



# Fresh leaf air freshener - Vanilla pineapple

## Safety Data Sheet

according to SANS 10234:2019 and SANS 11014:2010  
Issue date: 6/14/2022 Revision date: 6/14/2024 Version: 1.1

### SECTION 1: Identification

#### 1.1. Product identifier

Product form : Mixture  
Trade name : Fresh leaf air freshener - Vanilla pineapple  
Type of product : Air freshener  
Product code : SH628  
Product group : Trade product

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

Use of the substance/mixture :

#### 1.3. Supplier's details

##### Manufacturer

Shield Chemicals (Pty) Ltd  
9 London Rd Apex  
P.O. Box 1939  
1501 Benoni – Gauteng  
South Africa  
T (011) 421 7111  
Contact: Jayson Clark

#### 1.4. Emergency telephone number

Emergency number : (011) 421 7111

### SECTION 2: Hazards identification

#### 2.1. Classification of the substance or mixture

##### Classification according to the United Nations GHS

Hazardous to the aquatic environment – Acute Hazard Not classified  
Hazardous to the aquatic environment – Chronic Hazard, Category 3 H412  
Full text of H-statements: see section 16

#### 2.2. Label elements

##### Labelling according to the United Nations GHS

Signal word (GHS-ZA) : -  
Hazardous ingredients : 4-tert-butylcyclohexyl acetate, gamma-nonalactone, 2-tert-butylcyclohexanol acetate, diethyl malonate  
Hazard statements (GHS ZA) : H412 - Harmful to aquatic life with long lasting effects.  
Precautionary statements (GHS ZA) : P273 - Avoid release to the environment.  
P501 - Dispose of contents and container to an approved waste disposal plant.

#### 2.3. Other hazards

Adverse physicochemical, human health and environmental effects : Harmful to aquatic life with long lasting effects.

### SECTION 3: Composition/information on ingredients

#### 3.1. Substances

Not applicable

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### 3.2. Mixtures

Name	Product identifier	%	Classification according to the United Nations GHS
4-tert-butylcyclohexyl acetate	CAS-No.: 32210-23-4	10.0 - 20.0	Flam. Liq. Not classified Acute Tox. 5 (Oral), H303 Aquatic Acute 2, H401
gamma-nonolactone	CAS-No.: 104-61-0	5.0 - 10.0	Flam. Liq. Not classified Acute Tox. Not classified (Oral) STOT RE Not classified Aquatic Acute 3, H402
2-tert-butylcyclohexanol acetate	CAS-No.: 88-41-5	5.0 - 10.0	Flam. Liq. 4, H227 Acute Tox. 5 (Oral), H303 Acute Tox. Not classified (Dermal)
diethyl malonate	CAS-No.: 105-53-3	1.0 -5.0	Flam. Liq. 4, H227 Acute Tox. Not classified (Oral) Aquatic Acute Not classified

## SECTION 4: First aid measures

### 4.1. Description of first aid measures

First-aid measures after inhalation	: Remove person to fresh air and keep comfortable for breathing.
First-aid measures after skin contact	: Wash skin with plenty of water.
First-aid measures after eye contact	: Rinse eyes with water as a precaution.
First-aid measures after ingestion	: Call a poison center or a doctor if you feel unwell.

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

No additional information available

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

Treat symptomatically.

## SECTION 5: Firefighting measures

### 5.1. Extinguishing media

Suitable extinguishing media : Water spray. Dry powder. Foam.

### 5.2. Special hazards arising from the substance or mixture

Hazardous decomposition products in case of fire : Toxic fumes may be released.

### 5.3. Advice for firefighters

Protection during firefighting : Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

## SECTION 6: Accidental release measures

### 6.1. Personal precautions, protective equipment and emergency procedures

No additional information available

#### 6.1.1. For non-emergency personnel

Emergency procedures : Ventilate spillage area.

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### 6.1.2. For emergency responders

Protective equipment : Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".

### 6.2. Environmental precautions

Avoid release to the environment.

### 6.3. Methods and material for containment and cleaning up

Methods for cleaning up : Mechanically recover the product.  
Other information : Dispose of materials or solid residues at an authorized site.

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

Precautions for safe handling : Ensure good ventilation of the work station. Wear personal protective equipment.  
Hygiene measures : Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

### 7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Store in a well-ventilated place. Keep cool.

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

No additional information available

### 8.2. Appropriate engineering controls

Appropriate engineering controls : Ensure good ventilation of the work station.  
Environmental exposure controls : Avoid release to the environment.

### 8.3. Individual protection measures, such as personal protective equipment (PPE)

Hand protection : Protective gloves  
Eye protection : Safety glasses  
Skin and body protection : Wear suitable protective clothing  
Respiratory protection : In case of insufficient ventilation, wear suitable respiratory equipment

**Personal protective equipment symbol(s):**



### 8.4. Exposure limit values for the other components

No additional information available

## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

Physical state : Solid  
Appearance : Solid.  
Colour : Yellow.  
Odour : Vanilla pineapple.  
Odour threshold : No data available  
pH : No data available

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pH solution	: No data available
Relative evaporation rate (butylacetate=1)	: No data available
Relative evaporation rate (ether=1)	: No data available
Melting point	: No data available
Freezing point	: Not applicable
Boiling point	: No data available
Flash point	: Not applicable
Auto-ignition temperature	: Not applicable
Decomposition temperature	: No data available
Flammability (solid, gas)	: Non flammable.
Vapour pressure	: No data available
Vapour pressure at 50 °C	: No data available
Relative vapour density at 20 °C	: No data available
Relative density	: No data available
Relative density of saturated gas/air mixture	: No data available
Density	: No data available
Relative gas density	: No data available
Solubility	: No data available
Partition coefficient n-octanol/water (Log Pow)	: No data available
Partition coefficient n-octanol/water (Log Kow)	: No data available
Viscosity, kinematic	: Not applicable
Viscosity, dynamic	: No data available
Explosive properties	: No data available
Oxidising properties	: No data available
Explosive limits	: Not applicable
Lower explosive limit (LEL)	: No data available
Upper explosive limit (UEL)	: No data available

### 9.2. Other information

No additional information available

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

The product is non-reactive under normal conditions of use, storage and transport.

### 10.2. Chemical stability

Stable under normal conditions.

### 10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

### 10.4. Conditions to avoid

None under recommended storage and handling conditions (see section 7).

### 10.5. Incompatible materials

No additional information available

### 10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

Acute toxicity (oral)	: Not classified
Acute toxicity (dermal)	: Not classified
Acute toxicity (inhalation)	: Not classified

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<b>4-tert-butylcyclohexyl acetate (32210-23-4)</b>	
LD50 oral rat	3370 mg/kg bodyweight (Equivalent or similar to OECD 401, Rat, Male / female, Experimental value, Oral, 14 day(s))
<b>gamma-nonolactone (104-61-0)</b>	
LD50 oral rat	6600 mg/kg bodyweight Animal: rat, Animal sex: male, Guideline: OECD Guideline 401 (Acute Oral Toxicity), 95% CL: 5800 - 7400
<b>2-tert-butylcyclohexanol acetate (88-41-5)</b>	
LD50 oral rat	4600 mg/kg (Equivalent or similar to OECD 401, Rat, Experimental value, Oral, 14 day(s))
LD50 dermal rabbit	> 5000 mg/kg (Equivalent or similar to OECD 402, Rabbit, Experimental value, Dermal)
<b>diethyl malonate (105-53-3)</b>	
LD50 oral rat	15794 mg/kg bodyweight Animal: rat, Guideline: other:as described by Smyth et al., Amer. Ind. Hyg. Assoc. J. 23, 95-107
Skin corrosion/irritation	: Not classified
Serious eye damage/irritation	: Not classified
Respiratory or skin sensitisation	: Not classified
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified
Reproductive toxicity	: Not classified
STOT-single exposure	: Not classified
STOT-repeated exposure	: Not classified
<b>gamma-nonolactone (104-61-0)</b>	
NOAEL (oral, rat, 90 days)	1000 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 407 (Repeated Dose 28-Day Oral Toxicity in Rodents)
Aspiration hazard	: Not classified
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Viscosity, kinematic	Not applicable

## SECTION 12: Ecological information

### 12.1. Toxicity

Ecology - general	: Harmful to aquatic life with long lasting effects.
Hazardous to the aquatic environment, short-term (acute)	: Not classified.
Hazardous to the aquatic environment, long-term (chronic)	: Harmful to aquatic life with long lasting effects.

<b>4-tert-butylcyclohexyl acetate (32210-23-4)</b>	
LC50 - Fish [1]	8.6 mg/l (EU Method C.1, 96 h, Cyprinus carpio, Semi-static system, Fresh water, Experimental value, Nominal concentration)
EC50 - Crustacea [1]	5.3 mg/l (OECD 202: Daphnia sp. Acute Immobilisation Test, 48 h, Daphnia magna, Static system, Fresh water, Experimental value, Locomotor effect)
ErC50 algae	22 mg/l (EU Method C.3, 72 h, Desmodesmus subspicatus, Static system, Fresh water, Experimental value, GLP)
BCF - Fish [1]	234 – 334.6 l/kg (BCFBAF v3.01, QSAR, Fresh weight)
Partition coefficient n-octanol/water (Log Pow)	4.8 (Experimental value, OECD 117: Partition Coefficient (n-octanol/water), HPLC method, 25 °C)
Organic Carbon Normalized Adsorption Coefficient (Log Koc)	3.51 – 3.66 (log Koc, OECD 121: Estimation of the Adsorption Coefficient (Koc) on Soil and on Sewage Sludge using High Performance Liquid Chromatography (HPLC), Experimental value, GLP)

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<b>gamma-nonolactone (104-61-0)</b>	
EC50 - Crustacea [1]	52 mg/l Test organisms (species): Daphnia magna
EC50 - Crustacea [2]	59.6 mg/l Test organisms (species): Daphnia magna
EC50 72h - Algae [1]	63.5 mg/l Test organisms (species): Pseudokirchneriella subcapitata (previous names: Raphidocelis subcapitata, Selenastrum capricornutum)

<b>2-tert-butylcyclohexanol acetate (88-41-5)</b>	
BCF - Fish [1]	384.6 l/kg (BCFBAF v3.01, Calculated value, Fresh weight)
Partition coefficient n-octanol/water (Log Pow)	4.42 (Estimated value, KOWWIN)
Organic Carbon Normalized Adsorption Coefficient (Log Koc)	2.644 (log Koc, SRC PCKOCWIN v2.0, Calculated value)

<b>diethyl malonate (105-53-3)</b>	
EC50 - Crustacea [1]	202.3 mg/l Test organisms (species): Daphnia magna
EC50 72h - Algae [1]	508.2 mg/l Test organisms (species): Desmodesmus subspicatus (previous name: Scenedesmus subspicatus)
EC50 72h - Algae [2]	> 800 mg/l Test organisms (species): Desmodesmus subspicatus (previous name: Scenedesmus subspicatus)

### 12.2. Persistence and degradability

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Persistence and degradability	No additional information available
<b>4-tert-butylcyclohexyl acetate (32210-23-4)</b>	
Persistence and degradability	Readily biodegradable in water.
<b>2-tert-butylcyclohexanol acetate (88-41-5)</b>	
Persistence and degradability	Not readily biodegradable in water.

### 12.3. Bioaccumulative potential

<b>Fresh leaf air freshener - Vanilla pineapple</b>	
Bioaccumulative potential	No additional information available
<b>4-tert-butylcyclohexyl acetate (32210-23-4)</b>	
BCF - Fish [1]	234 – 334.6 l/kg (BCFBAF v3.01, QSAR, Fresh weight)
Partition coefficient n-octanol/water (Log Pow)	4.8 (Experimental value, OECD 117: Partition Coefficient (n-octanol/water), HPLC method, 25 °C)
Organic Carbon Normalized Adsorption Coefficient (Log Koc)	3.51 – 3.66 (log Koc, OECD 121: Estimation of the Adsorption Coefficient (Koc) on Soil and on Sewage Sludge using High Performance Liquid Chromatography (HPLC), Experimental value, GLP)
Bioaccumulative potential	Potential for bioaccumulation ( $4 \geq \text{Log Kow} \leq 5$ ).
<b>2-tert-butylcyclohexanol acetate (88-41-5)</b>	
BCF - Fish [1]	384.6 l/kg (BCFBAF v3.01, Calculated value, Fresh weight)
Partition coefficient n-octanol/water (Log Pow)	4.42 (Estimated value, KOWWIN)
Organic Carbon Normalized Adsorption Coefficient (Log Koc)	2.644 (log Koc, SRC PCKOCWIN v2.0, Calculated value)
Bioaccumulative potential	Low potential for bioaccumulation ( $\text{BCF} < 500$ ).

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### 12.4. Mobility in soil

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Mobility in soil	No additional information available
<b>4-tert-butylcyclohexyl acetate (32210-23-4)</b>	
Partition coefficient n-octanol/water (Log Pow)	4.8 (Experimental value, OECD 117: Partition Coefficient (n-octanol/water), HPLC method, 25 °C)
Organic Carbon Normalized Adsorption Coefficient (Log Koc)	3.51 – 3.66 (log Koc, OECD 121: Estimation of the Adsorption Coefficient (Koc) on Soil and on Sewage Sludge using High Performance Liquid Chromatography (HPLC), Experimental value, GLP)
Ecology - soil	Low potential for mobility in soil.
<b>2-tert-butylcyclohexanol acetate (88-41-5)</b>	
Partition coefficient n-octanol/water (Log Pow)	4.42 (Estimated value, KOWWIN)
Organic Carbon Normalized Adsorption Coefficient (Log Koc)	2.644 (log Koc, SRC PCKOCWIN v2.0, Calculated value)
Ecology - soil	Low potential for adsorption in soil.

### 12.5. Other adverse effects

Ozone : Not classified  
Other adverse effects : No additional information available


## SECTION 13: Disposal considerations

### 13.1. Disposal methods

Waste treatment methods : Dispose of contents/container in accordance with licensed collector's sorting instructions.

## SECTION 14: Transport information

In accordance with SANS / IMDG / IATA

SANS	IMDG	IATA
<b>14.1. UN number</b>		
Not applicable	3077	Not applicable
<b>14.2. Proper Shipping Name</b>		
Not applicable	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.	Not applicable
<b>14.3. Transport hazard class(es)</b>		
Not applicable	9	Not applicable
Not applicable		Not applicable
<b>14.4. Packing group</b>		
Not applicable	III	Not applicable
<b>14.5. Environmental hazards</b>		
Dangerous for the environment : No	Dangerous for the environment : No Marine pollutant : No	Dangerous for the environment : No

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SANS	IMDG	IATA
No supplementary information available		

### 14.6. Special precautions for user

#### SANS

No data available

#### IMDG

Special provisions (IMDG)	: 274, 335, 966, 967, 969
Limited quantities (IMDG)	: 5 kg
Excepted quantities (IMDG)	: E1
Packing instructions (IMDG)	: LP02, P002
Special packing provisions (IMDG)	: PP12
IBC packing instructions (IMDG)	: IBC08
IBC special provisions (IMDG)	: B3
Tank instructions (IMDG)	: BK1, BK2, BK3, T1
Tank special provisions (IMDG)	: TP33
EmS-No. (Fire)	: F-A - FIRE SCHEDULE Alfa - GENERAL FIRE SCHEDULE
EmS-No. (Spillage)	: S-F - SPILLAGE SCHEDULE Foxtrot - WATER-SOLUBLE MARINE POLLUTANTS
Stowage category (IMDG)	: A

#### IATA

No data available

### 14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable

## SECTION 15: Regulatory information

### 15.1. Safety, health, and environmental national regulations specific for the product

No additional information available

## SECTION 16: Other information

Issue date	: 14/06/2022
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Full text of H-statements	
H227	Combustible liquid
H303	May be harmful if swallowed
H401	Toxic to aquatic life
H402	Harmful to aquatic life
H412	Harmful to aquatic life with long lasting effects.

Safety Data Sheet (SDS), South Africa

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.