



Specification

Product Name: Rum and Raisin Flavour Drop

Product Code: SPEC0130

Description:

Food Flavouring Drops are premium quality water soluble intense flavours which provide an exceptionally efficient method of adding flavour. They are a highly concentrated, versatile, multi-use product for both food and liquid. They should be used sparingly; 1-2 ml is ample to flavour 1 litre of base liquid. Each 30ml bottle contains approximately 800 drops. Food Flavouring Drops disperse well in most foods and drinks. They are ideal for flavouring cakes, icings, fondants, ice cream, sorbets, cupcakes, pastry, salads, sauces, frostings, ganache, desserts, cocktails, drinks, cream, wine, beer, spirits, sweets and more. They can also be used to enhance the flavour of a dish, without changing the texture of the original product.

Odour & Flavour:

Characteristic. Conforms to standard.

Ingredients:

Flavouring preparations, Flavouring substances, Smoke flavouring, Propylene Glycol (E1520), Ethanol alcohol.

Dietary Information:

Suitable for Vegans, Ovo-lacto Vegetarians & Vegetarians, Non-GMO, Gluten Free, Allergen Free, Non-Irradiated, No Added Sugar.

Nutritional Information:

Energy: 1673.6kj/400kcal (Based on 100g)

Storage:

Dark, dry and cool conditions, not in direct sunlight.

Packaging:

30ml	5060341111884
500ml	5056191010781
1 Litre	5056191006098
5 Litre	5056191006104

Country of Origin:

United Kingdom.

Shelf Life:

24 months if stored as above and unopened.

Density (g/ml) at 20°C:



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1.024 – 1.044

Refractive Index at 20°C:

1.425 – 1.445

Flashpoint °C (closed cup):

22°C

Labelling according to Regulation (EC) No. 1334/2008:

Flavouring

Hazards:

Highly Flammable. Contains Acetaldehyde (potential carcinogen: inhalation route). Please refer to the MSDS for further information.

Allergen Declaration

Allergen	Contains (Y/N)
Cereals containing Gluten	N
Crustaceans	N
Eggs	N
Fish	N
Peanuts	N
Soybeans	N
Milk	N
Nuts	N
Celery	N
Mustard	N
Sesame Seeds	N
Sulphur Dioxide and Sulphites (at concentration of more than 10mg/kg or 10mg/L in terms of Sulphur Dioxide)	N
Lupin	N
Molluscs	N

Material Safety Data Sheet

1: Identification of the substance/mixture and of the company/undertaking:**1.1 – Product identifier**

Product form: Mixture,

Product name: Rum and Raisin Flavour Drop.

1.2 – Relevant identified uses of the substance or mixture and uses advised against:**1.2.1: Relevant identified uses:** use of the substance/mixture: Food and/or beverage flavouring.**1.2.2: Uses advised against:** Restrictions on use: Not for direct consumption.**1.3 – Details of the supplier of the safety data sheet:**www.specialingredients.co.uk

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Company: Special Ingredients Ltd, 4 Foxwood View, Chesterfield, S41 9RN. Tel: 0044 (0)1246 906247

1.4 - Emergency Telephone Contact: 07387 330318. <https://specialingredients.co.uk/pages/contact>

2: Hazards Identification:

2.1 – Classification of the substance or mixture:

Classification according to Regulation (EC) No. 1272/2008 (CLP):

- Flammable liquids, Category 2: H225
- Carcinogenicity, Category 1B: H350
- Hazardous to the aquatic environment — Chronic Hazard, Category 3: H412

Full text of H- and EUH-statements: see section 16

Adverse physicochemical, human health and environmental effects: Highly flammable liquid and vapour. May cause cancer.

2.2 – Label elements:

Labelling according to Regulation (EC) no. 1272/2008 [CLP],



GSH02

GHS08

Signal word (CLP): Danger

Contains: Acetaldehyde

Hazard statements (CLP):

- H225 - Highly flammable liquid and vapour.
- H350 - May cause cancer.

Precautionary statements (CLP):

- P201 - Obtain special instructions before use.
- P202 - Do not handle until all safety precautions have been read and understood.
- P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
- P233 - Keep container tightly closed.
- P240 - Ground and bond container and receiving equipment.
- P241 - Use explosion-proof electrical/ventilating/lighting equipment.

EUH-statements: EUH208 - Contains Valerian root oil(8057-49-6), Clove Leaf Oil(84961-50-2). May produce an allergic reaction.

2.3 – Other hazards:

Contains no PBT/vPvB substances 0.1% assessed in accordance with REACH Annex XIII

Component	
Acetic Acid (64-19-7)	This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII
Propylene glycol (57-55-6)	This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII



	regulation, annex XIII
Ethanol (64-17-5)	This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII
ethyl acetate (141-78-6)	This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII
Triacetin (102-76-1)	This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII
4-hydroxy-3-methoxybenzaldehyde (121-33-5)	This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII

The mixture does not contain substance(s) included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or is not identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at a concentration equal to or greater than 0,1 %

3: Composition/Information on Ingredients:

3.1 – Substances:

Not applicable.

3.2 – Mixtures:

Name	Product identifier	%	Classification according to Regulation (EC) no.1272/2008 [CLP]
ethyl acetate substance with a Community workplace exposure limit	CAS-No.: 141-78-6 EC-No.: 205-500-4 EC Index-No.: 607-022-00-5	5 – 10	Flam. Liq. 2, H225 Eye Irrit. 2, H319 STOT SE 3, H336
Acetic Acid substance with a Community workplace exposure limit	CAS-No.: 64-19-7 EC-No.: 200-580-7 EC Index-No.: 607-002-00-6	1 – 5	Flam. Liq. 3, H226 Acute Tox. 4 (Dermal), H312 Acute Tox. 4 (Inhalation:vapour), H332 Skin Corr. 1A, H314
Acetaldehyde	CAS-No.: 75-07-0 EC-No.: 200-836-8 EC Index-No.: 605-003-00-6	< 1	Flam. Liq. 1, H224 Acute Tox. 4 (Oral), H302 Eye Irrit. 2, H319 Muta. 2, H341 Carc. 1B, H350 STOT SE 3, H335
Clove Leaf Oil	CAS-No.: 84961-50-2 EC-No.: 284-638-7	< 1	Skin Sens. 1, H317
Valerian root oil	CAS-No.: 8057-49-6 EC-No.: 232-501-7	< 1	Skin Sens. 1, H317 Aquatic Chronic 3, H412



Specific concentration limits:		
Name	Product identifier	Specific concentration limits
Acetic Acid	CAS-No.: 64-19-7 EC-No.: 200-580-7 EC Index-No.: 607-002-00-6	(10 C < 25) Skin Irrit. 2; H315 (10 C < 25) Eye Irrit. 2; H319 (25 C < 90) Skin Corr. 1B; H314 (90 C < 100) Skin Corr. 1A; H314

Full Text of H- and EUH statements: see section 16.

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 : Rinse skin with water/shower. Take off immediately all contaminated clothing.

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 effect, both acute and delayed:

No additional information available

4.3 – Indication of any immediate medical attention and special treatment needed:

Treat Symptomatically.

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:

Fire hazard : Highly flammable liquid and vapour.

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.

6: Accidental Release Measures:

6.1 – Personal precautions, protective equipment and emergency procedures:

6.1.1 – For non-emergency personnel:

Emergency procedures : No open flames, no sparks, and no smoking. Only qualified personnel equipped with suitable protective equipment may intervene.

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. Notify authorities if product enters sewers or public waters.

6.3 – Methods and material for containment and cleaning up:

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.

6.4 – Reference to other sections:

For further information refer to section 13.

7: Handling and Storage:**7.1 – Precautions for safe handling:**

Ensure good ventilation of the work station. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Ground/bond container and receiving equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Flammable vapours may accumulate in the container. Use explosion-proof equipment. Wear personal protective equipment. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Take all necessary technical measures to avoid or minimize the release of the product on the workplace. Limit quantities of product at the minimum necessary for handling and limit the number of exposed workers. Provide local exhaust or general room ventilation. Floors, walls and other surfaces in the hazard area must be cleaned regularly.

Hygiene measures : Separate working clothes from town clothes. Launder separately. 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:

Technical measures: Ground/bond container and receiving equipment.

Storage conditions: Store in cool, dry conditions in the original unopened containers, between 5-20°C. Reseal container tightly once opened. Store in a well-ventilated place. Keep cool. Keep container tightly closed. Store locked up.

7.3 – Specific end use(s):

No additional information available.

8: Exposure Controls/ Personal Protection:**8.1 – Control parameters:****8.1.1 National occupational exposure and biological limit values**

Acetic Acid (64-19-7)	
IOEL STEL	50 mg/m ³
	20 ppm
Belgium - Occupational Exposure Limits	
OEL TWA	25 mg/m ³
	10 ppm



OEL STEL	38 mg/m ³
	15 ppm
France - Occupational Exposure Limits	
VME (OEL TWA)	25 mg/m ³
	10 ppm
VLE (OEL C/STEL)	50 mg/m ³
	20 ppm
Netherlands - Occupational Exposure Limits	
TGG-8u (OEL TWA)	25 mg/m ³
	10 ppm
TGG-15min (OEL STEL)	50 mg/m ³
	20 ppm
United Kingdom	
Local name	Acetic acid
WEL TWA (OEL TWA) [1]	25 mg/m ³
	10 mg/m ³
WEL TWA (OEL TWA) [2]	50 mg/m ³
	20 ppm
Regulatory reference	EH40/2005 (Third edition, 2018). HSE
USA - ACGIH - Occupational Exposure Limits	
ACGIH OEL TWA	10 ppm
ACGIH OEL STEL	15 ppm

Propylene glycol (57-55-6)	
United Kingdom	
Local name	Propane-1,2-diol
WEL TWA (OEL TWA) [1]	474 mg/m ³
	10 mg/m ³
WEL TWA (OEL TWA) [2]	150 ppm
Regulatory reference	EH40/2005 (Fourth edition, 2020). HSE

Ethanol (64-17-5)	
Belgium - Occupational Exposure Limits	
OEL TWA	1907 mg/m ³
	1000 ppm
France - Occupational Exposure Limits	



VME (OEL TWA)	1900 mg/m ³
	1000 ppm
VLE (OEL C/STEL)	9500 mg/m ³
	5000 ppm
Netherlands - Occupational Exposure Limits	
TGG-8u (OEL TWA)	260 mg/m ³
	136 ppm
TGG-15min (OEL STEL)	1900 mg/m ³
	992 ppm
United Kingdom	
Local name	Ethanol
WEL TWA (OEL TWA)	1920 mg/m ³
	1000 ppm
Regulatory reference	EH40/2005 (Third edition, 2018). HSE
USA - ACGIH - Occupational Exposure Limits	
ACGIH OEL STEL	1000 ppm

ethyl acetate (141-78-6)	
EU - Indicative Occupational Exposure Limit (IOEL)	
IOEL TWA	734 mg/m ³
	200 ppm
IOEL STEL	400 ppm
Belgium - Occupational Exposure Limits	
OEL TWA	1461 mg/m ³
	400 ppm
France - Occupational Exposure Limits	
VME (OEL TWA)	1400 mg/m ³
	400 ppm
United Kingdom	
Local name	Ethyl acetate
WEL TWA (OEL TWA)	734 mg/m ³
	200 ppm
WEL STEL (OEL STEL)	1468 mg/m ³
	400 ppm
Regulatory reference	EH40/2005 (Fourth edition, 2020). HSE

USA - ACGIH - Occupational Exposure Limits

ACGIH OEL TWA

400 ppm

8.1.2 Recommended monitoring procedures

No additional information available.

8.1.3 Air contaminants formed

No additional information available.

8.1.4 DNEL and PNEC

No additional information available.

8.1.5 Control banding

No additional information available.

8.2 – Exposure controls:**8.2.1 Appropriate engineering controls**

Ensure good ventilation of the work station.

8.2.2 Person protective equipment

Wear recommended personal protective equipment

Personal protective equipment symbol(s)

**8.2.2.1 Eye and face protection**

Eye protection			
Safety Glasses			
Type	Field of application	Characteristics	Standard
Safety Goggles	Droplet, Dust	Clear, Plastic	EN 166 1B3

8.2.2.2 Skin protection

Skin and body protection	
Type	Standard
Lab Coat	ASTM F903

Hand Protection					
Protective gloves against chemicals (EN 374)					
Type	Material	Permeation	Thickness (mm)	Penetration	Standard
Disposable gloves	Nitrile rubber (NBR)	5 (> 240 minutes)	0.20-0.30	2 (< 1.5)	EN 420, EN 16523-1, EN ISO 374-1, EN 374-2, EN 374-4, EN 374-5

**8.2.2.3 Respiratory protection**

In case of insufficient ventilation, wear suitable respiratory equipment

Respiratory Protection			
Device	Filter type	Condition	Standard
Powered Air-purifying Respirator (PAPR)	Filter AX (brown), Filter P (white), Type A – High Boiling (>65 °C) organic compounds	Protection for liquid particles, Protection for solid particles, Short term exposure	EN 12941

8.2.2.4 Thermal hazards

No additional information available.

8.2.3 Environmental exposure controls

Environmental exposure controls: avoid release to the environment.

9: Physical and Chemical Properties:**9.1 – Information on basic physical and chemical properties:**

Physical state: Liquid

Colour: Brown.

Appearance: Mobile liquid.

Odour: Characteristic. Conforms to Standard.

Odour threshold: Not available

Melting point: Not applicable

Freezing point: Not available

Boiling point: > 35 °C

Flammability: Not applicable

Explosive limits: Not available

Lower explosion limit: Not available

Upper explosion limit: Not available

Flash point: < 20 °C

Auto-ignition temperature: Not available

Decomposition temperature: Not available

pH: Not available

Viscosity, kinematic: Not available

Solubility: Soluble in water.

Partition coefficient n-octanol/water (Log Kow): Not available

Vapour pressure: Not available

Vapour pressure at 50°C: Not available

Density: 1.034 (1.24 – 1.044) g/ml at 20°C

Relative density: Not available

Relative vapour density at 20°C: Not available

Particle characteristics: Not applicable

9.2 – Other information:**9.2.1 Information with regard to physical hazard classes**

No additional information available.

9.2.2 Other safety characteristics

Refractive index: 1.425 – 1.445



Other properties: 100% Passes through 560 micron filter

10: Stability and Reactivity:

10.1 – Reactivity:

Highly flammable liquid and vapour.

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:

Avoid contact with hot surfaces. Heat. No flames, no sparks. Eliminate all sources of ignition.

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.

11: Toxicological Information:

11.1 – Information on hazard classes as defined in Regulation (EC) No 1272/2008:

Acute toxicity (oral): Not classified

Acute toxicity (dermal): Not classified

Acute toxicity (inhalation): Not classified

Acetaldehyde (75-07-0)	
LD50 oral	700 mg/kg bodyweight
LD50 dermal	3540 mg/kg bodyweight
ATE CLP (oral)	700 mg/kg bodyweight
ATE CLP (dermal)	3540 mg/kg bodyweight

Acetic Acid (64-19-7)	
LD50 oral rat	3310 mg/kg bodyweight (Rat, Male / female, Experimental value, Oral, 6 day(s))
LD50 oral	3540 mg/kg bodyweight
LD50 dermal	1100 mg/kg bodyweight
LC50 Inhalation - Rat	11.4 mg/l (Equivalent or similar to OECD 403, 4 h, Rat, Female, Experimental value, Inhalation (vapours), 14 day(s))
ATE CLP (oral)	3310 mg/kg bodyweight
ATE CLP (dermal)	1100 mg/kg bodyweight
ATE CLP (vapours)	11.4 mg/l/4h



ATE CLP (dust,mist)	11.4 mg/l/4h
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Propylene glycol (57-55-6)

LD50 oral rat	22000 mg/kg (Rat, Male / female, Experimental value, Oral)
LD50 dermal rabbit	> 2000 mg/kg bodyweight (24 h, Rabbit, Experimental value, Dermal, 14 day(s))
LC50 Inhalation - Rat	> 44.9 mg/l (4 h, Rat, Male / female, Experimental value, Inhalation (aerosol), 7 day(s))
ATE CLP (oral)	22000 mg/kg bodyweight

Ethanol (64-17-5)

LD50 oral rat	10740 mg/kg bodyweight (OECD 401: Acute Oral Toxicity, Rat, Male / female, Experimental value, Oral)
LD50 dermal rabbit	> 16000 mg/kg (Rabbit, Literature study, Dermal)
LC50 Inhalation - Rat	117 – 125 mg/l air (Equivalent or similar to OECD 403, 4 h, Rat, Male / female, Experimental value, Inhalation)
ATE CLP (oral)	10740 mg/kg bodyweight

ethyl acetate (141-78-6)

LD50 oral rat	10740 mg/kg bodyweight (OECD 401: Acute Oral Toxicity, Rat, Male / female, Experimental value, Oral)
LD50 dermal rabbit	> 20000 mg/kg bodyweight (24 hour cuff method, 24 h, Rabbit, Male, Experimental value, Dermal)
ATE CLP (oral)	10200 mg/kg bodyweight

Triacetin (102-76-1)

LD50 oral rat	> 2000 mg/kg bodyweight (OECD 401: Acute Oral Toxicity, Rat, Male / female, Experimental value, Oral, 14 day(s))
LD50 dermal rabbit	> 5000 mg/kg bodyweight (Equivalent or similar to OECD 402, Rabbit, Experimental value, Dermal)
LC50 Inhalation - Rat	> 1.721 mg/l (Equivalent or similar to OECD 403, 4 h, Rat, Male / female, Experimental value, Inhalation (aerosol), 14 day(s))

4-hydroxy-3-methoxybenzaldehyde (121-33-5)

LD50 oral rat	3300 mg/kg bodyweight (Equivalent or similar to OECD 401, Rat, Male / female, Experimental value, Oral, 14 day(s))
LD50 oral	3500 mg/kg bodyweight
LD50 dermal rat	> 2000 mg/kg bodyweight (OECD 402: Acute Dermal Toxicity, 24 h, Rat, Male / female, Experimental value, Dermal, 14 day(s))
ATE CLP (oral)	3300 mg/kg bodyweight



5-methylfurfural (620-02-0)	
LD50 oral rat	2200 mg/kg (Rat, Oral)
LD50 oral	2200 mg/kg bodyweight
ATE CLP (oral)	2200 mg/kg bodyweight

ethyl crotonate (623-70-1)	
LD50 oral rat	3000 mg/kg (Rat, Oral)
LD50 oral	3000 mg/kg bodyweight
ATE CLP (oral)	3000 mg/kg bodyweight

Clove Leaf Oil (84961-50-2)	
LD50 oral	2650 mg/kg bodyweight
LD50 dermal	2650 mg/kg bodyweight
ATE CLP (oral)	2650 mg/kg bodyweight
ATE CLP (dermal)	2650 mg/kg bodyweight

Skin corrosion/irritation: Not classified

Acetic Acid (64-19-7)	
pH	2.4 (0.1 mol/l)

Propylene glycol (57-55-6)	
pH	6.5 – 7.5 (50 %)

Ethanol (64-17-5)	
pH	7 (789 g/l, 20 °C)

Triacetin (102-76-1)	
pH	5 – 6 (5 %)

Serious eye damage/irritation: Not classified

Acetic Acid (64-19-7)	
pH	2.4 (0.1 mol/l)

Propylene glycol (57-55-6)	
pH	6.5 – 7.5 (50 %)



Ethanol (64-17-5)	
pH	7 (789 g/l, 20 °C)

Triacetin (102-76-1)	
pH	5 – 6 (5 %)

Respiratory or skin sensitisation: Not classified

Germ cell mutagenicity: Not classified

Carcinogenicity: May cause cancer.

Reproductive toxicity: Not classified

STOT-single exposure: Not classified

Acetaldehyde (75-07-0)	
STOT-single exposure	May cause respiratory irritation.

Triacetin (102-76-1)	
STOT-single exposure	May cause drowsiness or dizziness.

STOT-repeated exposure: Not classified

Aspiration hazard: May be fatal if swallowed and enters airways.

Acetic Acid (64-19-7)	
Viscosity, kinematic	1.17 mm ² /s (20 °C)

Propylene glycol (57-55-6)	
Viscosity, kinematic	41.426 mm ² /s

Ethanol (64-17-5)	
Viscosity, kinematic	1.082 mm ² /s (40 °C)

ethyl acetate (141-78-6)	
Viscosity, kinematic	0.489 mm ² /s (25 °C)

4-hydroxy-3-methoxybenzaldehyde (121-33-5)	
Viscosity, kinematic	Not applicable

11.2 – Information on other hazards

11.2.1 Endocrine disrupting properties

No additional information available.

11.2.2 Other information



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Other information: Special Ingredients Ltd do not test on animals, this is historical information.

12: Ecological Information:

12.1 – Toxicity:

Ecology – General: The product is not considered harmful to aquatic organisms nor to cause long-term adverse effects in the environment.

Hazardous to the aquatic environment, short-term (acute): Not classified

Hazardous to the aquatic environment, Long-term (Chronic): Not classified

Acetic Acid (64-19-7)	
LC50 - Fish [1]	> 1000 mg/l (Equivalent or similar to OECD 203, 96 h, Oncorhynchus mykiss, Semi-static system, Fresh water, Experimental value, GLP)
EC50 - Crustacea [1]	> 1000 mg/l (OECD 202: Daphnia sp. Acute Immobilisation Test, 48 h, Daphnia magna, Static system, Fresh water, Experimental value, GLP)
EC50 72h - Algae [1]	> 1000 mg/l (ISO 10253, Skeletonema costatum, Static system, Salt water, Experimental value, Growth rate)

Propylene glycol (57-55-6)	
LC50 - Fish [1]	40613 mg/l (96 h, Oncorhynchus mykiss, Static system, Fresh water, Experimental value)
ErC50 algae	24200 mg/l (OECD 201: Alga, Growth Inhibition Test, 72 h, Pseudokirchneriella subcapitata, Static system, Fresh water, Experimental value, GLP)

Ethanol (64-17-5)	
LC50 - Fish [1]	14200 mg/l (US EPA, 96 h, Pimephales promelas, Flow-through system, Fresh water, Experimental value)
EC50 72h - Algae [1]	275 mg/l (Equivalent or similar to OECD 201, Chlorella vulgaris, Static system, Fresh water, Experimental value, Growth rate)

ethyl acetate (141-78-6)	
LC50 - Fish [1]	230 mg/l (US EPA, 96 h, Pimephales promelas, Flow-through system, Fresh water, Experimental value)
EC50 - Crustacea [1]	154 mg/l (48 h, Daphnia magna, Literature)

Triacetin (102-76-1)	
LC50 - Fish [1]	> 100 mg/l (OECD 203: Fish, Acute Toxicity Test, 96 h, Oryzias latipes, Semi-static system, Fresh water, Experimental value, GLP)
EC50 - Crustacea [1]	380 mg/l (EU Method C.2, 48 h, Daphnia magna, Static system, Fresh water, Experimental value, GLP)



ErC50 algae	> 940 mg/l (OECD 201: Alga, Growth Inhibition Test, 72 h, Pseudokirchneriella subcapitata, Static system, Fresh water, Experimental value, GLP)
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4-hydroxy-3-methoxybenzaldehyde (121-33-5)

LC50 - Fish [1]	57 mg/l (Equivalent or similar to OECD 203, 96 h, Pimephales promelas, Flow-through system, Fresh water, Experimental value)
EC50 - Crustacea [1]	36.79 mg/l (OECD 202: Daphnia sp. Acute Immobilisation Test, 48 h, Daphnia magna, Static system, Fresh water, Experimental value, GLP)
ErC50 algae	120 mg/l (OECD 201: Alga, Growth Inhibition Test, 72 h, Pseudokirchneriella subcapitata, Static system, Fresh water, Experimental value, GLP)

12.2 – Persistence and Degradability:**Acetic Acid (64-19-7)**

Persistence and degradability	Readily biodegradable in the soil. Readily biodegradable in water.
Biochemical oxygen demand (BOD)	0.6 – 0.74 g O /g substance
Chemical oxygen demand (COD)	1.03 g O /g substance
ThOD	1.07 g O /g substance

Propylene glycol (57-55-6)

Persistence and degradability	Biodegradable in the soil. Readily biodegradable in water.
Biochemical oxygen demand (BOD)	0.96 – 1.08 g O /g substance
Chemical oxygen demand (COD)	1.63 g O /g substance
ThOD	1.69 g O /g substance

Ethanol (64-17-5)

Persistence and degradability	Biodegradable in the soil. Readily biodegradable in water.
Biochemical oxygen demand (BOD)	0.8 – 0.967 g O ₂ /g substance
Chemical oxygen demand (COD)	1.7 g O ₂ /g substance
ThOD	2.1 g O ₂ /g substance
BOD (% of ThOD)	0.43

ethyl acetate (141-78-6)

Persistence and degradability	Biodegradable in the soil. Readily biodegradable in water.
Biochemical oxygen demand (BOD)	0.293 g O /g substance
Chemical oxygen demand (COD)	1.69 g O /g substance

ThOD	1.82 g O /g substance
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Triacetin (102-76-1)

Persistence and degradability	Readily biodegradable in water.
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4-hydroxy-3-methoxybenzaldehyde (121-33-5)

Persistence and degradability	Readily biodegradable in water.
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5-methylfurfural (620-02-0)

Persistence and degradability	Biodegradability in soil: no data available.
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ethyl crotonate (623-70-1)

Persistence and degradability	Biodegradability in soil: no data available.
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12.3 - Bioaccumulative Potential:**Acetic Acid (64-19-7)**

BCF - Fish [1]	3.16 (Pisces, Fresh water, QSAR)
Partition coefficient n-octanol/water (Log Pow)	-0.17 (Experimental value, 25 °C)
Bioaccumulative potential	Not bioaccumulative.

Propylene glycol (57-55-6)

Partition coefficient n-octanol/water (Log Pow)	-1.07 (Experimental value, EU Method A.8: Partition Coefficient, 20.5 °C)
Bioaccumulative potential	Not bioaccumulative.

Ethanol (64-17-5)

BCF - Fish [1]	1 (Other, 72 h, Cyprinus carpio, Static system, Fresh water, Read-across)
Partition coefficient n-octanol/water (Log Pow)	-0.31 (Experimental value)
Bioaccumulative potential	Not bioaccumulative.

ethyl acetate (141-78-6)

BCF - Fish [1]	30 (3 day(s), Leuciscus idus, Static system, Experimental value)
Partition coefficient n-octanol/water (Log Pow)	0.68 (Experimental value, EPA OPPTS 830.7560, 25 °C)
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500).

Triacetin (102-76-1)	
BCF - Fish [1]	3.162 l/kg (BCFBAF v3.01, Estimated value, Fresh weight)
Partition coefficient n-octanol/water (Log Pow)	0.25 (Experimental value)
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500).

4-hydroxy-3-methoxybenzaldehyde (121-33-5)	
Partition coefficient n-octanol/water (Log Pow)	1.17 (Experimental value, OECD 107: Partition Coefficient (n-octanol/water): Shake Flask Method, 25 °C)
Bioaccumulative potential	Low potential for bioaccumulation (Log Kow < 4).

5-methylfurfural (620-02-0)	
Bioaccumulative potential	No bioaccumulation data available.

ethyl crotonate (623-70-1)	
Bioaccumulative potential	No bioaccumulation data available.

12.4 - Mobility in soil:

Acetic Acid (64-19-7)	
Surface tension	26.3 mN/m (30 °C)
Ecology – soil	Highly mobile in soil. May be harmful to plant growth, blooming and fruit formation.

Propylene glycol (57-55-6)	
Surface tension	71.6 mN/m (21.5 °C, 1.01 g/l, EU Method A.5: Surface tension))
Organic Carbon Normalized Adsorption Coefficient (Log Koc)	0.46 (log Koc, Calculated value)
Ecology – soil	Highly mobile in soil

Ethanol (64-17-5)	
Surface tension	0.022 N/m (20 °C)
Ecology – soil	Highly mobile in soil

Triacetin (102-76-1)	
Organic Carbon Normalized Adsorption Coefficient (Log Koc)	3.438 (log Koc, Experimental value)



Ecology – soil	Low potential for mobility in soil.
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Ethanol (64-17-5)	
Surface tension	0.022 N/m (20 °C)
Ecology – soil	Highly mobile in soil

12.5 - Results of PBT and vPvB assessment:

Component	
Acetic Acid (64-19-7)	This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII
Propylene glycol (57-55-6)	This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII
Ethanol (64-17-5)	This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII
ethyl acetate (141-78-6)	This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII
Triacetin (102-76-1)	This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII
4-hydroxy-3-methoxybenzaldehyde (121-33-5)	This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII

12.6 – Endocrine disruptins properties:

No additional information available.

12.7 – Other adverse effects:

No additional information available.

13: Disposal Considerations:**13.1 – Waste treatment methods:**

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

Additional information: Flammable vapours may accumulate in the container.

**14: Transport Information:**

In accordance with ADR/IMDG/IATA/ADN/RID.

14.1 UN number

UN-NO. (ADR): UN 1993

UN-NO. (IMDG): UN 1993

UN-NO. (IATA): UN 1993

UN-NO. (ADN): UN 1993

UN-NO. (RID): UN 1993

14.2 UN proper shipping name

Proper Shipping Name (IMDG): FLAMMABLE LIQUID, N.O.S. (ethanol; ethyl alcohol ; ethyl acetate)

Proper Shipping Name (IATA): Flammable liquid, n.o.s. (ethanol; ethyl alcohol ; ethyl acetate)

Proper Shipping Name (ADN): FLAMMABLE LIQUID, N.O.S. (ethanol; ethyl alcohol ; ethyl acetate)

Proper Shipping Name (RID): FLAMMABLE LIQUID, N.O.S. (ethanol; ethyl alcohol ; ethyl acetate)

Transport document description (ADR): UN 1993 FLAMMABLE LIQUID, N.O.S. (ethanol; ethyl alcohol ; ethyl acetate), 3, III, (D/E)

Transport document description (IMDG): UN 1993 FLAMMABLE LIQUID, N.O.S. (ethanol; ethyl alcohol ; ethyl acetate), 3, III

Transport document description (IATA): UN 1993 Flammable liquid, n.o.s. (ethanol; ethyl alcohol ; ethyl acetate), 3, III

Transport document description (ADN): UN 1993 FLAMMABLE LIQUID, N.O.S. (ethanol; ethyl alcohol ; ethyl acetate), 3, III

Transport document description (RID): UN 1993 FLAMMABLE LIQUID, N.O.S. (ethanol; ethyl alcohol ; ethyl acetate), 3, III

14.3 Transport hazard classes**ADR**

Transport hazard class(es) (ADR) : 3

Danger labels (ADR) : 3

:

**IMDG**

Transport hazard class(es) (IMDG) : 3

Danger labels (IMDG) : 3

:



IATA

Transport hazard class(es) (IATA) : 3

Danger labels (IATA) : 3

:

**ADN**

Transport hazard class(es) (ADN) : 3

Danger labels (ADN) : 3

:

**RID**

Transport hazard class(es) (RID) : 3

Danger labels (RID) : 3

:

**14.4 Packing group**

Packing group (ADR): III

Packing group (IMDG): III

Packing group (IATA): III

Packing group (ADN): III

Packing group (RID): III

14.5 Environmental hazards

Dangerous for the environment: No

Marine pollutant: No

Other information: No supplementary information available

14.6 – Special precautions for user:**Overland Transport**

Classification code (ADR): F1

Special provisions (ADR): 274, 601,

Limited quantities (ADR): 5I

www.specialingredients.co.ukTel: 01246 906247 | Foxwood Industrial Park, Chesterfield, S41 9RN, United Kingdom
Registered UK Company No: 08758412 | UK VAT No: GB175274393



Excepted quantities (ADR): E1

Packing instructions (ADR): P001, IBC03, LP01, R001

Mixed packing provisions (ADR): MP19

Portable tank and bulk container instructions (ADR): T4

Portable tank and bulk container special provisions (ADR): TP1, TP29

Tank code (ADR): LGBF

Vehicle for tank carriage: FL

Transport category (ADR): 3

Special provisions for carriage - Packages (ADR): V12

Special provisions for carriage - Operation (ADR): S2

Hazard identification number (Kemler No.): 30

Orange plates:

30
1993

Tunnel restriction code (ADR): D/E

EAC code: •3YE

Transport by sea

Special provisions (IMDG): 223, 274, 955

Limited quantities (IMDG): 5 L

Excepted quantities (IMDG): E1

Packing instructions (IMDG): LP01, P001

IBC packing instructions (IMDG): IBC03

Tank instructions (IMDG): T4

Tank special provisions (IMDG): TP1, TP29

EmS-No. (Fire): F-E

EmS-No. (Spillage): S-E

Stowage category (IMDG): A

Air Transport

PCA Excepted quantities (IATA): E1

PCA Limited quantities (IATA): Y344

PCA limited quantity max net quantity (IATA): 10L

PCA packing instructions (IATA): 355

PCA max net quantity (IATA): 60L

CAO packing instructions (IATA): 366

CAO max net quantity (IATA): 220L

Special provisions (IATA): A3

ERG code (IATA): 3L

Inland waterway transport

Classification code (ADN): F1

Special provisions (ADN): 274, 601

Limited quantities (ADN): 5 L

Excepted quantities (ADN): E1

Equipment required (ADN): PP, EX, A

Ventilation (ADN): VE01

Number of blue cones/lights (ADN): 0

**Rail transport**

Classification code (RID): F1

Special provisions (RID): 274, 601

Limited quantities (RID): 5L

Excepted quantities (RID): E1

Packing instructions (RID): P001, IBC03, LP01, R001

Mixed packing provisions (RID): MP19

Portable tank and bulk container instructions (RID): T4

Portable tank and bulk container special provisions (RID): TP1, TP29

Tank codes for RID tanks (RID): LGBF

Transport category (RID): 3

Special provisions for carriage – Packages (RID): W12

Colis express (express parcels) (RID): CE4

Hazard identification number (RID): 30

14.7 – Maritime transport in bulk according to IMO instruments

Not applicable.

15: Regulatory Information:**15.1 – Safety, health and environmental regulations/legislation specific for the substance or mixture:****15.1.1 – EU regulations:**

REACH Annex XVII (Restriction List): Contains no substance(s) listed on REACH Annex XVII (Restriction Conditions)

REACH Annex XIV (Authorisation List): Contains no substance(s) listed on REACH Annex XIV (Authorisation List)

REACH Candidate List (SVHC): Contains no substance(s) listed on the REACH Candidate List

PIC Regulation (Prior Informed Consent): Contains no substance(s) listed on the PIC list (Regulation EU 649/2012 concerning the export and import of hazardous chemicals)

POP Regulation (Persistent Organic Pollutants): Contains no substance(s) listed on the POP list (Regulation EU 2019/1021 on persistent organic pollutants)

Ozone Regulation (1005/2009): Contains no substance(s) listed on the Ozone Depletion list (Regulation EU 1005/2009 on substances that deplete the ozone layer)

Explosives Precursors Regulation (2019/1148): Contains no substance(s) listed on the Explosives Precursors list (Regulation EU 2019/1148 on the marketing and use of explosives precursors)

Drug Precursors Regulation (273/2004): Contains no substance(s) listed on the Drug Precursors list (Regulation EC 273/2004 on the manufacture and the placing on market of certain substances used in the illicit manufacture of narcotic drugs and psychotropic substances)

15.1.2 – National Regulations:

France

Occupational diseases	
Code	Description
RG 84	Conditions caused by liquid organic solvents for professional use: saturated or unsaturated aliphatic or cyclic liquid hydrocarbons and mixtures thereof; liquid halogenated hydrocarbons; nitrated derivatives of aliphatic hydrocarbons; alcohols; glycols, glycol ethers; ketones; aldehydes; aliphatic and cyclic ethers, including tetrahydrofuran; esters; dimethylformamide and dimethylacetamine; acetonitrile and propionitrile; pyridine; dimethylsulfone and dimethylsulfoxide

**Germany**

Water hazard class (WGK): Not classified according to Regulation Governing Systems for Handling Substances Hazardous to Waters (AwSV).

Chemicals Prohibition Ordinance (ChemVerbotsV): This product is subject to ChemVerbotsV Annex 2 Entry 1. The following requirements must be observed: authorization requirement (according to § 6 paragraph 1 sentence 1), basic requirements for carrying out the delivery (according to § 8 paragraph 1, 3 and 4), identification and documentation (according to § 9 paragraph 1 to 3) and exclusion of the shipping route (according to § 10).

Hazardous Incident Ordinance (12. BImSchV): Is not subject of the Hazardous Incident Ordinance (12. BImSchV)

Netherlands

SZW-lijst van kankerverwekkende stoffen: Acetaldehyde, Ethanol, Valerian root oil, Clove Leaf Oil are listed

SZW-lijst van mutagene stoffen: Valerian root oil, Clove Leaf Oil are listed

SZW-lijst van reprotoxische stoffen – Borstvoeding: Ethanol is listed

SZW-lijst van reprotoxische stoffen – Vruchtbaarheid: Ethanol is listed

SZW-lijst van reprotoxische stoffen – Ontwikkeling: Ethanol is listed

Denmark

Classification remarks: Emergency management guideline for the storage of flammable liquids must be followed

15.2 – Chemical safety assessment:

Class for fire hazard: Class I-1

Store unit: 1 liter

Classification remarks: F <Flam. Liq. 2>; Emergency management guidelines for the storage of flammable liquids must be followed

Danish National Regulations:

- Young people below the age of 18 years are not allowed to use the product
- Pregnant/breastfeeding women working with the product must not be in direct contact with the product
- The requirements from the Danish Working Environment Authorities regarding work with carcinogens must be followed during use and disposal

16: Other Information:

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
BCF	Bio-concentration factor
BLV	Biological limit value
BOD	Biochemical oxygen demand (BOD)
COD	Chemical oxygen demand (COD)
DMEL	Derived minimal effect level
DNEL	Derived-no effect level
EC-No.	European community number
EC50	Median effective concentration
EN	European standard
IARC	International Agency for research on Cancer



IATA	International Air Transport Association
IMDG	International Maritime Dangerous Goods
LC50	Median lethal concentration
LD50	Median lethal dose
LOAEL	Lowest Observed Adverse Effect Level
NOAEC	No-Observed Adverse Effect Concentration
NOAEL	No-Observed Adverse Effect Level
NOEC	No-Observed Effect Concentration
OECD	Organisation for Economic Co-operation and Development
OEL	Occupational Exposure Limit
PBT	Persistent Bio accumulative Toxic
PNEC	Predicted No-Effect Concentration
RID	Regulations concerning the international Carriage of Dangerous Goods by Rail
SDS	Safety Data Sheet
STP	Sewage treatment plant
ThOD	Theoretical oxygen demand (ThOD)
TLM	Median Tolerance Limit
VOC	Volatile Organic Compounds
CAS-No.	Chemical Abstract Service number
N.O.S.	Not Otherwise Specified
vPvB	Very Persistent and Very Bio accumulative
ED	Endocrine disrupting properties

Full Text of H- and EUH-statements:		
Acute Tox. 4 (Dermal)	4	Acute toxicity (dermal), Category 4
Acute Tox. 4 (Inhalation:vapour)		Acute toxicity (inhalation:vapour) Category 4
Acute Tox. 4 (Oral)		Acute toxicity (oral), Category 4
Aquatic Chronic 3		Hazardous to the aquatic environment — Chronic Hazard, Category 3
Carc. 1B		Carcinogenicity, Category 1B
EUH208		Contains Allspice oil(84929-57-7), Cinnamon leaf oil(84649-98-9), Lemon Oil(84929-31-7), Nutmeg oil(84082-68-8), Orange Oil(8028-48-6), Clove Leaf Oil(84961-50-2). May produce an allergic reaction.
Eye Irrit. 2		Serious eye damage/eye irritation, Category 2
Flam. Liq. 1		Flammable liquids, Category 1
Flam. Liq. 2		Flammable liquids, Category 2
Flam. Liq. 3		Flammable liquids, Category 3
H224		Extremely flammable liquid and vapour.
H225		Highly flammable liquid and vapour
H226		Flammable liquid and vapour.
H302		Harmful if swallowed.
H312		Harmful in contact with skin.
H314		Causes severe skin burns and eye damage.
H315		Causes skin irritation.
H317		May cause an allergic skin reaction.
H319		Causes serious eye irritation.
H332		Harmful if inhaled.



H335	May cause respiratory irritation.
H336	May cause drowsiness or dizziness.
H341	Suspected of causing genetic defects.
H350	May cause cancer.
Muta. 2	Germ cell mutagenicity, Category 2
Skin Corr. 1A	Skin corrosion/irritation, Category 1, Sub-Category 1A
Skin Corr. 1B	Skin corrosion/irritation, Category 1, Sub-Category 1B
Skin Irrit. 2	Skin corrosion/irritation, Category 2
Skin Sens. 1	Skin sensitisation, Category 1
STOT SE 3	Specific target organ toxicity – Single exposure, Category 3, Respiratory tract irritation

The information contained herein is to the best of our knowledge, but since the circumstances and conditions in which it may be used are beyond our control, we do not accept any liability whatsoever, however arising, which results directly or indirectly from the use of the product.