquatic invertebrates LC₅₀, 48 hours: 0.47 mg/l, Acartia tonsa
REACH dossier information.

Acute toxicity - aquatic plants NOEC, 72 hours: 0.201 mg/l, Pseudokirchneriella subcapitata
LOEC, 72 hours: 0.466 mg/l, Pseudokirchneriella subcapitata
EC₅₀, 72 hours: 0.723 mg/l, Pseudokirchneriella subcapitata
REACH dossier information.

Acute toxicity - terrestrial NOEC, 56 days: 45 mg/kg, Eisenia Fetida (Earthworm)
LOEC, 28 days: 105 mg/kg, Eisenia Fetida (Earthworm)
NOEC, 28 days: 105 mg/kg, Eisenia Fetida (Earthworm)
REACH dossier information.

Chronic aquatic toxicity

NOEC 0.01 < NOEC ≤ 0.1

Degradability Non-rapidly degradable

M factor (Chronic) 1

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Chronic toxicity - fish early life stage NOEC, 21 days: 0.093 mg/l, Lepomis macrochirus (Bluegill)
 LOEC, 21 days: 0.182 mg/l, Lepomis macrochirus (Bluegill)
 LC₅₀, 21 days: 0.452 mg/l, Lepomis macrochirus (Bluegill)
 REACH dossier information.

Chronic toxicity - aquatic invertebrates NOEC, 5.5 days: 0.0375 mg/l, Acartia tonsa
 LOEC, 5.5 days: 0.075 mg/l, Acartia tonsa
 EC₅₀, 5.5 days: 0.131 mg/l, Acartia tonsa
 REACH dossier information.

allyl heptanoate

Acute aquatic toxicity

LE(C)₅₀ 0.1 < L(E)C₅₀ ≤ 1

M factor (Acute) 1

Acute toxicity - aquatic invertebrates EC₅₀, 48 hours: 0.89 mg/l, Daphnia magna
 EC₀, 48 hours: 0.63 mg/l, Daphnia magna
 EC₁₀₀, 48 hours: 1.25 mg/l, Daphnia magna
 REACH dossier information.

Chronic aquatic toxicity

M factor (Chronic) 1

butylphenyl methylpropional

Acute toxicity - fish NOEC, 96 hours: 1.28 mg/l, Brachydanio rerio (Zebra Fish)
 LC₅₀, 96 hours: 2.04 mg/l, Brachydanio rerio (Zebra Fish)

Acute toxicity - aquatic invertebrates EC₅₀, 48 hours: 10.7 mg/l, Daphnia magna
 REACH dossier information.

Acute toxicity - aquatic plants EC₅₀, 72 hours: 29.155 mg/l, Scenedesmus subspicatus
 REACH dossier information.

Acute toxicity - microorganisms EC₁₀, 3 hours: > 100 mg/l, Activated sludge
 REACH dossier information.

coumarin

Acute toxicity - fish LC₅₀, 96 hours: 1.324 mg/l,
 REACH dossier information.
 QSAR

Acute toxicity - aquatic invertebrates EC₅₀, 48 hours: 8.012 mg/l, Daphnia sp.
 REACH dossier information.
 QSAR

Acute toxicity - aquatic plants EC₅₀, 96 hours: 1.452 mg/l,
 NOEC, 96 hours: 0.408 mg/l,
 REACH dossier information.
 QSAR

Acute toxicity - microorganisms NOEC, 28 days: 100 mg/l, Activated sludge
 REACH dossier information.

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Chronic toxicity - aquatic invertebrates NOEC, 21 days: 0.448 mg/l, Daphnia sp.
REACH dossier information.
QSAR

(E)-anethole

Acute toxicity - fish LC₀, 96 hours: ~ 4.8 mg/l, Brachydanio rerio (Zebra Fish)
LC₁₀₀, 96 hours: ~ 10.3 mg/l, Brachydanio rerio (Zebra Fish)
LC₅₀, 96 hours: ~ 7 mg/l, Brachydanio rerio (Zebra Fish)
REACH dossier information.

Acute toxicity - aquatic invertebrates LC₅₀, 48 hours: ~ 6.82 mg/l, Daphnia magna
EC₅₀, 48 hours: ~ 4.25 mg/l, Daphnia magna
REACH dossier information.

Acute toxicity - aquatic plants IC₅₀, 96 hours: ~ 9.571 mg/l, Selenastrum capricornutum
REACH dossier information.

Acute toxicity - microorganisms EC₅₀, 3 hours: ~ 97.2 mg/l, Activated sludge
REACH dossier information.

12.2. Persistence and degradability

Persistence and degradability No data available.

allyl 3-cyclohexylpropionate

Stability (hydrolysis) pH4 - Half-life : 90.5 hours @ 25°C
pH7 - Half-life : 90.8 hours @ 25°C
pH9 - Half-life : 51.4 hours @ 25°C
REACH dossier information.

Biodegradation Water - Degradation (60%): 7 days
Water - Degradation (86%): 28 days
REACH dossier information.
The substance is readily biodegradable.

allyl hexanoate

Stability (hydrolysis) pH4 - Half-life : 302 hours @ 25°C
pH7 - Half-life : 695 hours @ 25°C
pH9 - Half-life : 128 hours @ 25°C
REACH dossier information.

Biodegradation Water - Degradation (19%): 2 days
Water - Degradation (62%): 7 days
Water - Degradation (70%): 28 days
REACH dossier information.
The substance is readily biodegradable.

1,3,4,6,7,8-hexahydro-4,6,6,7,8,8-hexamethylindeno[5,6-c]pyran

Phototransformation Water - DT₅₀ : 3.7 - 4.9 hours
REACH dossier information.

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Biodegradation Water - Half-life : < 120 days
 Water - Degradation (60%): 28 days
 Water - Half-life : 100 hours
 Water - Degradation (~2%): 28 days
 REACH dossier information.
 No biodegradation observed under test conditions.

Biological oxygen demand ~ 3 g O₂/g substance REACH dossier information.

allyl heptanoate

Biodegradation Water - Degradation (15%): 2 days
 Water - Degradation (78%): 12 days
 Water - Degradation (81%): 28 days
 REACH dossier information.
 The substance is readily biodegradable.

butylphenyl methylpropional

Phototransformation Water - DT₅₀ : 11.66 hours
 REACH dossier information.

Biodegradation Water - Degradation (80.7%): 28 days
 REACH dossier information.
 The substance is readily biodegradable.

coumarin

Biodegradation Water - Degradation (100%): 28 days
 REACH dossier information.
 The substance is readily biodegradable.

(E)-anethole

Biodegradation Water - Degradation (~79%): 28 days
 REACH dossier information.
 The substance is readily biodegradable.

12.3. Bioaccumulative potential

Bioaccumulative potential No data available on bioaccumulation.

Partition coefficient Not determined.

allyl 3-cyclohexylpropionate

Bioaccumulative potential BCF: 307.8 l/kg, Algae REACH dossier information. QSAR

Partition coefficient log Pow: 4.28 REACH dossier information.

allyl hexanoate

Bioaccumulative potential BCF: 59.2 l/kg, Algae REACH dossier information. QSAR

Partition coefficient log Pow: 3.191 REACH dossier information.

1,3,4,6,7,8-hexahydro-4,6,6,7,8,8-hexamethylindeno[5,6-c]pyran

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Bioaccumulative potential BCF: 1584, Lepomis macrochirus (Bluegill) REACH dossier information.

Partition coefficient log Pow: 5.3 REACH dossier information.

allyl heptanoate

Bioaccumulative potential BCF: 193.2 l/kg, Algae REACH dossier information. QSAR

Partition coefficient log Pow: 3.97 REACH dossier information.

butylphenyl methylpropional

Bioaccumulative potential BCF: 274.3 l/kg, Algae REACH dossier information.

Partition coefficient log Pow: 4.2 REACH dossier information.

coumarin

Partition coefficient log Pow: 1.39 REACH dossier information.

(E)-anethole

Partition coefficient Pow: ~ 3.3884 REACH dossier information.

12.4. Mobility in soil

Mobility The product is soluble in water.

allyl 3-cyclohexylpropionate

Adsorption/desorption coefficient Water - log Koc: 3.26 @ 20°C REACH dossier information. QSAR

1,3,4,6,7,8-hexahydro-4,6,6,7,8,8-hexamethylindeno[5,6-c]pyran

Adsorption/desorption coefficient Activated sludge - log Koc: 4.87 REACH dossier information.

allyl heptanoate

Adsorption/desorption coefficient - log Koc: 2.986 @ 20°C REACH dossier information. QSAR

butylphenyl methylpropional

Henry's law constant 2.523 Pa m³/mol @ 25°C REACH dossier information. Calculation method.

(E)-anethole

Surface tension ~ 35 mN/m @ 25°C REACH dossier information.

12.5. Results of PBT and vPvB assessment

Results of PBT and vPvB assessment This product does not contain any substances classified as PBT or vPvB.

12.6. Other adverse effects

Other adverse effects Not determined.

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SECTION 13: Disposal considerations

13.1. Waste treatment methods

General information Dispose of waste product or used containers in accordance with local regulations

SECTION 14: Transport information

General The product is not covered by international regulations on the transport of dangerous goods (IMDG, IATA, ADR/RID). Refer to the Dangerous Goods List for information on any Special Provisions 335 / A158.

14.1. UN number

Not applicable.

14.2. UN proper shipping name

Not applicable.

14.3. Transport hazard class(es)

No transport warning sign required.

14.4. Packing group

Not applicable.

14.5. Environmental hazards

Environmentally hazardous substance/marine pollutant

No.

14.6. Special precautions for user

Not applicable.

14.7. Transport in bulk according to Annex II of MARPOL and the IBC Code

Transport in bulk according to Not applicable.

**Annex II of MARPOL 73/78
and the IBC Code**

SECTION 15: Regulatory information

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

National regulations EH40/2005 Workplace exposure limits.

EU legislation 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 (as amended).
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) (as amended).
Commission Regulation (EU) No 2015/830 of 28 May 2015.

15.2. Chemical safety assessment

No chemical safety assessment has been carried out.

SECTION 16: Other information

Classification procedures according to Regulation (EC) 1272/2008 Skin Sens. 1 - H317, Aquatic Chronic 2 - H411: Calculation method.

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Revision comments	Section 2: Hazards identification // 2.2. Label elements
Revision date	01/06/2016
Revision	2
Supersedes date	18/08/2015
SDS number	603
Hazard statements in full	H301 Toxic if swallowed. H302 Harmful if swallowed. H311 Toxic in contact with skin. H312 Harmful in contact with skin. H315 Causes skin irritation. H317 May cause an allergic skin reaction. H331 Toxic if inhaled. H332 Harmful if inhaled. H361f Suspected of damaging fertility. H373 May cause damage to organs through prolonged or repeated exposure. 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.

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