EUGENOL BATCH: 4561701

**CERTIFICATE OF ANALYSIS** 

CAS#: 97-53-0

EUG0001

FEMA#: 2467

#### **PRODUCT IDENTIFICATION**

PRODUCT NAME	EUGENOL	
MOLECULAR FORM	C10 H12 O2	
MOLECULAR WT	164.20	
MELTING POINT (C)		
BOILING POINT (C)	256 deg C	
FLASH POINT (F) SHELF	213 deg F	
LIFE (DAYS)		
BEST BEFORE DATE	November 2027	

PHYSICAL SPECIFICATIONS	RANGE	RESULTS
APPEARANCE ODOR	COLORLESS TO PALE YELLOW LIQUID STRONG AROMATIC ODOR OF CLOVE, POWERFUL WARM-SPICY	CONFORMS CONFORMS
SPECIFIC GRAVITY (25C) REFRACTIVE INDEX (20C) SOLUBILITY	1.0640 to 1.0700 1.5400 to 1.5420 SLIGHTLY SOLUBLE IN WATER; MISCIBLE IN ALCOHOL, OILS; SOLUBLE IN PROPYLENE GLYCOL, 1 mL in 2 mL 70% ALCOHOL	1.0650 1.5410 CONFORMS
ANALYTICAL SPECIFICATIONS	RANGE	RESULTS
PURITY (BY GC)	99.0% MIN	99.99%
OTHER SPECIFICATIONS	RANGE	RESULTS
LIMIT OF PHENOL DIMERIC / OGLIOMERIC COMPOUNDS RELATED SUBSTANCES HYDROCARBONS SULFATED ASH	PASSES TEST ABSORBANCE AT 330 NM <0.25 PASSES TESTS PASSES TEST 0.1% MAXIMUM (DETERMINED ON 1G)	

STABLE UNDER NORMAL CONDITIONS

#### STORAGE

STORE IN COOL DRY PLACE AWAY FROM HEAT AND SUNLIGHT. SHELF LIFE CONSIDERATIONS APPLY ONLY FOR ORIGINAL UNOPENED CONTAINERS

#### COMMENTS

PRODUCT MEETS THE REQUIREMENTS SET FORTH BY USP38

19-20 Sandleheath Industrial Estate, Fordingbridge, Hampshire, SP6 1PA, UK Tel: 01425 655555 Email: technical@madarcorporation.co.uk

### **FRAGRANCE ALLERGENS**

Madar Corporation Limited hereby certifies that:

### EUGENOL

Contains the following fragrance substances and natural extracts (essential oils) which are 'established contact allergens in humans' according to the Scientific Committee on Consumer Safety.

	Allergen	CAS number	Content %
1	Acetyl cedrene	32388-55-9	-
2	Amyl cinnamal	122-40-7	-
3	Amylcinnamyl alcohol	101-85-9	-
4	Amyl salicylate	2050-08-0	-
5	trans-Anethole	4180-23-8	-
6	Anisyl alcohol	105-13-5	-
7	Benzaldehyde	100-52-7	-
8	Benzyl alcohol	100-51-6	-
9	Benzyl benzoate	120-51-4	-
10	Benzyl cinnamate	103-41-3	-
11	Benzyl salicylate	118-58-1	-
12	Butylphenyl methylpropional (Lilial)*	80-54-6	-
13	Camphor	76-22-2	-
		464-49-3	
14	beta-Caryophyllene	87-44-5	-
15	Carvone	99-49-0 / 6485-40-1 / 2244-	-
		16-8	
16	Cinnamal	104-55-2	-
17	Cinnamyl alcohol	104-54-1	-
18	Citral	5392-40-5	-
19	Citronellol	106-22-9 / 1117-61-9 /	-
		7540-51-4	
20	Coumarin	91-64-5	-
21	Damascenone (Rose ketone-4)	23696-85-7	-
22	alpha-Damascone	43052-87-5 / 23726-94-5	-
23	cis-beta-Damascone	23726-92-3	-
24	delta-Damascone	57378-68-4	-
25	Dimethyl benzyl carbinyl acetate	151-05-3	-

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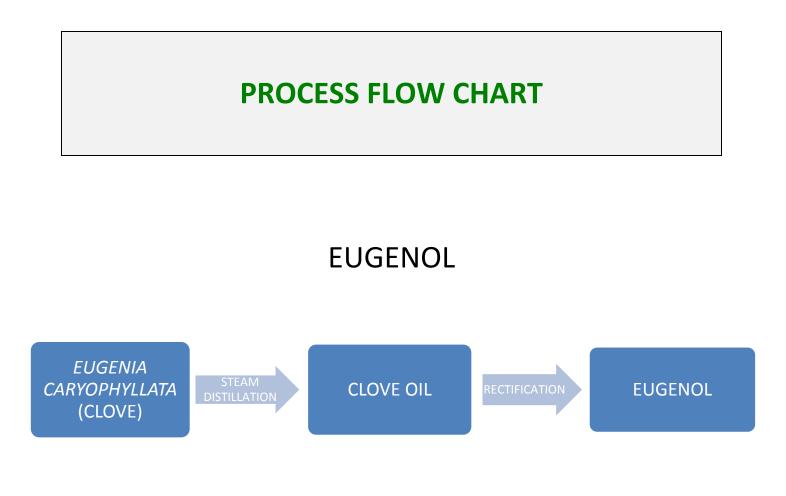
26	Eugenol	97-53-0	100%
27	Farnesol	4602-84-0	-
28	Geraniol	106-24-1	-
29	Hexadecanolactone	109-29-5	-
30	Hexamethylindanopyran (Galaxolide)	1222-05-5	_
31	Hexyl cinnamal	101-86-0	-
32	Hydroxyisohexyl 3-cyclohexene	31906-04-4 / 51414-25-6	
52	carboxaldehyde	51500 04 47 51414 25 0	
	(Lyral)*		
33	Hydroxycitronellal	107-75-5	_
34	Isoeugenol	97-54-1	0.02%
35	alpha -Isomethylionone	127-51-5	-
36	(DL)-Limonene	5989-27-5	_
37	Linalool	78-70-6	-
38	Linalyl acetate	115-95-7	-
39	Menthol	1490-04-6 / 89-78-1 / 2216-	-
55	mention	51-5	
40	6-Methyl coumarin	92-48-8	_
41	Methyl 2-octynoate	111-12-6	-
42	Methyl salicylate	119-36-8	-
43	3-Methyl-5-(2,2,3-trimethyl-3-cyclopentyl)	67801-20-1	
43	pent-4-en-2-ol	0,001 20 1	
44	alpha-Pinene	80-56-8	_
44	beta-Pinene	127-91-3	_
45	Propylidene phtalide	17369-59-4	_
46	Salicylaldehyde	90-02-8	-
47	alpha-Santanol	115-71-9	-
47	beta-Santanol	77-42-9	_
48	Sclareol	515-03-7	_
49	Terpineol (Mixture of isomers)	8000-41-7	_
50	alpha-Terpineol	10482-56-1 / 98-55-5	-
51	Terpinolene	586-62-9	-
52	Tetramethyl acetylooctahydronaphthalenes	54464-57-2 / 54464-59-4 /	-
		68155-66-8 / 68155-67-9	
53	Trimethyl-benzenepropanol (Majantol)	103694-68-4	-
54	Vanillin	121-33-5	-
55	Cananga odorata (Ylang-ylang oil)	83863-30-3 / 8006-81-3	-
56	Cedrus atlantica bark oil	92201-55-3 / 8000-27-9	-
57	Cinnamomum cassia leaf oil	8007-80-5	-
	Cinnamomum zeylanicum bark oil	84649-98-9	
58	Citrus autantium amara flower / peel oil	8016-38-4 / 72968-50-4	-
59	Citrus bergamia peel oil expressed	89957-91-5	-
60	Citrus limonum peel oil expressed	84929-31-7	-
61	Citrus sinensis peel oil expressed	97766-30-8 / 8028-48-6	-
62	Cymbopogon citratus, schoenanthus oils	89998-14-1 / 8007-02-1 /	-
		89998-16-3	
63	Eucalyptus spp. Leaf oil	92502-70-0 / 8000-48-4	-
64	Eugenia caryophyllus leaf / flower oil	8000-34-8	-

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			1
65	Evernia furduracea (Treemoss) extract	90028-67-4	-
66	Evernia prunastri (Oakmoss) extract	90028-68-5	-
67	Jasminum grandiflorum / officinale	84776-64-7 / 90045-94-6 /	-
		8022-96-6	
68	Juniperus virginiana	8000-27-9 / 85085-41-2	-
69	Laurus nobilis	8002-41-3 / 8007-48-5 /	-
		84603-73-6	
70	Lavandula hybrida	91722-69-9	-
71	Lavandula officinalis	84776-65-8	-
72	Mentha piperita	8006-90-4 / 84082-70-2	-
73	Mentha spicata	84696-51-5	-
74	Myroxylon pereirae	8007-00-9	-
75	Narcissu spp.	Diverse	
76	Pelargonium graveolens	90082-51-2 / 8000-46-2	-
77	Pinus mugo / pumila	90082-72-7 / 97676-05-6	-
78	Pogostemon cablin	8014-09-3 / 84238-39-1	-
79	Rosa spp. (Rose)	Diverse	-
80	Santalum album	84787-70-2 / 8006-87-9	-
81	Turpentine oil	8006-64-2 / 9005-90-7 /	-
		8052-14-0	
82	Verbena absolute	8024-12-2	-

The information contained in this document is accurate to the best of our knowledge at the time given. This document is provided for internal use only. Tilley Distribution UK is not liable for any damages that may result from the misuse of data. Content values are given as an average of recently delivered batches. Absent means <1ppm or not detectable. \*No longer permitted in cosmetics in the European Union and has been delisted from Annex III.

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Madar Corporation Limited hereby certifies that the products has no added antioxidants, diluents, colorants or preservatives, nor are any solvents used in the extraction process.

### **IFRA CERTIFICATE**

### EUGENOL

Madar Corporation Limited hereby certifies that the above material complies with the requirements of the INTERNATIONAL FRAGRANCE ASSOCIATION - IFRA-51st Amendment / published June 30th 2023 provided it is used in following applications (class) at a maximum concentration level of:

IFRA category	Maximum level of use (%)
Class 1	0.45%
Class 2	0.14%
Class 3	1.00%
Class 4	2.50%
Class 5A	0.64%
Class 5B	0.64%
Class 5C	0.64%
Class 5D	0.21%
Class 6	1.50%
Class 7A	2.00%
Class 7B	2.00%
Class 8	0.21%
Class 9	4.90%
Class 10A	4.00%
Class 10B	18.00%
Class 11A	0.21%
Class 11B	0.21%
Class 12	Not restricted

The above values were calculated based on the following IFRA restricted materials:

<eugenol – 100%, methyl eugenol - <0.01%>

Date of issue: 18/08/2023

The IFRA Standards regarding use restrictions are based on safety assessments by the Panel of Experts of the RESEARCH INSTITUTE FOR FRAGRANCE MATERIALS (RIFM) and are enforced by the IFRA Scientific Committee. It is the ultimate responsibility of our customer to ensure the safety of the final product by further testing if need be. Evaluation of the Fragrance ingredient was made according to the safety requirements contained in the relevant section of the IFRA Code of Practice.

IFRA category includes	IFRA category
Children's toys, Lip Products of all types (solid and liquid lipsticks, balms, clear or coloured etc) (****)	Class 1
Deodorant and Antiperspirant products of all types (spray, stick, roll-on, under-arm and body etc), Body sprays (including body mist)	Class 2
Eye products of all types (eye shadow, mascara, eyeliner, eye make-up, eye masks, eye pillows, etc.) including eye care and moisturizer; Facial make up and foundation; Make-up remover for face and eyes; Nose pore strips; Wipes or refreshing tissues for face, neck, hands, body; Body and face paint (for children and adults); Facial masks for face and around the eyes	Class 3
Hydroalcoholic and non-hydroalcoholic fine fragrance of all types (Eau de Toilette, Parfum, Cologne, solid perfume, fragrancing cream, aftershaves of all types, etc.); Fragranced bracelets; Ingredients of perfume kits and fragrance mixtures for cosmetic kits; Scent pads, foil packs; Scent strips for hydroalcoholic products	Class 4
Body creams, oils, lotions of all types; Foot care products (creams and powders); Insect repellent (intended to be applied to the skin); All powders and talc (excluding baby powders and talc)	Class 5A
Facial toner; Facial moisturizers and creams	Class 5B
Hand cream; Nail care products including cuticle creams, etc.	Class 5C
Baby cream/lotion, baby oil, baby powders and talc	Class 5D
Mouthwash, including breath sprays; Toothpaste; Toothpowder, strips, mouthwash tablets (****)	Class 6
Hair permanent or other hair chemical treatments (rinse-off) (e.g. relaxers), including rinse-off hair dyes	Class 7A
Hair sprays of all types (pumps, aerosol sprays, etc.); Hair styling aids non sprays (mousse, gels, leave- on conditioners); Hair permanent or other hair chemical treatments (leave-on) (e.g. relaxers), including leave-on hair dyes; Shampoo - Dry (waterless shampoo); Hair deodorizer	Class 7B
Intimate wipes; Tampons; Baby wipes; Toilet paper (wet)	Class 8
Bar Soap; Shampoo off all type; Cleanser for face (rinse off); Conditioner (rinse off); Liquid Soap; Body washes and shower gels of all types; Baby wash, bath, shampoo; Bath gels, foams, mousses, salts, oils and other products added to bathwater; Foot care products (feet are placed in a bath for soaking); Shaving creams of all types (stick, gels, foams, etc.); All depilatories (including facial) and waxes for mechanical hair removal; Shampoos for pets	Class 9
Hand wash laundry detergent (including concentrates); Laundry pre-treatment of all types (e.g. paste, sprays, sticks); Hand dishwashing detergent (including concentrates); Hard surface cleaners of all types (bathroom and kitchen cleansers, furniture polish, etc.); Machine laundry detergents with skin contact (e.g. liquids, powders) including concentrates; Dry cleaning kits; Toilet seat wipes; Fabric softeners of all types including fabric softener sheets; Household cleaning products, other types including fabric cleaners, soft surface cleaners, carpet cleaners, furniture polishes sprays and wipes, leather cleaning wipes, stain removers, fabric enhancing sprays, treatment products for textiles (e.g. starch sprays, fabric treated with fragrances after wash, deodorizers for textiles or fabrics); Floor wax; Fragranced oil for lamp ring, reed diffusers, pot-pourri, liquid refills for air fresheners (non-cartridge systems), etc; Ironing water (Odorized distilled water)	Class 10A
Animal sprays – sprays applied to animals of all types; Air freshener sprays, manual, including aerosol and pump; Aerosol/spray insecticides	Class 10B
Feminine hygiene conventional pads, liners, interlabial pads; Diapers (baby and adult); Adult incontinence pant, pad; Toilet paper (dry);	Class 11A
Tights with moisturizers; Scented socks, gloves; Facial tissues (dry tissues); Napkins; Paper towels; Wheat bags; Facial masks (paper/protective) e.g. surgical masks not used as medical device; Fertilizers, solid (pellet or powder)	Class 11B
Candles of all types (including encased); Laundry detergents for machine wash with minimal skin contact (e.g. Liquid tabs, pods); Automated air fresheners and fragrancing of all types (concentrated aerosol with metered doses (range 0.05-0.5mL/spray), plug-ins, closed systems, solid substrate, membrane delivery, electrical, powders, fragrancing sachets, incense, liquid refills (cartridge), air freshening crystals); Air delivery systems; Cat Litter; Cell phone cases; Deodorizers/maskers not intended for skin contact (e.g. fabric drying machine deodorizers, carpet powders); Fuels; Insecticides (e.g. mosquito coil, paper, electrical, for clothing) excluding aerosols/sprays; Joss sticks or incense sticks; Dishwash detergent and deodorizers – for machine wash; Olfactive board games; Paints; Plastic articles (excluding toys); Scratch and sniff; Scent pack; Scent delivery system (using dry air technology); Shoe polishes; Rim blocks (Toilet)	Class 12

(\*\*\*\*) Fragrance materials for use in these applications need also FEMA-GRAS conformity.

Date of issue: 18/08/2023

### Safety Data Sheet

This safety data sheet was created pursuant to the requirements of: Regulation (EC) No. 1907/2006 and Regulation (EC) No. 1272/2008

Product name EUGENOL

Issuing Date 06-Jan-2023

Revision date 06-Jan-2023

Version 7

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

#### 1.1. Product identifier

Product name	EUGENOL
REACH registration number EC No (EU Index No)	01-2119971802-33-0000 202-589-1
CAS No	97-53-0
Chemical Name	1-Hydroxy-2-Methoxy-4-Propenylbenzene
Pure substance/mixture	Substance
Contains Eugenol	
Formula	C10H12O2
Molecular weight	164.20
1.2. Relevant identified uses of the	substance or mixture and uses advised against
Recommended Use	Industry Use
Uses advised against	No information available
1.3. Details of the supplier of the sa	fety data sheet
Supplier Madar Corporation Limited 19 - 20 Sandleheath Industrial Estate Fordingbridge SP6 1PA	

Tel: (+44) 1425 655 555

For further information, please contact

E-mail address

technical@madarcorporation.co.uk

Non-Emergency Telephone Number +44 (0)1425 655 555

#### 1.4. Emergency telephone number

Emergency telephone CHEMTREC

Emergency telephone - +1-703-741-5970 Europe CCN# 17256

#### SECTION 2: Hazards identification

#### 2.1. Classification of the substance or mixture Regulation (EC) No 1272/2008

Regulation (EC) NO 1272/2008	
Serious eye damage/eye irritation	Category 2 - (H319)
Skin sensitization	Category 1B - (H317)

#### 2.2. Label elements

Contains Eugenol



Signal word Warning

#### **Hazard statements**

H317 - May cause an allergic skin reaction H319 - Causes serious eye irritation

#### Precautionary Statements - EU (§28, 1272/2008)

P280 - Wear protective gloves/protective clothing/eye protection/face protection

P302 + P352 - IF ON SKIN: Wash with plenty of soap and water

P333 + P313 - If skin irritation or rash occurs: Get medical advice/attention

P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing

P337 + P313 - If eye irritation persists: Get medical advice/attention

P501 - Dispose of contents/container in accordance with local, regional, national, and international regulations as applicable

#### 2.3. Other hazards

Causes mild skin irritation. Toxic to aquatic life. May be harmful if swallowed.

#### SECTION 3: Composition/information on ingredients

#### 3.1 Substances

#### **Chemical nature**

Phenols.

Chemical name	Weight-%	REACH registration number	EC No (EU Index No)	Classification according to Regulation (EC) No. 1272/2008 [CLP]	Specific concentration limit (SCL)	M-Factor	M-Factor (long-term)
Eugenol 97-53-0	NF	No data available	-	Acute Tox. 5 (H303) Skin Irrit. 3 (H316) Eye Irrit. 2A (H319)	-	-	-

Skin Sens. 1B (H317)		
Aquatic Acute 2		
(H401)		

#### Full text of H- and EUH-phrases: see section 16

Acute Toxicity Estimate No information available

This product does not contain candidate substances of very high concern at a concentration >=0.1% (Regulation (EC) No. 1907/2006 (REACH), Article 59)

#### SECTION 4: First aid measures

#### 4.1. Description of first aid measures

General advice	Show this safety data sheet to the doctor in attendance.	
Inhalation	Remove to fresh air.	
Eye contact	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Keep eye wide open while rinsing. Do not rub affected area. Get medical attention if irritation develops and persists.	
Skin contact	Wash with soap and water. May cause an allergic skin reaction. In the case of skin irritation or allergic reactions see a physician.	
Ingestion	Rinse mouth. Never give anything by mouth to an unconscious person. Do NOT induce vomiting. Call a physician.	
Self-protection of the first aider	Avoid contact with skin, eyes or clothing. Wear personal protective clothing (see section 8).	
4.2. Most important symptoms and	effects, both acute and delayed	
Symptoms	Itching. Rashes. Hives. May cause redness and tearing of the eyes. Burning sensation. Prolonged contact may cause redness and irritation.	
4.3. Indication of any immediate medical attention and special treatment needed		
Note to physicians	May cause sensitization in susceptible persons. Treat symptomatically.	

#### SECTION 5: Firefighting measures

#### 5.1. Extinguishing media

Suitable Extinguishing Media	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.	
Large Fire	CAUTION: Use of water spray when fighting fire may be inefficient.	
Unsuitable extinguishing media	Do not scatter spilled material with high pressure water streams.	
5.2. Special hazards arising from the substance or mixture		
Specific hazards arising from the chemical	Product is or contains a sensitizer. May cause sensitization by skin contact.	
Hazardous combustion products	Irritating or toxic substances may be emitted upon burning, combustion, or decomposition.	

#### 5.3. Advice for firefighters

Special protective equipment and<br/>precautions for fire-fightersFirefighters should wear self-contained breathing apparatus and full firefighting turnout<br/>gear. Use personal protection equipment.

#### **SECTION 6: Accidental release measures**

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

Personal precautions	Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Use personal protective equipment as required. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.	
Other information	Refer to protective measures listed in Sections 7 and 8.	
For emergency responders	Use personal protection recommended in Section 8.	
6.2. Environmental precautions		
Environmental precautions	See Section 12 for additional Ecological Information.	
6.3. Methods and material for containment and cleaning up		
Methods for containment	Prevent further leakage or spillage if safe to do so.	
Methods for cleaning up	Take up mechanically, placing in appropriate containers for disposal.	
Prevention of secondary hazards	Clean contaminated objects and areas thoroughly observing environmental regulations.	
6.4. Reference to other sections		
Reference to other sections	See section 8 for more information. See section 13 for more information.	

### **SECTION 7: Handling and storage**

7.1.	Precautions	for safe	handling

Advice on safe handling	Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. In case of insufficient ventilation, wear suitable respiratory equipment. Do not eat, drink or smoke when using this product. Take off contaminated clothing and wash before reuse.	
General hygiene considerations	Avoid contact with skin, eyes or clothing. Wear suitable gloves and eye/face protection. Do not eat, drink or smoke when using this product.	
7.2. Conditions for safe storage, including any incompatibilities		
Storage Conditions	Keep containers tightly closed in a dry, cool and well-ventilated place.	
7.3. Specific end use(s)		
Risk Management Methods (RMM)	The information required is contained in this Safety Data Sheet.	

#### SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Exposure Limits	This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.
Biological occupational exposure limits	This product, as supplied, does not contain any hazardous materials with biological limits established by the region specific regulatory bodies.
Derived No Effect Level (DNEL) dermal Inhalation Predicted No Effect Concentration (PNEC) Fresh Water Sea Water Sea sediment Soil	Workers. 6 mg/kg bw/day 21.2 mg/m <sup>3</sup> 1.13 μg/L 0.113 μg/L 0.0081 mg/kg sediment d.w. 0.0155 mg/kg soil d.w.
8.2. Exposure controls_	
Engineering controls	No information available.
Personal Protective Equipment	
Eye/face protection	Wear safety glasses with side shields (or goggles).
Hand protection	Wear suitable gloves.
Skin and body protection	Wear suitable protective clothing.
Respiratory protection	No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.
General hygiene considerations	Avoid contact with skin, eyes or clothing. Wear suitable gloves and eye/face protection. Do not eat, drink or smoke when using this product.
Environmental exposure controls	No information available.

#### **SECTION 9: Physical and chemical properties**

9.1. Information on basic physical and chemical properties			
Physical state	Liquid		
Appearance	Clear		
Color	Colorless to Pale Yellow		
Odor	Characteristic odor.		
Odor threshold	No information available		
<b>D</b>		Build Made	
Property	<u>Values</u>	<u>Remarks • Method</u>	
Melting point / freezing point	-8 °C		
Boiling point / boiling range	248 °C		
Flammability (solid, gas)	No data available	None known	
Flammability Limit in Air		None known	
Upper flammability limit:	No data available		
Lower flammability limit:	No data available		
Flash Point	100 °C	CC (closed cup)	
Autoignition Temperature	No data available	None known	
Decomposition temperature		None known	
pH	No data available	None known	
pH (as aqueous solution)	No data available	None known	

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Kinematic viscosity	8.39 mPa s	(25°C)
Dynamic viscosity	No data available	None known
Water solubility	No data available	(20°C)
solubility(ies)	No data available	None known
Partition coefficient	Log Kow=1.83	(30°C)
Vapor pressure	0.004kPa	(25°C)
Relative density	1.0640 - 1.0700	(25°C)
Bulk Density	No data available	. ,
Density	No data available	
Vapor Density	No data available	None known
Particle characteristics		
Particle Size	No information available	
Particle Size Distribution	No information available	
9.2. Other information		
Molecular weight	164.20	
Refractive Index	1.5400 - 1.5420	

9.2.1. Information with regard to physical hazard classes Not applicable

9.2.2. Other safety characteristics No information available

#### SECTION 10: Stability and reactivity

#### 10.1. Reactivity

 Reactivity
 No information available.

 10.2. Chemical stability
 Stability

 Stability
 Stable under normal conditions.

 Explosion data
 Sensitivity to mechanical impact None.

 Sensitivity to static discharge
 None.

 10.3. Possibility of hazardous reactions

Possibility of hazardous reactions None under normal processing.

10.4. Conditions to avoid

Conditions to avoid None known based on information supplied.

10.5. Incompatible materials

Incompatible materials None known based on information supplied.

10.6. Hazardous decomposition products

Hazardous Decomposition Products None known based on information supplied.

#### **SECTION 11: Toxicological information**

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

Information on likely routes of exposure

**Product Information** 

Inhalation	Specific test data for the substance or mixture is not available. May cause irritation of respiratory tract.	
Eye contact	Avoid contact with eyes. Specific test data for the substance or mixture is not available. Causes serious eye irritation. (based on components). May cause redness, itching, and pain.	
Skin contact	May cause sensitization by skin contact. Specific test data for the substance or mixture is not available. Repeated or prolonged skin contact may cause allergic reactions with susceptible persons. (based on components). May cause irritation. Prolonged contact may cause redness and irritation. Causes mild skin irritation.	
Ingestion	Specific test data for the substance or mixture is not available. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.	
Symptoms related to the physical, chemical and toxicological characteristics		
Symptoms	Itching. Rashes. Hives. May cause redness and tearing of the eyes. Prolonged contact may cause redness and irritation.	
Acute toxicity		

Numerical measures of toxicity No information available

Delayed and immediate effects as well as chronic effects from short and long-term exposure		
Skin corrosion/irritation	Classification based on data available for ingredients. Causes mild skin irritation.	
Serious eye damage/eye irritation	Classification based on data available for ingredients. Causes serious eye irritation.	
Respiratory or skin sensitization	May cause an allergic skin reaction.	
Germ cell mutagenicity	No information available.	
Carcinogenicity	No information available.	
Reproductive toxicity	No information available.	
STOT - single exposure	No information available.	
STOT - repeated exposure	No information available.	
Aspiration hazard	Not classified.	
11.2. Information on other hazards	_	

SECTION 14: Transport in		
Contaminated packaging	Do not reuse empty contai	ners.
Waste from residues/unused products	Dispose of in accordance environmental legislation.	with local regulations. Dispose of waste in accordance with
13.1. Waste treatment methods		
SECTION 13: Disposal co	nsiderations	
<b>12.7. Other adverse effects</b> No information available.		
12.6. Other adverse effects Endocrine disrupting properties	No information available.	
12.6 Other advarge offects	substance is not considere	d to be very persistent nor very bioaccumulating (vPvB).
PBT and vPvB assessment		idered to be persistent, bioaccumulating nor toxic (PBT). This
12.5. Results of PBT and vPvB ass	essment	
Mobility in soil	No information available.	
12.4. Mobility in soil		
Chemical na Eugeno		Partition coefficient 2.49
Component Information		
Bioaccumulation		
12.3. Bioaccumulative potential		
Persistence and degradability	Readily biodegradable.	
12.2. Persistence and degradabilit	<u>y</u>	
Ecotoxicity	Toxic to aquatic life.	
<u>12.1. Toxicity</u>		
SECTION 12: Ecological i	nformation	
Other adverse effects	No information available.	
11.2.2. Other information		
Endocrine disrupting properties		
11.2.1. Endocrine disrupting prop		

- IATA
- **14.1 UN number or ID number** Not regulated

#### EUGENOL

<ul> <li>14.2 UN proper shipping name</li> <li>14.3 Transport hazard class(es)</li> <li>14.4 Packing group</li> <li>14.5 Environmental hazard</li> <li>14.6 Special precautions for user Special Provisions</li> </ul>	Not regulated Not regulated Not regulated Not applicable None
IMDG 14.1 UN number or ID number 14.2 UN proper shipping name 14.3 Transport hazard class(es) 14.4 Packing group 14.5 Environmental hazard 14.6 Special precautions for user Special Provisions 14.7 Maritime transport in bulk according to IMO instruments	Not regulated Not regulated Not regulated Not regulated Not applicable None No information available
<u>RID</u> 14.1 UN/ID no 14.2 UN proper shipping name 14.3 Transport hazard class(es) 14.4 Packing group 14.5 Environmental hazard 14.6 Special precautions for user Special Provisions	Not regulated Not regulated Not regulated Not regulated Not applicable None
ADR 14.1 UN number or ID number 14.2 UN proper shipping name 14.3 Transport hazard class(es) 14.4 Packing group 14.5 Environmental hazard 14.6 Special precautions for user Special Provisions	Not regulated Not regulated Not regulated Not regulated Not applicable

#### SECTION 15: Regulatory information

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

National regulations

Germany

Water hazard class (WGK)

slightly hazardous to water (WGK 1)

#### **European Union**

Take note of Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work.

#### Authorizations and/or restrictions on use:

This product does not contain substances subject to authorization (Regulation (EC) No. 1907/2006 (REACH), Annex XIV) This product does not contain substances subject to restriction (Regulation (EC) No. 1907/2006 (REACH), Annex XVII)

#### **Persistent Organic Pollutants**

Not applicabl

Ozone-depleting substances (ODS) regulation (EC) 1005/2009 Not applicable

International Inventories	
TSCA	Contact supplier for inventory compliance status
DSL/NDSL	Contact supplier for inventory compliance status
EINECS/ELINCS	Contact supplier for inventory compliance status
ENCS	Contact supplier for inventory compliance status
IECSC	Contact supplier for inventory compliance status
KECL	Contact supplier for inventory compliance status
PICCS	Contact supplier for inventory compliance status
AICS	Contact supplier for inventory compliance status
NZIOC	Contact supplier for inventory compliance status

Legend:

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
 DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List
 EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances
 ENCS - Japan Existing and New Chemical Substances
 IECSC - China Inventory of Existing Chemical Substances
 KECL - Korean Existing and Evaluated Chemical Substances
 PICCS - Philippines Inventory of Chemicals and Chemical Substances
 AICS - Australian Inventory of Chemical Substances
 NZIOC - New Zealand Inventory of Chemicals

15.2. Chemical safety assessment

Chemical Safety Report

No information available

#### **SECTION 16: Other information**

Key or legend to abbreviations and acronyms used in the safety data sheet

#### Full text of H-Statements referred to under section 3

H303 - May be harmful if swallowed

H316 - Causes mild skin irritation

- H317 May cause an allergic skin reaction
- H319 Causes serious eye irritation
- H401 Toxic to aquatic life

#### Legend

SVHCL

#### LEG8 SECTION 8: Exposure controls/personal protection

TWA	TWA (time-weighted average)	STEL
Ceiling	Maximum limit value	*
+	Sensitizers	

STEL (Short Term Exposure Limit) Skin designation

Classification procedure	
Classification according to Regulation (EC) No. 1272/2008 [CLP]	Method Used
Acute oral toxicity	Calculation method
Acute dermal toxicity	Calculation method
Acute inhalation toxicity - gas	Calculation method
Acute inhalation toxicity - vapor	Calculation method
Acute inhalation toxicity - dust/mist	Calculation method

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Skin corrosion/irritation	Calculation method
Serious eye damage/eye irritation	Calculation method
Respiratory sensitization	Calculation method
Mutagenicity	Calculation method
Carcinogenicity	Calculation method
Reproductive toxicity	Calculation method
STOT - single exposure	Calculation method
STOT - repeated exposure	Calculation method
Acute aquatic toxicity	Calculation method
Chronic aquatic toxicity	Calculation method
Aspiration hazard	Calculation method
Ozone	Calculation method

#### Key literature references and sources for data used to compile the SDS

Agency for Toxic Substances and Disease Registry (ATSDR) U.S. Environmental Protection Agency ChemView Database European Food Safety Authority (EFSA) European Chemicals Agency (ECHA) Committee for Risk Assessment (ECHA\_RAC) European Chemicals Agency (ECHA) (ECHA API) EPA (Environmental Protection Agency) Acute Exposure Guideline Level(s) (AEGL(s)) U.S. Environmental Protection Agency Federal Insecticide, Fungicide, and Rodenticide Act U.S. Environmental Protection Agency High Production Volume Chemicals Food Research Journal Hazardous Substance Database International Uniform Chemical Information Database (IUCLID) National Institute of Technology and Evaluation (NITE) Australia National Industrial Chemicals Notification and Assessment Scheme (NICNAS) NIOSH (National Institute for Occupational Safety and Health) National Library of Medicine's ChemID Plus (NLM CIP) National Library of Medicine's PubMed database (NLM PUBMED) National Toxicology Program (NTP) New Zealand's Chemical Classification and Information Database (CCID) Organization for Economic Co-operation and Development Environment, Health, and Safety Publications Organization for Economic Co-operation and Development High Production Volume Chemicals Program Organization for Economic Co-operation and Development Screening Information Data Set World Health Organization

Revision date 06-Jan-2023

This material safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006 Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text

Classification and labeling according to the IFRA/IOFI Labeling Manual 2022. End of Safety Data Sheet

#### EUGENOL



CAS#: 97-53-0

FEMA#: 2467

#### **PRODUCT SPECIFICATION**

PRODUCT IDENTIFICATION		
PRODUCT NAME	EUGENOL	
MOLECULAR FORM	C10 H12 O2	
MOLECULAR WT	164.20	
MELTING POINT (C)		
BOILING POINT (C)	256 deg C	
FLASH POINT (F)	213 deg F	
SHELF LIFE (DAYS)	730	
PHYSICAL SPECIFICATIONS	RANGE	METHOD
APPEARANCE	COLORLESS TO YELLOW LIQUID	VISUAL
ODOR	STRONG AROMATIC ODOR OF CLOVE, POWERFUL WARM-SPICY	ORGANOLEPTIC
SPECIFIC GRAVITY (25C)	1.0640 to 1.0700	FCC METHOD
REFRACTIVE INDEX (20C) SOLUBILITY	1.5400 to 1.5420 SLIGHTLY SOLUBLE IN WATER; MISCIBLE IN	FCC METHOD FCC METHOD
SOLUBILITY	ALCOHOL, OILS; SOLUBLE IN WATER, MISCIBLE IN GLYCOL, 1 mL in 2 mL 70% ALCOHOL	FGG METHOD
ANALYTICAL SPECIFICATIONS	RANGE	METHOD
PURITY (BY GC)	99.0% MIN	QC_30.M
OTHER SPECIFICATIONS	RANGE	METHOD
LIMIT OF PHENOL	PASSES TEST	USP METHOD
DIMERIC / OGLIOMERIC COMPOUNDS	ABSORBANCE AT 330 NM <0.25	BP/EP METHOD
RELATED SUBSTANCES	PASSES TESTS	<b>BP/EP METHOD</b>
HYDROCARBONS SULFATED ASH		BP/EP METHOD BP/EP METHOD
	0.1% MAXIMUM (DETERMINED ON 1G)	

#### STABILITY

STABLE UNDER NORMAL CONDITIONS

#### STORAGE

STORE IN COOL DRY PLACE AWAY FROM HEAT AND SUNLIGHT. SHELF LIFE CONSIDERATIONS APPLY ONLY FOR ORIGINAL UNOPENED CONTAINERS

#### COMMENTS

PRODUCT MEETS THE REQUIREMENTS SET FORTH BY USP38

### **VEGAN / VEGETARIAN DECLARATION**

### EUGENOL

to the best of our knowledge is suitable for both vegan and vegetarian lifestyles.

Date of issue: 06/08/2021