Safety Data Sheet

01. IDENTIFICATION OF THE SUBSTANCE/PREPARATION & THE COMPANY/UNDERTAKING

1.1 Product Identifier

Product Name		Marjoram Oil Spanish			
Biological Definition		Thymus Mastichina Herb Oil is an essential oil obtained from the herbs of the thyme, *Thymus mastichina, Lamiaceae.*			
INCI Name		Thymus Mastichina Herb Oil			
Synonyms & Trade Names		-			
CAS-No	84837-14-9	EC No.	284-294-8	EINECS No.	284-294-8

1.2 Relative identified uses of the substance or mixture and uses advised against

Relevant uses: Miscellaneous. For professional user /industrial user only.
Uses advised against: All uses not specified in this section or in section 7.3

1.3 Details of the supplier of the safety data sheet

Golden Bough Botanicals Inc 12-1585 Cliveden Ave Delta BC V3M 6M1

1.4 Emergency Tel. No.	604-540-8700 (Monday-Friday 8:30 am-4:30 pm)

02. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

The full text for all hazard statements are displayed in Section 16.

Classification (EC 1272/2008)

Physical and Chemical Hazards:	Flam. Liq. 3 H226 Flammable liquid and vapour.
Human health:	Asp. Tox. 1: H304 - May be fatal if swallowed and enters airways.
	Eye Irrit. 2: H319 - Causes serious eye irritation.
	Skin Irrit. 2: H315 - Causes skin irritation.
	Skin Sens. 1B: H317 - May cause an allergic skin reaction.
Environment:	Aquatic Chronic 2: H411 - Toxic to aquatic life with long lasting effects.

2.2 Label Elements

Label in accordance with (EC) No 1272/2008

GHS02 GHS07 GHS08 GHS09

Signal Word	Danger.
Contains	Cineole; (-)-pin-2(10)-ene; d-Limonene; (+)-pin-2(3)-ene

Hazard Statements

H411 - Toxic to aquatic life with long lasting effects.
H304 - May be fatal if swallowed and enters airways.
H319 - Causes serious eye irritation.

H226 - Flammable liquid and vapour.
H315 - Causes skin irritation.
H317 - May cause an allergic skin reaction.

Precautionary Statements

P210: Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P264: Wash thoroughly after use.
P280: Wear protective gloves/protective clothing/eye protection/face protection.
P301+P310: IF SWALLOWED: Immediately call a POISON CENTER/doctor.
P302+P352: IF ON SKIN: Wash with plenty of water.
P303+P361+P353: IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P370+P378: In case of fire: Use ABC powder extinguisher to extinguish.
P403+P235: Store in a well-ventilated place. Keep cool.
P501: Dispose of contents and / or containers in accordance with regulations on hazardous waste or packaging and packaging waste respectively.

Supplementary Precautionary Statements

None.

2.3 Other Hazards

PBT or vPvB according to Annex XIII	Not additional data available.
Adverse physio-chemical properties	Not additional data available.
Adverse effects on human health	EUH208: Contains P-menta-1,4(8)-dieno. May produce an allergic reaction

03. COMPOSITION/INFORMATION ON INGREDIENTS

3.2 Mixtures

60.0 – 80.0% Cineole CAS-No: 470-82-6 EC No: 207-431-5

Classification (EC 1272/2008) Flam. Liq. 3: H226; Skin Sens. 1B: H317, Warning.

10.0 – 20.0% Linalool CAS-No: 78-70-6 EC No: 201-134-4

Classification (EC 1272/2008) Eye Irrit. 2: H319; Skin Irrit. 2: H315 - Warning

4.0 – 7.0% (-)-pin-2(10)-ene CAS-No: 181-67-3 EC No: 242-060-2

Classification (EC 1272/2008) Aquatic Acute 1: H400; Aquatic Chronic 1: H410; Asp. Tox. 1: H304; Flam. Liq. 3: H226; Skin Irrit. 2: H315; Skin Sens. 1B: H317 - Danger

1.0 – 4.0% d-Limonene CAS-No: 5989-27-5 EC No: 227-813-5

Classification (EC 1272/2008) Aquatic Acute 1: H400; Aquatic Chronic 1: H410; Asp. Tox. 1: H304; Flam. Liq. 3: H226; Skin Irrit. 2: H315; Skin Sens. 1: H317 - Danger

1.0 – 4.0% P-menth-1-en-8-ol CAS-No: 98-55-5 EC No: 202-813-5

Classification (EC 1272/2008) Eye Irrit. 2: H319; Skin Irrit. 2: H315 - Warning

1.0 – 4.0% (+)-pin-2(3)-ene CAS-No: 7785-70-8 EC No: 232-087-8

Classification (EC 1272/2008) Aquatic Acute 1: H400; Aquatic Chronic 1: H410; Asp. Tox. 1: H304; Flam. Liq.

3: H226; Skin Irrit. 2: H315; Skin Sens. 1B: H317 - Danger
1.0 – 4.0% Inalyl acetate CAS-No: 115-95-7 EC No: 204-116-4 Classification (EC 1272/2008) Eye Irrit. 2: H319; Skin Irrit. 2: H315 - Warning
1.0 – 4.0% Pin-2(3)-eno CAS-No: 80-56-8 EC No: 201-291-9 Classification (EC 1272/2008) Asp. Tox. 1: H304; Flam. Liq. 3: H226; Skin Irrit. 2: H315; Skin Sens. 1B: H317 - Danger
1.0 – 4.0% 7-methyl-3-methyleneocta-1,6-diene CAS-No: 123-35-3 EC No: 204-622-5 Classification (EC 1272/2008) Asp. Tox. 1: H304; Eye Irrit. 2: H319; Flam. Liq. 3: H226; Skin Irrit. 2: H315 - Danger
<1% Camphene CAS-No: 79-92-5 EC No: 201-234-8 Classification (EC 1272/2008) Aquatic Acute 1: H400; Aquatic Chronic 1: H410; Eye Irrit. 2: H319; Flam. Sol. 2: H228 Warning
<1% P-menta-1,4(8)-dieno CAS-No: 586-62-9 EC No: 209-578-0 Classification (EC 1272/2008) Aquatic Acute 1: H400; Aquatic Chronic 1: H410; Asp. Tox. 1: H304; Skin Sens. 1B: H317 - Danger

04. FIRST AID MEASURES

4.1 Description of first aid measures	
Inhalation	The symptoms resulting from intoxication can appear after exposure, therefore, in case of doubt, seek medical attention for direct exposure to the chemical product or persistent discomfort, showing the SDS of this product. This product does not contain substances classified as hazardous for inhalation, however, in case of symptoms of intoxication remove the person affected from the exposure area and provide with fresh air. Seek medical attention if the symptoms get worse or persist.
Ingestion	Request medical assistance immediately, showing the SDS of this product. Do not induce vomiting, but if it does happen keep the head down to avoid aspiration. In the case of loss of consciousness do not administrate anything orally unless supervised by a doctor. Rinse out the mouth and throat, as they may have been affected during ingestion. Keep the person affected at rest.
Skin Contact	Remove contaminated clothing and footwear, rinse skin or shower the person affected if appropriate with plenty of cold water and neutral soap. In serious cases see a doctor. If the product causes burns or freezing, clothing should not be removed as this could worsen the injury caused if it is stuck to the skin. If blisters form on the skin, these should never be burst as this will increase the risk of infection.
Eye Contact	Rinse eyes thoroughly with lukewarm water for at least 15 minutes. Do not allow the person affected to rub or close their eyes. If the injured person uses contact lenses, these should be removed unless they are stuck to the eyes, as this could cause further damage. In all cases, after cleaning, a doctor should be consulted as quickly as possible with the SDS of the product.
4.2 Most important symptoms and effects, both acute and delayed	
Acute and delayed effects are indicated in sections 2 and 11.	

4.3	Indication of any immediate medical attention and special treatment needed
	No additional data available.

05. FIRE-FIGHTING MEASURES

5.1	Extinguishing Media
	Extinguishing media: If possible use polyvalent powder fire extinguishers (ABC powder), alternatively use foam or carbon dioxide extinguishers (CO_2). Unsuitable extinguishing media: IT IS RECOMMENDED NOT to use tap water as an extinguishing agent.
5.2	**Special hazards arising from the product**
	As a result of combustion or thermal decomposition reactive sub-products are created that can become highly toxic and, consequently, can present a serious health risk.
5.3	**Advice for firefighters**
	Depending on the magnitude of the fire it may be necessary to use full protective clothing and individual respiratory equipment. Minimum emergency facilities and equipment should be available (fire blankets, portable first aid kit...) in accordance with Directive 89/654/EC. Additional provisions: Act in accordance with the Internal Emergency Plan and the Information Sheets on actions to take after an accident or other emergencies. Destroy any source of ignition. In case of fire, refrigerate the storage containers and tanks for products susceptible to inflammation, explosion or BLEVE as a result of high temperatures. Avoid spillage of the products used to extinguish the fire into an aqueous medium.

06. ACCIDENTAL RELEASE MEASURES

6.1	Personal precautions, protective equipment and emergency procedures
	Isolate leaks provided that there is no additional risk for the people performing this task. Evacuate the area and keep out those without protection. Personal protection equipment must be used against potential contact with the spilt product (See section 8). Above all prevent the formation of any vapour-air flammable mixtures, through either ventilation or the use of an inertisation agent. Destroy any source of ignition. Eliminate electrostatic charges by interconnecting all the conductive surfaces on which static electricity could form, and also ensuring that all surfaces are connected to the ground.
6.2	**Environmental Precautions**
	Avoid at all cost any type of spillage into an aqueous medium. Contain the product absorbed appropriately in hermetically sealed containers. Notify the relevant authority in case of exposure to the general public or the environment.
6.3	**Methods and material for containment and cleaning up.**
	Cover with an inert, inorganic, non-combustible absorbent material (e.g dry-lime, sand, soda ash). Place in covered containers using non-sparking tools and transport outdoors. Avoid open flames or sources of ignition. Ventilate area and wash spill site after material pickup is complete. Dispose of in accordance with current laws and regulations.
6.4	**Reference to other sections**
	See sections 7, 8, 13.

07. HANDLING AND STORAGE

7.1	Precautions for safe handling
	Precautions for safe manipulation Comply with the current legislation concerning the prevention of industrial risks. Keep containers hermetically sealed. Control spills and residues, destroying them with safe methods (section 6). Avoid leakages from the container. Maintain order and cleanliness where dangerous products are used.

Technical recommendations for the prevention of fires and explosions

Transfer in well ventilated areas, preferably through localized extraction. Fully control sources of ignition (mobile phones, sparks,…) and ventilate during cleaning operations. Avoid the existence of dangerous atmospheres inside containers, applying inertisation systems where possible. Transfer at a slow speed to avoid the creation of electrostatic charges. Against the possibility of electrostatic charges: ensure a perfect equipotential connection, always use groundings, do not wear work clothes made of acrylic fibres, preferably wearing cotton clothing and conductive footwear. Comply with the essential security requirements for equipment and systems defined in Directive 94/9/EC (ATEX 100) and with the minimum requirements for protecting the security and health of workers under the selection criteria of Directive 1999/92/EC (ATEX 137). Consult section 10 for conditions and materials that should be avoided.

Technical recommendations to prevent ergonomic and toxicological risks

Do not eat or drink during the process, washing hands afterwards with suitable cleaning products.

Technical recommendations to prevent environmental risks

Due to the danger of this product for the environment it is recommended to use it within an area containing contamination control barriers in case of spillage, as well as having absorbent material in close proximity.

7.2 Conditions for safe storage, including any incompatibilities

Avoid sources of heat, radiation, static electricity and contact with food. For additional information see subsection 10. Maximum storage temp.: 25°C.

7.3 Specific end use(s)

Except for the instructions already specified it is not necessary to provide any special recommendation regarding the uses of this product.

08. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

There are no occupational exposure limits for the substances contained in the product.

DNEL (Workers):

		Short exposure		Long exposure	
Identification		**Systemic**	**Local**	**Systemic**	**Local**
Cineole	Oral	n/a	n/a	n/a	n/a
CAS: 470-82-6	Dermal	n/a	n/a	2mg/kg	n/a
EC: 207-431-5	Inhalation	n/a	n/a	7.05 mg/m^3	n/a
Linalool	Oral	n/a	n/a	n/a	n/a
CAS: 78-70-6	Dermal	5mg/kg	n/a	2.5mg/kg	n/a
EC: 201-134-4	Inhalation	16.5 mg/m^3	n/a	2.8mg/m^3	n/a
(-)-pin-2(10)-ene	Oral	n/a	n/a	n/a	n/a
CAS: 18172-67-3	Dermal	n/a	n/a	n/a	n/a
EC: 242-060-2	Inhalation	n/a	n/a	5.98mg/m^3	n/a
d-Limonene	Oral	n/a	n/a	n/a	n/a
CAS: 5989-27-5	Dermal	n/a	n/a	n/a	n/a
EC: 227-813-5	Inhalation	n/a	n/a	33.3mg/m^3	n/a
(+)-pin-2(3)-ene	Oral	n/a	n/a	n/a	n/a
CAS:7785-70-8	Dermal	n/a	n/a	0.8mh/kg	n/a
EC: 232-087-8	Inhalation	n/a	n/a	5.69mg/m^3	n/a
Inalyl acetate	Oral	n/a	n/a	n/a	n/a
CAS:115-95-7	Dermal	n/a	n/a	2.5mg/kg	n/a
EC:204-116-4	Inhalation	n/a	n/a	2.75mg/m^3	n/a

Pin-2(3)-eno	Oral	n/a	n/a	n/a	n/a
CAS:50-56-8	Dermal	n/a	n/a	n/a	n/a
EC: 201-291-9	Inhalation	n/a	n/a	5.98mg/m^3	n/a
7-methyl-3-methylene					
octa-1,6-diene	Oral	n/a	n/a	n/a	n/a
CAS: 123-35-3	Dermal	n/a	n/a	0.83mg/kg	n/a
EC: 204-622-5	Inhalation	n/a	n/a	5.83mg/m^3	n/a
Camphene	Oral	n/a	n/a	n/a	n/a
CAS:79-92-5	Dermal	1.25mg/kg	n/a	0.21mg/kg	n/a
EC:201-234-8	Inhalation	110.19 mg/m^3	n/a	110.19 mg/m^3	n/a
P-menta-1,4(8)-dieno	Oral	n/a	n/a	n/a	n/a
CAS:586-62-9	Dermal	n/a	n/a	0.52mg/kg	n/a
EC:209-578-0	Inhalation	n/a	n/a	3.6mg/m^3	n/a

DNEL (General population):

		Short exposure		**Long exposure**	
Identification		**Systemic**	**Local**	**Systemic**	**Local**
Cineole	Oral	n/a	n/a	600mg/kg	n/a
CAS: 470-82-6	Dermal	n/a	n/a	1mg/kg	n/a
EC: 207-431-5	Inhalation	n/a	n/a	1.74mg/m3	n/a
Linalool	Oral	1.2mg/kg	n/a	0.2mg/kg	n/a
CAS: 78-70-6	Dermal	2.5mg/kg	n/a	1.25mg/kg	n/a
EC: 201-134-4	Inhalation	4.1mg/m^3	n/a	0.7mg/m^3	n/a
(-)-pin-2(10)-ene	Oral	n/a	n/a	0.31mg/g	n/a
CAS: 18172-67-3	Dermal	n/a	n/a	n/a	n/a
EC: 242-060-2	Inhalation	n/a	n/a	1.06mg/m^3	n/a
d-Limonene	Oral	n/a	n/a	4.76mg/kg	n/a
CAS: 5989-27-5	Dermal	n/a	n/a	n/a	n/a
EC: 227-813-5	Inhalation	n/a	n/a	8.33mg/m^3	n/a
(+)-pin-2(3)-ene	Oral	n/a	n/a	0.3mg/kg	n/a
CAS:7785-70-8	Dermal	n/a	n/a	0.3mg/kg	n/a
EC: 232-087-8	Inhalation	n/a	n/a	1.0mg/m^3	n/a
Inalyl acetate	Oral	n/a	n/a	0.2mg/kg	n/a
CAS:115-95-7	Dermal	n/a	n/a	1.25mg/kg	n/a
EC:204-116-4	Inhalation	n/a	n/a	0.68mg/m^3	n/a
Pin-2(3)-eno	Oral	n/a	n/a	0.31mg/kg	n/a
CAS:50-56-8	Dermal	n/a	n/a	n/a	n/a
EC: 201-291-9	Inhalation	n/a	n/a	1.06mg/m^3	n/a
7-methyl-3-methylene					
octa-1,6-diene	Oral	n/a	n/a	0.42mg/kg	n/a
CAS: 123-35-3	Dermal	n/a	n/a	0.42mg/kg	n/a
EC: 204-622-5	Inhalation	n/a	n/a	1.25mg/m^3	n/a

Camphene	Oral	0.625mg/kg	n/a	0.1mg/kg	n/a
CAS:79-92-5	Dermal	0.625mg/kg	n/a	0.1mg/kg	n/a
EC:201-234-8	Inhalation	54.3mg/m^3	n/a	54.3 mg/m^3	n/a
P-menta-1,4(8)-dieno	Oral	n/a	n/a	0.26mg/kg	n/a
CAS:586-62-9	Dermal	n/a	n/a	0.26mg/kg	n/a
EC:209-578-0	Inhalation	n/a	n/a	0.9mg/m^3	n/a

PNEC:

Identification		
Cineole	STP 10 mg/L	Fresh water 0.057 mg/L
CAS: 470-82-6	Soil 0.2 mg/kg	Marine water 0.0057 mg/L
EC: 207-431-5	Intermittent 0.57 mg/L	Sediment (Fresh water) 0.06732 mg/kg
	Oral 133 g/kg	Sediment (Marine water) 0.00673 mg/kg
Linalool	STP 10 mg/L	Fresh water 0.2 mg/
CAS: 78-70-6	Soil 0.327 mg/kg	Marine water 0.02 mg/L
EC: 201-134-4	Intermittent 2 mg/L	Sediment (Fresh water) 2.22 mg/kg
	Oral 7.8 g/kg	Sediment (Marine water) 0.222 mg/kg
(-)-pin-2(10)-ene	STP 3.26 mg/L	Fresh water 0.002 mg/
CAS: 18172-67-3	Soil 0.49 mg/kg	Marine water 0.0002 mg/L
EC: 242-060-2	Intermittent n/a	Sediment (Fresh water) 0.485 mg/kg
	Oral 1.35 g/kg	Sediment (Marine water) 0.048 mg/kg
d-Limonene	STP 1.8 mg/L	Fresh water 0.0054 mg/L
CAS: 5989-27-5	Soil 0.262 mg/kg	Marine water 0.00054 mg/L
EC: 227-813-5	Intermittent n/a	Sediment (Fresh water) 1.32 mg/kg
	Oral 3.33 g/kg	Sediment (Marine water) 0.13 mg/kg
P-menth-1-en-8-ol	STP 2.6 mg/L	Fresh water 0.068 mg/L
CAS: 98-55-5	Soil 0.329 mg/kg	Marine water 0.0068 mg/L
EC: 202-680-6	Intermittent n/a	Sediment (Fresh water) 1.85 mg/kg
	Oral n/a	Sediment (Marine water) 0.185 mg/kg
(+)-pin-2(3)-ene	STP 6.6 mg/L	Fresh water 0.00028 mg/
CAS: 7785-70-8	Soil 0.0146 mg/kg	Marine water 0.000028 mg/L
EC: 232-087-8	Intermittent 2.8 mg/L	Sediment (Fresh water) 0.0723 mg/kg
	Oral 13.1 g/kg	Sediment (Marine water) 0.00723 mg/kg
Pin-2(3)-eno	STP 3.26 mg/L	Fresh water 0.004 mg/
CAS: 80-56-8	Soil 0.539 mg/kg	Marine water 0.0004 mg/L
EC: 201-291-9	Intermittent n/a	Sediment (Fresh water) 1.033 mg/kg
	Oral 1.35 g/kg	Sediment (Marine water) 0.103 mg/kg

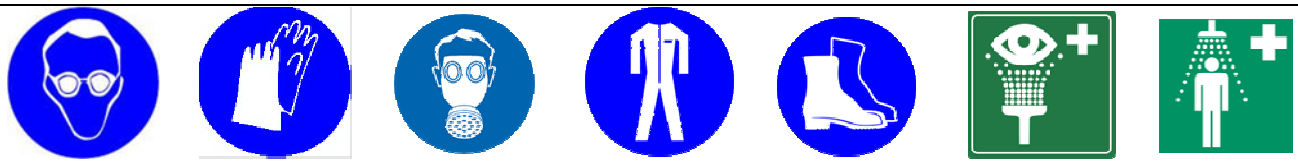
7-methyl-3-methyleneocta-1,6-diene	STP 0.2 mg/L	Fresh water 0.008 mg/L
CAS: 123-35-3	Soil 1.015 mg/kg	Marine water 0.0008 mg/L
EC: 204-622-5	Intermittent n/a	Sediment (Fresh water) 5.022 mg/kg
	Oral 2.78 g/kg	Sediment (Marine water) 0.502 mg/kg

Camphene	STP 10 mg/L	Fresh water 0.00072 mg/
CAS: 79-92-5	Soil 0.0211 mg/kg	Marine water 0.000072 mg/L
EC: 201-234-8	Intermittent 0.00072 mg/L	Sediment (Fresh water) 0.0262 mg/kg

	Oral 2.08 g/kg	Sediment (Marine water) 0.00262 mg/kg
P-menta-1,4(8)-dieno CAS: 586-62-9 EC: 209-578-0	STP 0.2 mg/L Soil 0.0291 mg/kg Intermittent 0.00634 mg/L Oral 10.31 g/kg	Fresh water 0.000634 Marine water 0.0000634 mg/L Sediment (Fresh water) 0.147 mg/kg Sediment (Marine water) 0.0147 mg/kg

8.2 Exposure controls

Protective Equipment



Process Conditions	Provide eyewash station.(standard: DIN 12 899, ISO 3864-1:2002) Provide emergency shower. (standard: ANSI Z358-1, ISO 3864-1:2002)
Engineering Measures	Provide adequate ventilation. Use engineering controls to reduce air contamination.
Respiratory Equipment	Avoid inhalation. Mandatory respiratory tract protection. PPE: Filter mask for gases and vapours Labelling: CE CAT III CEN Standard: EN 405:2001+A1:2009 Remarks: Replace when there is a taste or smell of the contaminant inside the face mask. If the contaminant comes with warnings it is recommended to use isolation equipment
Hand Protection	Avoid contact with skin. Mandatory hand protection. PPE: Protective gloves against minor risks. Labelling: CE CAT I Remarks: Replace gloves in case of any sign of damage. For prolonged periods of exposure to the product for professional users/industrials, we recommend using CE III gloves in line with standards EN 420 and EN 374.
Eye Protection	Avoid contact with eyes. Mandatory face protection. PPE: Panoramic glasses against liquid splash. Labelling: CE CAT II CEN Standard: EN 166:2001, EN ISO 4007:2012 Remarks: Clean daily and disinfect periodically according to the manufacturer´s instructions. Use if there is a risk of splashing.
Other Protection	No additional data available.
Hygiene Measures	Good personal hygiene practices are always advisable, especially when working with chemicals / oils.
Personal Protection	As a preventative measure it is recommended to use basic Personal Protection Equipment, with the corresponding <<CE marking>> in accordance with Directive 89/686/EC. For more information on Personal Protection Equipment (storage, use, cleaning, maintenance, class of protection,…) consult the information leaflet provided by the manufacturer. For more information see subsection 7.1. All information contained herein is a recommendation which needs some specification from the labour risk prevention services as it is not known whether the company has additional measures at its disposal.
Skin Protection	Mandatory Complete bodily protection. PPE: Antistatic and fireproof protective clothing. Labelling: CE CAT III CEN Standard: EN 1149-1:2006, EN 1149-2:1997, EN 1149-3:2004, EN 168:2001 EN ISO 14116:2008/AC:2009, EN 1149-5:2008

	Remarks: Limited protection against flames. Mandatory foot protection. PPE: Safety footwear with antistatic and heat resistant properties. Labelling: CE CAT III CEN Standard: EN 13287:2008, EN ISO 20345:2011 Remarks: Replace boots at any sign of deterioration.
Environmental Exposure Controls	In accordance with the community legislation for the protection of the environment it is recommended to avoid environmental spillage of both the product and its container. For additional information see subsection 7.1.D **Volatile Organic Compounds:** With regard to Directive 2010/75/EU, this product has the following characteristics: V.O.C. (Supply): 91.86 % weight V.O.C. density at 20°C: 836.86 kg/m³ (836.86 g/L) Average carbon number: 10 Average molecular weight: 151.47 g/mol

09. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties	
Appearance	Mobile liquid, pale yellow.
Colour	Pale yellow.
Odour	Characteristic - cineolic, with herbaceous aspect.
Relative Density	0.904 - 0.918 @ 20°C
Flash Point (°C)	51.0
Refractive Index	1.461- 1.464 @ 20°C
Melting Point (°C)	No additional data available.
Boiling Point (°C)	180.0.
Vapour Pressure	143Pa @ 20°C, 885Pa (1kPa) @ 50°C.
Solubility in Water @20°C	Insoluble in water.
Auto-ignition temperature (°C)	235.0

9.2 Other information

No additional data available.

10. STABILITY AND REACTIVITY

10.1 Reactivity

No hazardous reactions are expected because the product is stable under recommended storage conditions. See section 7.

10.2 Chemical stability

Stable under the recommended handling, use and storage conditions.

10.3 Possible hazardous reactions

Under the specified conditions, hazardous reactions that lead to excessive temperatures or pressure are not expected.

10.4 Conditions to Avoid

Applicable for handling and storage at room temperature:

Shock and friction	Contact with air	Increase in temperature	Sunlight	Humidity
n/a	n/a	Risk of combustion	Avoid direct impact	n/a

10.5 Incompatible materials

Acids	Water	Combustive materials	Combustible materials	Others
n/a	n/a	Avoid direct impact	n/a	Avoid alkalis or strong bases

10.6 Hazardous Decomposition Products

See subsection 10.3, 10.4 and 10.5 to find out the specific decomposition products. Depending on the decomposition conditions, complex mixtures of chemical substances can be released: carbon dioxide (CO_2), carbon monoxide and other organic compounds.

11. TOXOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute Toxicity

The experimental information related to the toxicological properties of the product itself is not available. In case of exposure that is repetitive, prolonged or at concentrations higher than recommended by the occupational exposure limits, it may result in adverse effects on health depending on the means of exposure:
Ingestion (Acute effect)
Acute toxicity : Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous for consumption. For more information see section 3.
Corrosivity/Irritability: The consumption of a considerable dose can cause irritation in the throat, abdominal pain, nausea and vomiting.

Specific toxicology information on the substances:

	Acute Toxicity		Genus
Cineole	LD50 oral	2480 mg/kg	Rat
CAS: 470-82-6	LD50 dermal	>2000 mg/kg	
EC: 207-431-5	LC50 inhalation	>20 mg/L (4 h)	
Linalool	LD50 oral	3000 mg/kg	Rat
CAS: 78-70-6	LD50 dermal	5610 mg/kg	Rabbit
EC: 201-134-4	LC50 inhalation	>20 mg/L (4 h)	
(-)-pin-2(10)-ene	LD50 oral	4800 mg/kg	Rat
CAS: 18172-67-3	LD50 dermal	>2000 mg/kg	
EC: 242-060-2	LC50 inhalation	>20 mg/L (4 h)	
Pin-2(3)-eno	LD50 oral	3700 mg/kg	Rat
CAS: 80-56-8	LD50 dermal	5100 mg/kg	Rabbit
EC: 201-291-9	LC50 inhalation	>20 mg/L (4 h)	
P-menth-1-en-8-ol	LD50 oral	4300 mg/kg	Rat
CAS: 98-55-5	LD50 dermal	>2000 mg/kg	
EC: 202-680-6	LC50 inhalation	>20 mg/L (4 h)	
Inalyl acetate	LD50 oral	14500 mg/kg	Rat
CAS: 115-95-7	LD50 dermal	5610 mg/kg	Rabbit
EC: 204-116-4	LC50 inhalation	>20 mg/L (4 h)	
d-Limonene	LD50 oral	4400 mg/kg	Rat
CAS: 5989-27-5	LD50 dermal	5100 mg/kg	Rabbit
EC: 227-813-5	LC50 inhalation	>20 mg/L (4 h)	

	7-methyl-3-methylene octa-1,6-diene — LD50 oral >2000 mg/kg; CAS: 123-35-3 — LD50 dermal >2000 mg/kg; EC: 204-622-5 — LC50 inhalation >20 mg/L (4 h) (+)-pin-2(3)-ene — LD50 oral 3700 mg/kg Rat; CAS: 7785-70-8 — LD50 dermal >2000 mg/kg; EC: 232-087-8 — LC50 inhalation >20 mg/L (4 h) Camphene — LD50 oral 5500 mg/kg Rat; CAS: 79-92-5 — LD50 dermal 8189 mg/kg Rabbit; EC: 201-234-8 — LC50 inhalation >5 mg/L P-menta-1,4(8)-dieno — LD50 oral 3850 mg/kg Rat; CAS: 586-62-9 — LD50 dermal 5100 mg/kg Rabbit; EC: 209-578-0 — LC50 inhalation >20 mg/L
Skin corrosion / irritation	Contact with the skin and the eyes (acute effect): Contact with the skin: Produces skin inflammation. Contact with the eyes: Produces eye damage after contact.
Serious eye damage / irritation	No additional data available.
Respiratory or skin sensitisation	Inhalation (Acute Effect): Acute toxicity : Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous for inhalation. For more information see section 3. Corrosivity/Irritability: Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous for this effect. For more information see section 3. Sensitising effects: Respiratory: Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous with sensitising effects. For more information see section 3. Cutaneous: Prolonged contact with the skin can result in episodes of allergic contact dermatitis.
Germ Cell Mutagenicity	No additional data available.
Carcinogenicity	CMR effects (carcinogenicity, mutagenicity and toxicity to reproduction): Carcinogenicity: Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous for the effects mentioned. For more information see section 3. Mutagenicity: Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous for this effect. For more information see section 3. Reproductive toxicity: Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous for this effect. For more information see section 3.
Reproductive toxicity	No additional data available.
STOT-single exposure	Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous for this effect. For more information see section 3.
STOT-repeated exposure	Specific target organ toxicity (STOT)-repeated exposure: Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous for this effect. For more information see

	section 3. Skin: Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous for this effect. For more information see section 3.
Aspiration hazard	The consumption of a considerable dose can cause pulmonary damage.
Photo-toxicity	No additional data available.
Other Information	No additional data available.

12. ECOLOGICAL INFORMATION

12.1 Toxicity

The experimental information related to the eco-toxicological properties of the product itself is not available.

Identification	Acute toxicity		Species	Genus
Linalool	LC50	27.8 mg/L (96 h)	Oncorhynchus mykiss	Fish
CAS: 78-70-6	EC50	59 mg/L (48 h)	Daphnia magna	Crustacean
EC: 201-134-4	EC50	88.3 mg/L (96 h)	Scenedesmus subspicatus	Algae
(-)-pin-2(10)-ene	LC50	0.56 mg/L (96 h)	Cyprinus carpio	Fish
CAS: 18172-67-3	EC50	1.2 mg/L (48 h)	Daphnia magna	Crustacean
EC: 242-060-2	EC50	0.7 mg/L (72 h)	Pseudokirchneriella subcapitata	Algae
d-Limonene	LC50	0.1 - 1 mg/L (96 h)		Fish
CAS: 5989-27-5	EC50	0.1 - 1 mg/L (48 h)		Crustacean
EC: 227-813-5	EC50	0.1 - 1 mg/L		Algae
P-menth-1-en-8-ol	LC50	10 mg/L (96 h)	Salmo gairdneri	Fish
CAS: 98-55-5	EC50	n/a		
EC: 202-680-6	EC50	n/a		
(+)-pin-2(3)-ene	LC50	0.28 mg/L (96 h)	Pimephales promelas	Fish
CAS: 7785-70-8	EC50	1.4 mg/L (48 h)	Daphnia magna	Crustacean
EC: 232-087-8	EC50	n/a		
Inalyl acetate	LC50	11 mg/L (96 h)	Cyprinus carpio	Fish
CAS: 115-95-7	EC50	15 mg/L (48 h)	Daphnia magna	Crustacean
EC: 204-116-4	EC50	62 mg/L (72 h)	Desmodesmus subspicatus	Algae
Camphene	LC50	0.72 mg/L (96 h)	Brachydanio rerio	Fish
CAS: 79-92-5	EC50	46 mg/L (24 h)	Daphnia magna	Crustacean
EC: 201-234-8	EC50	n/a		
P-menta-1,4(8)-dieno	LC50	0.8 mg/L (96 h)	Danio rerio	Fish
CAS: 586-62-9	EC50	0.63 mg/L (48 h)	Daphnia magna	Crustacean
EC: 209-578-0	EC50	0.7 mg/L (72 h)	Pseudokirchneriella subcapitata	Algae

12.2 Persistence & degradability

Identification	Degradability		Biodegradability	
Linalool	BOD5	n/a	Concentration	100 mg/L
CAS: 78-70-6	COD	n/a	Period	28 days
EC: 201-134-4	BOD5/COD	0.55	% Biodegradable	90 %

(-)-pin-2(10)-ene	BOD5	n/a		Concentration	2 mg/L
CAS: 18172-67-3	COD	n/a		Period	28 days
EC: 242-060-2	BOD5/COD	n/a		% Biodegradable	76 %
d-Limonene	BOD5	n/a		Concentration	n/a
CAS: 5989-27-5	COD	n/a		Period	28 days
EC: 227-813-5	BOD5/COD		n/a	% Biodegradable	100 %
P-menth-1-en-8-ol	BOD5	n/a		Concentration	100 mg/L
CAS: 98-55-5	COD	n/a		Period	14 days
EC: 202-680-6	BOD5/COD	n/a		% Biodegradable	84.6 %
Inalyl acetate	BOD5	n/a		Concentration	81 mg/L
CAS: 115-95-7	COD	n/a		Period	28 days
204-116-4	BOD5/COD	n/a		% Biodegradable	80 %
Pin-2(3)-eno	BOD5	n/a		Concentration	100 mg/L
CAS: 80-56-8	COD	n/a		Period	28 days
EC: 201-291-9	BOD5/COD	n/a		% Biodegradable	95 %
7-methyl-3-methylene					
octa-1,6-diene	BOD5	n/a		Concentration	100 mg/L
CAS: 123-35-3	COD	n/a		Period	14 days
EC: 204-622-5	BOD5/COD	n/a		% Biodegradable	86 %
Camphene	BOD5	n/a		Concentration	100 mg/L
CAS: 79-92-5	COD	n/a		Period	28 days
EC: 201-234-8	BOD5/COD	n/a		% Biodegradable	4 %
P-menta-1,4(8)-dieno	BOD5	n/a		Concentration	2 mg/L
CAS: 586-62-9	COD	n/a		Period	28 days
EC: 209-578-0	BOD5/COD	n/a		% Biodegradable	81 %

12.3 Bioaccumulation Potential

Identification	**Bioaccumulation potential**	
Cineole	BCF	
CAS: 470-82-6	Pow Log	2.74
EC: 207-431-5	Potential	
Linalool	BCF	39
CAS: 78-70-6	Pow Log	2.97
EC: 201-134-4	Potential	Moderate
(-)-pin-2(10)-ene	BCF	1100
CAS: 18172-67-3	Pow Log	4.4
EC: 242-060-2	Potential	Very High
d-Limonene	BCF	660
CAS: 5989-27-5	Pow Log	4.83
EC: 227-813-5	Potential	High
P-menth-1-en-8-ol	BCF	110
CAS: 98-55-5	Pow Log	2.98

EC: 202-680-6	Potential	High
(+)-pin-2(3)-ene	BCF	1250
CAS: 7785-70-8	Pow Log	4.4
EC: 232-087-8	Potential	Very High
Inalyl acetate	BCF	174
CAS: 115-95-7	Pow Log	3.9
EC: 204-116-4	Potential	High
Pin-2(3)-eno	BCF	2800
CAS: 80-56-8	Pow Log	4.83
EC: 201-291-9	Potential	Very High
7-methyl-3-methyleneocta-1,6-diene	BCF	324
CAS: 123-35-3	Pow Log	5.29
EC: 204-622-5	Potential	High
Camphene	BCF	1290
CAS: 79-92-5	Pow Log	4.22
EC: 201-234-8	Potential	Very High
P-menta-1,4(8)-dieno	BCF	334
CAS: 586-62-9	Pow Log	4.29
EC: 209-578-0	Potential	High

12.4 Mobility in soil

Identification	Absorption/desorption		Volatility	
Cineole	Koc	n/a	Henry	n/a
CAS: 470-82-6	Conclusion	n/a	Dry soil	n/a
EC: 207-431-5	Surface tension	3.24E-2 N/m (25 ºC)	Moist soil	n/a
(-)-pin-2(10)-ene	Koc	2080	Henry	n/a
CAS: 18172-67-3	Conclusion	Low	Dry soil	n/a
EC: 242-060-2	Surface tension	2.685E-2 N/m (25 ºC)	Moist soil	n/a
d-Limonene	Koc	6324	Henry	n/a
CAS: 5989-27-5	Conclusion		Dry soil	n/a
EC: 227-813-5	Surface tension	2.675E-2 N/m (25 ºC)	Moist soil	n/a
(+)-pin-2(3)-ene	Koc	7400	Henry	n/a
CAS: 7785-70-8	Conclusion	Immobile	Dry soil	n/a
EC: 232-087-8	Surface tension	n/a	Moist soil	n/a
Inalyl acetate	Koc	518	Henry	1.77E+2 Pa·m³/mol
CAS: 115-95-7	Conclusion	Low	Dry soil	Yes
EC: 204-116-4	Surface tension	n/a	Moist soil	Yes
Pin-2(3)-eno	Koc	n/a	Henry	n/a
CAS: 80-56-8	Conclusion	n/a	Dry soil	n/a
EC: 201-291-9	Surface tension	2.587E-2 N/m (25 ºC)	Moist soil	n/a
7-methyl-3-methyleneocta-1,6-diene	Koc	1300	Henry	6.515E+3 Pa·m³/mol

CAS: 123-35-3	Conclusion	Low	Dry soil	n/a
EC: 204-622-5	Surface tension	n/a	Moist soil	Yes
Camphene	Koc	n/a	Henry	n/a
CAS: 79-92-5	Conclusion	n/a	Dry soil	n/a
EC: 201-234-8	Surface tension	1.098E-2 N/m (205.93°C)	Moist Soil	n/a
P-menta-1,4(8)-dieno	Koc	1120	Henry	n/a
CAS: 586-62-9	Conclusion	Low	Dry soil	n/a
EC: 209-578-0	Surface tension	2.865E-2 N/m (25 ºC)	Moist soil	n/a

12.5 Results of PBT and vPvB Assessment

PBT: Not applicable. vPvB: Not applicable.

12.6 Other adverse effects

Do not allow product to enter streams, sewers or other waterways.

13. DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Waste Treatment methods:
Code: 16 03 05*
Description: Organic wastes containing dangerous substances
Waste class: (Regulation (EU) No1357/2014) Dangerous.

Type of waste (Regulation (EU) No 1357/2014):
Consult the authorized waste service manager on the assessment and disposal operations in accordance with Annex 1 and Annex 2 (Directive 2008/98/EC). As under 15 01 (2014/955/EC) of the code and in case the container has been in direct contact with the product, it will be processed the same way as the actual product. Otherwise, it will be processed as non-dangerous residue. We do not recommended disposal down the drain. See paragraph 6.2.

Regulations related to waste management:
In accordance with Annex II of Regulation (EC) nº1907/2006 (REACH) the community or state provisions related to waste management are stated
Community legislation: Directive 2008/98/EC, 2014/955/EU, Regulation (EU) No 1357/2014.

14. TRANSPORT INFORMATION

14.1 UN number

UN No. Road	UN 1993
UN No. SEA	UN 1993
UN No. AIR	UN 1993

14.2 UN proper shipping name

FLAMMABLE LIQUID, N.O.S. (Cineole)

14.3 Transport hazard class(es)

ADR/RID/ADN Class: 3: Flammable Liquid
IMDG Class: 3
ICAO Class/Division: 3

Transport Labels

14.4 Packing group

ADR/RID/ADN Packing group	III
IMDG Packing group	III
ICAO Packing group	III

14.5 Environmental hazards

Environmentally Hazardous Substance/Marine Pollutant

14.6 Special precautions for user

ADR 2015 / RID 2015

Special regulations:	274, 601, 640E
Tunnel restriction code:	D/E
Physico-Chemical properties:	see section 9.
Limited quantities:	5 L

IMDG 37-14

Special regulations:	223, 274, 955
EmS Codes:	F-E, S-E
Physico-Chemical properties:	see section 9.
Limited quantities:	5 L

IATA/ICAO 2015

Physico-Chemical properties:	see section 9

14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC code

No additional data available.

15. REGULATORY INFORMATION

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

Statutory Instruments

The Chemicals (Hazard Information and Packaging for Supply) Regulations 2009 (S.I 2009 No. 716).

Guidance Notes

Workplace Exposure Limits EH40. CHIP for everyone HSG(108).

EU Legislation

Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), establishing a European Chemicals Agency, amending Directive 1999/45/EC and repealing Council Regulation (EEC) No 793/93 and Commission Regulation (EC) No 1488/94 as well as Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC, including amendments.

Limitations to commercialisation and the use of certain dangerous substances and mixtures (Annex XVII REACH, etc ….):

Shall not be used, as substance or as mixtures in aerosol dispensers where these aerosol dispensers are intended for supply to the general public for entertainment and decorative purposes such as the following:

— metallic glitter intended mainly for decoration,
— artificial snow and frost,
— “whoopee” cushions,
— silly string aerosols,
— imitation excrement,
— horns for parties,
— decorative flakes and foams,
— artificial cobwebs,
— stink bombs.

15.2 Chemical safety assessment

No additional information available.

16. OTHER INFORMATION

Hazard and/or Precautionary Statements in Full	H317: May cause an allergic skin reaction H315: Causes skin irritation H411: Toxic to aquatic life with long lasting effects H304: May be fatal if swallowed and enters airways H226: Flammable liquid and vapour H319: Causes serious eye irritation
Other Information	ADR: European agreement concerning the international carriage of dangerous goods by road IMDG: International maritime dangerous goods code IATA: International Air Transport Association ICAO: International Civil Aviation Organisation COD: Chemical Oxygen Demand BOD5: 5-day biochemical oxygen demand BCF: Bioconcentration factor LD50: Lethal Dose 50 CL50: Lethal Concentration 50 EC50: Effective concentration 50 Log-POW: Octanol–water partition coefficient Koc: Partition coefficient of organic carbon
Revision Date	June 26, 2016
Reason for revision	New SDS
Rev No/Repl, SDS Generated	01