



Fresh 24 - Fireworx

Safety Data Sheet

according to SANS 10234:2019 and SANS 11014:2010
Issue date: 5/31/2024 Revision date: 5/31/2026 Version: 1.1

SECTION 1: Identification

1.1. Product identifier

Product form : Mixture
Trade name : Fresh 24 - Fireworx
Type of product : Vehicle interior air freshener
Product code : SH402
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

Flammable liquids Not classified
Skin corrosion/irritation, Category 2 H315
Serious eye damage/eye irritation, Category 2A H319
Skin sensitisation, Category 1 H317
Reproductive toxicity, Category 2 H361
Hazardous to the aquatic environment – Acute Hazard Not classified
Hazardous to the aquatic environment – Chronic Hazard, Category 2 H411
Full text of H-statements: see section 16

2.2. Label elements

Labelling according to the United Nations GHS

Hazard pictograms (GHS ZA) :



Signal word (GHS-ZA) :

Warning

Hazardous ingredients :

1-(1,2,3,4,5,6,7,8-octahydro-2,3,8,8-tetramethyl-2-naphthyl)ethan-1-one, coumarin, linalyl acetate, linalool, beta-pinene, p-mentha-1,4-diene, Juniperus mexicana

Hazard statements (GHS ZA) :

H315 - Causes skin irritation
H317 - May cause an allergic skin reaction
H319 - Causes serious eye irritation
H361 - Suspected of damaging fertility or the unborn child
H411 - Toxic to aquatic life with long lasting effects

Precautionary statements (GHS ZA) :

P203 - Obtain, read and follow all safety instructions before use.
P261 - Avoid breathing vapours.

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P264 - Wash hands, forearms and face thoroughly after handling.
P272 - Contaminated work clothing should not be allowed out of the workplace.
P273 - Avoid release to the environment.
P280 - Wear eye protection, protective clothing, protective gloves.
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.
P318 - IF exposed or concerned, get medical advice.
P321 - Specific treatment (see ... on this label).
P332+P317 - If skin irritation occurs: Get medical help.
P333+P317 - If skin irritation or rash occurs: Get medical help.
P362+P364 - Take off contaminated clothing and wash it before reuse.
P391 - Collect spillage.
P405 - Store locked up.
P501 - Dispose of contents and container to a hazardous or special waste collection point.

2.3. Other hazards

Adverse physicochemical, human health and environmental effects : Suspected of damaging fertility or the unborn child, Causes skin irritation, May cause an allergic skin reaction, Causes serious eye irritation, Toxic to aquatic life with long lasting effects.

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	%	Classification according to the United Nations GHS
1-(1,2,3,4,5,6,7,8-octahydro-2,3,8-tetramethyl-2-naphthyl)ethan-1-one	CAS-No.: 54464-57-2	5.0 - 10.0	Skin Irrit. 2, H315 Eye Dam. 1, H318 Skin Sens. 1, H317 Aquatic Chronic 1, H410
coumarin	CAS-No.: 91-64-5	1.0 - 5.0	Acute Tox. 4 (Oral), H302 Skin Sens. 1, H317 Aquatic Acute 2, H401 Aquatic Chronic 3, H412
2,6-dimethyl-7-octen-2-ol	CAS-No.: 18479-58-8	1.0 - 5.0	Flam. Liq. 4, H227
2-(4-tert-butylbenzyl)propionaldehyde	CAS-No.: 80-54-6	1.0 - 5.0	Flam. Liq. 4, H227 Acute Tox. 4 (Oral), H302 Acute Tox. 5 (Dermal), H313 Aquatic Acute 2, H401 Aquatic Chronic 2, H411

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general : IF exposed or concerned: Get medical advice/attention.
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. Take off contaminated clothing. If skin irritation or rash occurs: Get medical advice/attention.
First-aid measures after eye contact : Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.
First-aid measures after ingestion : Call a poison center or a doctor if you feel unwell.

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

Symptoms/effects after skin contact : Irritation. May cause an allergic skin reaction.
Symptoms/effects after eye contact : Eye irritation.

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. Carbon dioxide.

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. Avoid contact with skin and eyes. Avoid breathing vapours.

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

For containment : Collect spillage.
Methods for cleaning up : Take up liquid spill into absorbent material. Notify authorities if product enters sewers or public waters.
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. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear personal protective equipment. Avoid contact with skin and eyes. Avoid breathing vapours.
Hygiene measures : Wash contaminated clothing before reuse. Contaminated work clothing should not be allowed out of the workplace. 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 locked up. Store in a well-ventilated place. Keep cool.

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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 inadequate ventilation] wear respiratory protection.

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 : Liquid
Appearance : Liquid.
Colour : No data available
Odour : characteristic.
Odour threshold : No data available
pH : No data available
pH solution : No data available
Relative evaporation rate (butylacetate=1) : No data available
Relative evaporation rate (ether=1) : No data available
Melting point : Not applicable
Freezing point : No data available
Boiling point : No data available
Flash point : $\approx 96\text{ }^{\circ}\text{C}$ closed cup
Auto-ignition temperature : No data available
Decomposition temperature : No data available
Flammability : Not applicable
Vapour pressure : $\approx 0.07\text{ hPa}$
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 : $0.998 - 1.008\text{ g/cm}^3$
Relative gas density : No data available
Solubility : Insoluble in water.
Partition coefficient n-octanol/water (Log Pow) : No data available
Partition coefficient n-octanol/water (Log Kow) : No data available
Viscosity, kinematic : No data available
Viscosity, dynamic : No data available
Explosive properties : No data available
Oxidising properties : No data available
Explosive limits : No data available

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Lower explosion limit : No data available
Upper explosion limit : 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

coumarin (91-64-5)	
LD50 oral rat	680 mg/kg bodyweight (Equivalent or similar to OECD 401, Rat, Male / female, Experimental value, Oral, 14 day(s))
2-(4-tert-butylbenzyl)propionaldehyde (80-54-6)	
LD50 oral rat	1390 mg/kg (Equivalent or similar to OECD 401, Rat, Male / female, Experimental value, Oral, 14 day(s))
LD50 dermal rat	> 2000 mg/kg (Equivalent or similar to OECD 402, Rat, Male / female, Experimental value, Dermal, 14 day(s))
LC50 Inhalation - Rat	> 0.18 mg/l (IRT (inhalation risk test), 7 h, Rat, Male / female, Experimental value, Inhalation (vapours), 14 day(s))

Skin corrosion/irritation : Causes skin irritation.
Serious eye damage/irritation : Causes serious eye irritation.
Respiratory or skin sensitisation : May cause an allergic skin reaction.
Germ cell mutagenicity : Not classified
Carcinogenicity : Not classified
Reproductive toxicity : Suspected of damaging fertility or the unborn child.
STOT-single exposure : Not classified
STOT-repeated exposure : Not classified
Aspiration hazard : Not classified

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1-(1,2,3,4,5,6,7,8-octahydro-2,3,8,8-tetramethyl-2-naphthyl)ethan-1-one (54464-57-2)	
Animal studies and expert judgment for classification	False
coumarin (91-64-5)	
Animal studies and expert judgment for classification	False
2,6-dimethyl-7-octen-2-ol (18479-58-8)	
Animal studies and expert judgment for classification	False
2-(4-tert-butylbenzyl)propionaldehyde (80-54-6)	
Animal studies and expert judgment for classification	False

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general	: Toxic 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)	: Toxic to aquatic life with long lasting effects.

coumarin (91-64-5)	
LC50 - Fish [1]	2.94 mg/l (96 h, Pimephales promelas, QSAR, Lethal)
EC50 - Crustacea [1]	24.3 – 36.9 mg/l (48 h, Daphnia magna, Static system, Fresh water, Experimental value, Locomotor effect)
Partition coefficient n-octanol/water (Log Pow)	1.51 (Estimated value, 25 °C)
Organic Carbon Normalized Adsorption Coefficient (Log Koc)	1.63 (log Koc, QSAR)
2,6-dimethyl-7-octen-2-ol (18479-58-8)	
Partition coefficient n-octanol/water (Log Pow)	3.47 (Estimated value)
2-(4-tert-butylbenzyl)propionaldehyde (80-54-6)	
LC50 - Fish [1]	2.04 mg/l (OECD 203: Fish, Acute Toxicity Test, 96 h, Danio rerio, Flow-through system, Fresh water, Experimental value, GLP)
EC50 - Crustacea [1]	10.7 mg/l (Other, 48 h, Daphnia magna, Static system, Fresh water, Experimental value)
EC50 72h - Algae [1]	29.155 mg/l (DIN 38412-9, Desmodesmus subspicatus, Static system, Fresh water, Experimental value, Growth rate)
Partition coefficient n-octanol/water (Log Pow)	4.2 (Experimental value, OECD 117: Partition Coefficient (n-octanol/water), HPLC method, 24 °C)
Organic Carbon Normalized Adsorption Coefficient (Log Koc)	3.11 (log Koc, PCKOCWIN v1.66, Calculated value)

12.2. Persistence and degradability

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Persistence and degradability	No additional information available
coumarin (91-64-5)	
Persistence and degradability	Readily biodegradable in water.
2,6-dimethyl-7-octen-2-ol (18479-58-8)	
Persistence and degradability	Biodegradability in water: no data available.

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2-(4-tert-butylbenzyl)propionaldehyde (80-54-6)	
Persistence and degradability	Readily biodegradable in water.

12.3. Bioaccumulative potential

Fresh 24 - Fireworx	
Bioaccumulative potential	No additional information available

coumarin (91-64-5)	
Partition coefficient n-octanol/water (Log Pow)	1.51 (Estimated value, 25 °C)
Organic Carbon Normalized Adsorption Coefficient (Log Koc)	1.63 (log Koc, QSAR)
Bioaccumulative potential	Low potential for bioaccumulation (Log Kow < 4).

2,6-dimethyl-7-octen-2-ol (18479-58-8)	
Partition coefficient n-octanol/water (Log Pow)	3.47 (Estimated value)
Bioaccumulative potential	Low potential for bioaccumulation (Log Kow < 4).

2-(4-tert-butylbenzyl)propionaldehyde (80-54-6)	
Partition coefficient n-octanol/water (Log Pow)	4.2 (Experimental value, OECD 117: Partition Coefficient (n-octanol/water), HPLC method, 24 °C)
Organic Carbon Normalized Adsorption Coefficient (Log Koc)	3.11 (log Koc, PCKOCWIN v1.66, Calculated value)
Bioaccumulative potential	Potential for bioaccumulation (4 ≤ Log Kow ≤ 5).

12.4. Mobility in soil

Fresh 24 - Fireworx	
Mobility in soil	No additional information available

coumarin (91-64-5)	
Surface tension	No data available in the literature
Partition coefficient n-octanol/water (Log Pow)	1.51 (Estimated value, 25 °C)
Organic Carbon Normalized Adsorption Coefficient (Log Koc)	1.63 (log Koc, QSAR)
Ecology - soil	Highly mobile in soil.

2,6-dimethyl-7-octen-2-ol (18479-58-8)	
Partition coefficient n-octanol/water (Log Pow)	3.47 (Estimated value)
Ecology - soil	No (test)data on mobility of the substance available.

2-(4-tert-butylbenzyl)propionaldehyde (80-54-6)	
Partition coefficient n-octanol/water (Log Pow)	4.2 (Experimental value, OECD 117: Partition Coefficient (n-octanol/water), HPLC method, 24 °C)
Organic Carbon Normalized Adsorption Coefficient (Log Koc)	3.11 (log Koc, PCKOCWIN v1.66, Calculated value)
Ecology - soil	Low potential for mobility in soil.

12.5. Other adverse effects

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

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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
14.1. UN number		
3082	3082	3082
14.2. Proper Shipping Name		
ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.	Environmentally hazardous substance, liquid, n.o.s.
14.3. Transport hazard class(es)		
9	9	9
		
14.4. Packing group		
III	III	III
14.5. Environmental hazards		
Dangerous for the environment : Yes	Dangerous for the environment : Yes Marine pollutant : Yes	Dangerous for the environment : Yes
No supplementary information available		

14.6. Special precautions for user

SANS

Special provisions (SANS) : 179, 274, 331, 335
Limited quantities (SANS) : 5 L
Limited quantities (SANS) : 5 L
Packagings, large packagings and IBCs Packing instructions (SANS) : P001, IBC03, LP01
Packagings, large packagings and IBCs Special packing instructions (SANS) : PP1
Portable tank and bulk containers instructions (SANS) : T4
Portable tank and bulk container special provisions (SANS) : TP1, TP29

IMDG

Special provisions (IMDG) : 274, 335, 969
Limited quantities (IMDG) : 5 L
Excepted quantities (IMDG) : E1
Packing instructions (IMDG) : LP01, P001
Special packing provisions (IMDG) : PP1
IBC packing instructions (IMDG) : IBC03
Tank instructions (IMDG) : T4
Tank special provisions (IMDG) : TP2, TP29
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

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IATA

PCA Excepted quantities (IATA)	: E1
PCA Limited quantities (IATA)	: Y964
PCA limited quantity max net quantity (IATA)	: 30kgG
PCA packing instructions (IATA)	: 964
PCA max net quantity (IATA)	: 450L
CAO packing instructions (IATA)	: 964
CAO max net quantity (IATA)	: 450L
Special provisions (IATA)	: A97, A158, A197
ERG code (IATA)	: 9L

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	: 31/05/2024
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Full text of H-statements

H226	Flammable liquid and vapour
H227	Combustible liquid
H302	Harmful if swallowed
H303	May be harmful if swallowed
H304	May be fatal if swallowed and enters airways
H313	May be harmful in contact with skin
H315	Causes skin irritation
H317	May cause an allergic skin reaction
H318	Causes serious eye damage
H319	Causes serious eye irritation
H335	May cause respiratory irritation
H361	Suspected of damaging fertility or the unborn child
H400	Very toxic to aquatic life
H401	Toxic to aquatic life
H402	Harmful 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

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.