

# SAFETY DATA SHEET


Date of issue: May 2013  
Product name: **Exotic Garden 213**

Page: 1/9

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

<b>Product identifier</b>	<b>Exotic Garden 213</b>
<b>Relevant identified uses of the substance or mixture and uses advised against</b>	Concentrate fragrance oil liquid for aerosol refills.
<b>Details of the supplier of the safety data sheet</b>	<b>Vectair Systems Ltd.</b>
Supplier:	Unit 3 Trident Centre Armstrong Road, Basingstoke Hampshire RG24 8 NU United Kingdom Telephone : +44-1256-319500 Fax : +44-1256-319510 E-mail : info@vectair.co.uk
<b>Emergency telephone number</b>	Vectair Systems Limited: +44-1256-319500 For the phone number of emergency valid in your country, thank you to contact the relevant local authorities and visit the website of ECHA (European Chemicals Agency): <a href="http://echa.europa.eu/en/web/guest/support/helpdesks/national-helpdesks/list-of-national-helpdesks">http://echa.europa.eu/en/web/guest/support/helpdesks/national-helpdesks/list-of-national-helpdesks</a>

## SECTION 2 : Hazards identification

<b>Classification of the substance or mixture</b>	<b>Classification (REGULATION (EC) No 1272/2008)</b> <b>Eye irritation, Category 2, H319:</b> Causes serious eye irritation. <b>Skin sensitization, Category 1, H317:</b> May cause an allergic skin reaction. <b>Chronic aquatic toxicity, Category 3, H412:</b> Harmful to aquatic life with long lasting effects.  <b>Classification (67/548/EEC, 1999/45/EC)</b> <b>Sensitising, R43:</b> May cause sensitization by skin contact. <b>Dangerous for the environment, R52/53:</b> Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
<b>Label elements</b>	<b>Labelling (REGULATION (EC) No 1272/2008)</b> <b>Hazard pictograms:</b>   <b>Signal word :</b> Warning <b>Hazard statements:</b> H317 May cause an allergic skin reaction. H319 Causes serious eye irritation. H412 Harmful to aquatic life with long lasting effects. <b>Precautionary statements :</b> <b>Prevention:</b> P273 Avoid release to the environment. P280 Wear protective gloves/ eye protection/ face protection. <b>Response:</b> P302 + P352 IF ON SKIN: Wash with plenty of soap and water. P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  Hazardous components which must be listed on the label: ● 68155-66-8 1-(1,2,3,4,5,6,7,8-Octahydro-2,3,8,8-tetramethyl-2-naphthyl) ethan-1-one
<b>Other hazards</b>	None reasonably foreseeable.

# SAFETY DATA SHEET

Date of issue: May 2013  
Product name: **Exotic Garden 213**

Page: 2/9

## SECTION 3 : Composition/information on ingredients

**Substances** Not applicable, product is a mixture.

### Mixtures, Hazardous components

Chemical Name	CAS-No. EC-No. Registration number	Classification (67/548/EEC)	Classification (REGULATION (EC) No 1272/2008)	Concentration [%]
2-phenylethanol	60-12-8 200-456-2	Xi; R36	Eye Irrit.2; H319	10 - 20
1-(1,2,3,4,5,6,7,8-Octahydro-2,3,8,8-tetramethyl-2-naphthyl)ethan-1-one	68155-66-8, 54464-57- 2, 68155-67-9 915-730-3	Xi; R38 Xi; R43 N; R51/53	Skin Irrit.2; H315 Skin Sens.1; H317 Aquatic Chronic2; H411	2,5 - 10
1,4-dioxacycloheptadecane-5,17-dione	105-95-3 203-347-8	N; R51/53	Aquatic Chronic2; H411	2,5 - 10
linalool	78-70-6 201-134-4	Xi; R38	Skin Irrit.2; H315	0 - 10
2,6-dimethyloct-7-en-2-ol	18479-58-8 242-362-4 01-2119457274-37	Xi; R38	Eye Irrit.2; H319	0 - 10
anisaldehyde	123-11-5 204-602-6	Xn; R22	Acute Tox.4; H302	0 - 10
linalyl acetate	115-95-7 204-116-4	N; R51/53		0 - 2,5
benzyl benzoate	120-51-4 204-402-9	Xn; R22 N; R51/53	Acute Tox.4; H302 Aquatic Chronic2; H411	0 - 2,5
coumarin	91-64-5 202-086-7	Xi; R43 Xn; R22	Acute Tox.4; H302 STOT RE2; H373 Skin Sens.1; H317	0,1 - 1
2-(4-tertbutylbenzyl)propionaldehyde	80-54-6 201-289-8	Xn; R22 Xi; R38 Xi; R43 N; R51/53 Repr.Cat.3; R62	Acute Tox.4; H302 Skin Irrit.2; H315 Repr.2; H361f Skin Sens.1; H317 Aquatic Chronic2; H411	0,1 - 1
alpha-hexylcinnamaldehyde	101-86-0 639-566-4	Xi; R38 Xi; R43	Skin Irrit.2; H315 Skin Sens.1; H317	0,1 - 1
3-p-cumenyl-2-methylpropionaldehyde	103-95-7 203-161-7	Xi; R38 Xi; R43 N; R51/53 Repr.Cat.3; R62	Skin Irrit.2; H315 Repr.2; H361f Skin Sens.1; H317 Aquatic Chronic2; H411	0,1 - 1
3-methyl-4-(2,6,6-trimethyl-2-cyclohexen-1-yl)-3-buten-2-one	127-51-5 204-846-3	Xi; R43 N; R51/53	Skin Sens.1; H317 Aquatic Chronic2; H411	0,1 - 1
#-methyl-1,3-benzodioxole-5-propionaldehyde	1205-17-0 214-881-6	Xi; R43 N; R51/53	Skin Sens.1; H317 Aquatic Chronic2; H411	0,1 - 1
citronellol	106-22-9 203-375-0	N; R51/53 R43 Xi; R38	Skin Sens.1; H317 Skin Irrit.2; H315	0,1 - 1
[3R-(3a3a,7B,8aa-1-(2,3,4,7,8,8a-hexahydro-3,6,8,8-tetramethyl-1H-3a,7-methanoazulen-5-yl)ethan-1-one	32388-55-9 251-020-3	Xi; R43 N; R50/53	Skin Sens.1; H317 Aquatic Acute1; H400 Aquatic Chronic1; H410	0,1 - 0,25
undecan-4-olide	104-67-6 203-225-4	N; R51/53		0 - 2,5
4-(2,6,6-trimethylcyclohex-1-ene-1-yl)-but-3-ene-2-one	14901-07-6 238-969-9	N; R51/53	Aquatic Chronic2; H411	0 - 2,5
geranyl acetate	105-87-3 203-341-5	N; R51/53	Aquatic Chronic2; H411	0 - 2,5
geraniol	106-24-1 203-377-1	Xi; R43 Xi; R38-R41	Skin Irrit.2; H315 Eye Dam.1; H318 Skin Sens.1; H317	0,1 - 1

# SAFETY DATA SHEET

Date of issue: May 2013  
Product name: **Exotic Garden 213**

Page: 3/9

isopentyl salicylate	2050-08-0, 87-20-7 218-080-2, 201-730-4	N; R50/53	Aquatic Chronic1; H410	0 - 0,25
1-(2,6,6-trimethyl-3-cyclohexen-1-yl)-2-buten-1-one	57378-68-4, 71048-82-3 260-709-8, 275-156-8 01-2119535122-53	Xn; R22 Xi; R38 Xi; R43 N; R50/53	Acute Tox.4; H302 Skin Irrit.2; H315 Skin Sens.1; H317 Aquatic Chronic1; H410	0,1 - 0,25

For the full text of the R-phrases mentioned in this Section, see Section 16.

## SECTION 4 : First-aid measures

### Description of first aid measures

**General advice:** Take Risk and Safety phrases (section 15) into account.  
**If inhaled:** Remove from exposure site to fresh air and keep at rest. Obtain medical advice.  
**In case of skin contact:** Remove contaminated clothes. Wash thoroughly with water (and soap). Contact physician if symptoms persist.  
**In case of eye contact:** Flush immediately with water for at least 15 minutes. Contact physician if symptoms persist.  
**If swallowed:** Rinse mouth with water and obtain medical advice.

### Most important symptoms and effects, both acute and delayed

**Symptoms:** No information available.  
**Risks:** No information available.

### Indication of any immediate medical attention and special treatment needed

**Treatment:** No information available.

## SECTION 5 : Fire-fighting measures

### Extinguishing media:

**Suitable extinguishing media:** Carbondioxide, dry chemical, foam.  
**Unsuitable extinguishing media:** Do not use a direct waterjet on burning material.

### Special hazards arising from the substance or mixture

**Specific hazards during fire fighting:** Water may be ineffective.

### Advice for firefighters

**Further information:** Standard procedure for chemical fires.

# SAFETY DATA SHEET

---

Date of issue: May 2013  
Product name: **Exotic Garden 213**

Page: 4/9

## SECTION 6 : Accidental release measures

### **Personal precautions, protective equipment and emergency procedures**

**Personal precautions:** Avoid inhalation and contact with skin and eyes. A self-contained breathing apparatus is recommended in case of a major spill.

### **Environmental precautions**

**Environmental precautions:** Keep away from drains, surface- and ground-water and soil.

### **Methods and materials for containment and cleaning up**

**Methods for cleaning up:** Clean up spillage promptly. Remove ignition sources. Provide adequate ventilation. Avoid excessive inhalation of vapours. Gross spillages should be contained by use of sand or inert powder and disposed of according to the local regulations.

### **Reference to other sections**

Prevent spreading over a wide area (e.g. by containment or oil barriers).

## SECTION 7 : Handling and storage

### **Precautions for safe handling**

**Advice on safe handling:** Avoid excessive inhalation of concentrated vapours. Follow good manufacturing practices for housekeeping and personal hygiene.

Wash any exposed skin immediately after any chemical contact, before breaks and meals, and at the end of each work period.

Contaminated clothing and shoes should be thoroughly cleaned before re-use.

If appropriate, procedures used during the handling of this material should also be used when cleaning equipment or removing residual chemicals from tanks or other containers, especially when steam or hot water is used, as this may increase vapour concentrations in the workplace air. Where chemicals are openly handled, access should be restricted to properly trained employees.

Keep all heated processes at the lowest necessary temperature in order to minimize emissions of volatile chemicals into the air.

**Advice on protection against fire and explosion:** Keep away from ignition sources and naked flame.

### **Conditions for safe storage, including any incompatibilities**

**Requirements for storage areas and containers:** Store in a cool, dry, ventilated area away from heat sources. Keep containers upright and tightly closed when not in use.

### **Specific end uses**

**Specific use(s):** No information available.

## SECTION 8 : Exposure controls/personal protection

### **Control parameters**

Contains no substances with occupational exposure limit values.

### **Exposure controls**

#### **Engineering measures**

Where appropriate, use closed systems to transfer and process this material. If appropriate, isolate mixing rooms and other areas where this material is used or openly handled. Maintain these areas under negative air pressure relative to the rest of the plant.

#### **Personal protective equipment**

**Respiratory protection:** Use local exhaust ventilation around open tanks and other open sources of potential exposures in order to avoid excessive inhalation, including places where this material is openly weighed or measured. In addition, use general dilution ventilation of the work area to eliminate or reduce possible worker exposures. No respiratory protection is required during normal operations in a workplace where engineering controls

# SAFETY DATA SHEET

---

Date of issue: May 2013  
Product name: **Exotic Garden 213**

Page: 5/9

such as adequate ventilation, etc. are sufficient.  
If engineering controls and safe work practices are not sufficient, an approved, properly fitted respirator with organic vapour cartridges or canisters and particulate filters should be used:  
a) while engineering controls and appropriate safe work practices and/or procedures are being implemented; or  
b) during short term maintenance procedures when engineering controls are not in normal operation or are not sufficient; or  
c) if normal operational workplace vapour concentration in the air is increased due to heat ;  
d) during emergencies; or  
e) if engineering controls and operational practices are not sufficient to reduce airborne concentrations below an established occupational exposure limit.

**Hand protection:** Avoid skin contact. Use chemically resistant gloves.

**Eye protection:** Use tight-fitting goggles, face shield or safety glasses with side shields if eye contact might occur.

**Hygiene measures:** To the extent deemed appropriate, implement pre-placement and regularly scheduled ascertainment of symptoms and spirometry testing of lung function for workers who are regularly exposed to this material.

To the extent deemed appropriate, use an experienced air sampling expert to identify and measure volatile chemicals that could be present in the workplace air to determine potential exposures and to ensure the continuing effectiveness of engineering controls and operational practices to minimize exposure.

**Environmental exposure controls**      **General advice:** Keep away from drains, surface- and groundwater and soil.

## SECTION 9 : Physical and chemical properties

### Information on basic physical and chemical properties

**Appearance** : liquid  
**Colour** : yellow to orange  
**Odour** : conforms to standard  
**Odour Threshold** : not determined  
**Flash point** : > 61,0 °C  
**Lower explosion limit** : not determined  
**Upper explosion limit** : not determined  
**Flammability (solid, gas)** : not determined  
**Oxidizing properties** : not determined  
**Autoignition temperature** : not determined  
**pH** : not determined  
**Melting point** : not determined  
**Boiling point** : not determined  
**Vapour pressure** : 0,08 hPa Calculated  
**Density** : not determined  
**Water solubility** : not determined  
**Partition coefficient:** not determined  
noctanol/water  
**Solubility in other solvents** : not determined  
**Viscosity, dynamic** : not determined  
**Viscosity, kinematic** : not determined  
**Relative vapour density** : not determined  
**Evaporation rate** : not determined  
**Refractive index** : not determined  
**Relative density** : 1,0040 - 1,0140

### Other information

# SAFETY DATA SHEET

---

Date of issue: May 2013  
Product name: **Exotic Garden 213**

Page: 6/9

## SECTION 10 : Stability and reactivity

<b>Reactivity</b>	No hazards to be specially mentioned.
<b>Chemical stability</b>	Stable under normal conditions.
<b>Possibility of hazardous reactions</b>	<b>Hazardous reactions:</b> Note: Presents no significant reactivity hazard, by itself or in contact with water. Avoid contact with strong acids, alkali or oxidizing agents.
<b>Conditions to avoid</b>	<b>Conditions to avoid:</b> Direct sources of heat.
<b>Incompatible materials</b>	<b>Materials to avoid:</b> Avoid contact with strong acids, alkali or oxidizing agents.
<b>Hazardous decomposition products</b>	<b>Hazardous decomposition products:</b> Carbon monoxide and unidentified organic compounds may be formed during combustion.

## SECTION 11 : Toxicological information

<b>Information on toxicological effects</b>	<b>Acute toxicity</b> <b>Acute oral toxicity:</b> Acute toxicity estimate: 6.660,4 mg/kg Method: Calculation method <b>Acute dermal toxicity:</b> Acute toxicity estimate: 18.930,13 mg/kg Method: Calculation method
<b>Skin corrosion/irritation</b>	<b>1-(1,2,3,4,5,6,7,8-Octahydro-2,3,8,8-tetramethyl-2-naphthyl)ethan-1-one:</b> Species: human Result: Skin irritation Method: OECD 439
<b>Serious eye damage/eye irritation</b>	<b>2-phenylethanol:</b> Species: rabbit Result: Severe eye irritation Test substance: (undiluted)
<b>Respiratory or skin sensitization</b>	<b>1-(1,2,3,4,5,6,7,8-Octahydro-2,3,8,8-tetramethyl-2-naphthyl)ethan-1-one:</b> LLNA Species: mouse Result: Causes sensitization. Method: OECD 429
<b>Germ cell mutagenicity</b>	Information on ingredients with chronic toxicity hazard(s) is available upon request.
<b>Carcinogenicity</b>	Information on ingredients with chronic toxicity hazard(s) is available upon request.
<b>Reproductive toxicity</b>	Information on ingredients with chronic toxicity hazard(s) is available upon request.
<b>Target Organ Systemic Toxicant - Single exposure</b>	Information on ingredients with chronic toxicity hazard(s) is available upon request.
<b>Target Organ Systemic Toxicant - Repeated exposure</b>	Information on ingredients with chronic toxicity hazard(s) is available upon request.
<b>Aspiration hazard</b>	No test data available. Ingredients with an aspiration hazard are identified in section 3.

# SAFETY DATA SHEET

Date of issue: May 2013  
Product name: **Exotic Garden 213**

Page: 7/9

## SECTION 12 : Ecological information

### **Toxicity**

#### **Toxicity to fish**

**1-(1,2,3,4,5,6,7,8-Octahydro-2,3,8,8-tetramethyl-2-naphthyl)ethan-1-one:**

LC50: 1,3 mg/l

Exposure time: 96 h

Species: Lepomis macrochirus (Bluegill sunfish)

Method: OECD Test Guideline 203

#### **Toxicity to daphnia and other aquatic invertebrates.**

**1-(1,2,3,4,5,6,7,8-Octahydro-2,3,8,8-tetramethyl-2-naphthyl)ethan-1-one:**

EC50: 1,38 mg/l

Exposure time: 48 h

Species: Daphnia magna (Water flea)

Method: OECD Test Guideline 202

Remarks: IFF

#### **Toxicity to algae**

**1-(1,2,3,4,5,6,7,8-Octahydro- 2,3,8,8-tetramethyl-2 naphthyl)ethan-1-one:**

EC50: 2,6 mg/l

Exposure time: 72 h

Species: Desmodesmus subspicatus (green algae)

Method: OECD Test Guideline 201

#### **Toxicity to bacteria**

**1-(1,2,3,4,5,6,7,8-Octahydro-2,3,8,8-tetramethyl-2-naphthyl)ethan-1-one:**

NOEC: > 100 mg/l

Exposure time: 42 h static test

Method: OECD 301 F

#### **Toxicity to fish (Chronic toxicity)**

**1-(1,2,3,4,5,6,7,8-Octahydro-2,3,8,8-tetramethyl-2-naphthyl)ethan-1-one:**

NOEC: 0,16 mg/l

Exposure time: 30 d

Species: Danio rerio (zebra fish)

Method: OECD 210

#### **Toxicity to daphnia and other aquatic invertebrates. (Chronic toxicity)**

**1-(1,2,3,4,5,6,7,8-Octahydro-2,3,8,8-tetramethyl-2-naphthyl)ethan-1-one:**

NOEC: 0,028 mg/l

Exposure time: 21 d

Species: Daphnia magna (Water flea)

Method: OECD 211

### **Persistence and degradability**

#### **Biodegradability**

**1-(1,2,3,4,5,6,7,8-Octahydro-2,3,8,8-tetramethyl-2-naphthyl)ethan-1-one:**

Result: Not readily biodegradable.

11 %

Method: OECD 301 C

### **Bioaccumulative potential**

#### **Bioaccumulation**

**1-(1,2,3,4,5,6,7,8-Octahydro-2,3,8,8-tetramethyl-2-naphthyl)ethan-1-one:**

Species: Lepomis macrochirus (Bluegill sunfish)

Exposure time: 21 d

Bioconcentration factor (BCF): 391

Method: OECD 305

### **Mobility in soil**

**Mobility:** no data available

#### **Distribution among environmental compartments**

**1-(1,2,3,4,5,6,7,8-Octahydro-2,3,8,8-tetramethyl-2-naphthyl)ethan-1-one:**

Adsorption/Soil

Log Koc: 4,1

# SAFETY DATA SHEET

---

Date of issue: May 2013  
Product name: **Exotic Garden 213**

Page: 8/9

## Results of PBT and vPvB assessment

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

## Other adverse effects

**Additional ecological information:** There is no data available for this product.

## SECTION 13 : Disposal considerations

### Waste treatment methods

**Product:** Dispose of according to local regulations. Avoid disposing into drainage systems and into the environment.

**Contaminated packaging:** Empty containers should be taken to an approved waste handling site for recycling or disposal.

## SECTION 14 : Transport information

### ADR

Not dangerous goods  
Environmentally hazardous: no

### IATA

Not dangerous goods

### IMDG

Not dangerous goods

**Special precautions for user:** No special precautions required.

## SECTION 15 : Regulatory information

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

#### Labelling —EU Directives 67/548/EEC or 1999/45/EC—

**Symbol(s) :** Xi Irritant

**R-phrase(s):** R43 May cause sensitization by skin contact.

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

**S-phrase(s):** S24 Avoid contact with skin.

S37 Wear suitable gloves.

S61 Avoid release to the environment. Refer to special instructions/Safety data sheets.

**Water contaminating class (Germany):** WGK 2 water endangering

### Chemical Safety Assessment

A Chemical Safety Assessment has not been carried out for this product.



# SAFETY DATA SHEET

---

Date of issue: May 2013  
Product name: **Exotic Garden 213**

Page: 9/9

## **SECTION 16 : Other information**

### **Full text of R-phrases referred to under sections 2 and 3**

R22 Harmful if swallowed.  
R36 Irritating to eyes.  
R38 Irritating to skin.  
R41 Risk of serious damage to eyes.  
R43 May cause sensitization by skin contact.  
R50/53 Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.  
R51/53 Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.  
R62 Possible risk of impaired fertility.

### **Full text of H-Statements referred to under sections 2 and 3.**

H302 Harmful if swallowed.  
H315 Causes skin irritation.  
H317 May cause an allergic skin reaction.  
H318 Causes serious eye damage.  
H319 Causes serious eye irritation.  
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.

### **Further information**

In December 2003, the National Institute for Occupational Safety and Health ("NIOSH") published an Alert on preventing lung disease in workers who use or make flavorings [NIOSH Publication Number 2004-110].

In August 2004, the United States Flavor and Extract Manufacturers Association (FEMA) issued a report entitled "Respiratory Safety in the Flavor Manufacturing Workplace".

Both of these reports provide recommendations for reducing employee exposure and for medical surveillance in the workplace. The recommendations in these reports are generally applicable to the use of any chemical in the workplace and you are strongly urged to review both of these reports.

The report published by FEMA also contains a list of "high priority" chemicals. If any of these chemicals are present in this product at a concentration  $\geq 1.0\%$  due to an intentional addition by Vectair Systems, the chemical(s) will be identified in this safety data sheet.

According to Regulation (EC) No. 1907/2006 the information in this safety data sheet is based on the properties of the material known to Vectair Systems at the time the data sheet was issued. The safety data sheet is intended to provide information for a health and safety assessment of the material and the circumstances, under which it is packaged, stored or applied in the workplace. For such a safety assessment Vectair Systems holds no responsibility. This document is not intended for quality assurance purposes.



## **IFRA CONFORMITY CERTIFICATE**

**Vectair Systems Ltd.**

---

Unit 3, Armstrong Road, Basingstoke, Hampshire, RG24 8NU  
Tel: 01256 319 500 Fax: 01256 319 510

---

**FRAGRANCE COMPOUND**  
**VECTAIR SYSTEMS LTD, United Kingdom**  
**Product: Exotic Garden 213**

We certify that the above material complies with the Standards of the International Fragrance Association (IFRA), amendment 46, provided it is used in the following classes at a maximum concentration level of:

Application	Fragrance Concentration (%)
Aerosol air freshener	10.0
Toilet block detergent Pdcb	3.0

The IFRA Standards regarding use restrictions are based on safety assessments by the Panel of Experts of the RESEARCH INSTITUTE FOR FRAGRANCE MATERIALS (RIFM) and are enforced by the IFRA Scientific Committee.  
Evaluation of individual Fragrance ingredients is made according to the safety standards contained in the relevant section of the IFRA Code of Practice.