

Material Safety Data Sheet

EU Regulation: 2020/878

SECTION 1: IDENTIFICATION OF	THE SUBSTANC	E/MIXTURE A	ND OF THE COMPAN	NY/UNDERTAKING	
1.1 PRODUCT IDENTIFICATION					
PRODUCT NAME	Clove Bud, Essential Oil				
BIOLOGICAL DEFINITION	EUGENIA CARYOPHYLLUS BUD OIL IS AN ESSENTIAL OIL STEAM-DISTILLED FROM THE DRIED FLOWER BUDS OF THE CLOVE, SYZYGIUM AROMATICUM, SYN. EUGENIA CARYOPHYLLUS, MYRTACEAE. IT CONTAINS EUGENOL (82-87% INCLUDING ABOUT 10% ACETYLEUGENOL), CARYOPHYLLENE				
INCI NAME	Eugenia Caryophyllus Bud Oil				
SYNONYMS & TRADE NAMES	-				
INTERNAL PRODUCT CODE	к0139				
CAS-No	84961-50-2	EC No.	284-638-7	EINECS No.	284-638-7
1.2 DETAILS OF THE SUPPLIER OF THE SAFETY DATA SHEET					
COMPANY ADDRESS	O&3 Unit 2, Athelstan Business Park, Hanwell Lane, Hutton Conyers, Ripon, HG4 5BF, England.				
EMAIL	TECHNICALCREW@OAND3.COM				
1.3 DETAILS OF THE SUPPLIER OF THE SAFETY DAT	A SHEET				
EMERGENCY CONTACTS	(07968 200167)				



SECTION 2: HAZARDS IDENTIFICATION		
2.1	THE FIRM TEXT FOR ALL HAZARD STATEMENTS IS DISPLAYED IN SECTION 1.4	
CLASSIFICATION OF THE SUBSTANCE OR MIXTURE CLASSIFICATION (67/548/EEC)	THE FULL TEXT FOR ALL HAZARD STATEMENTS IS DISPLAYED IN SECTION 16. NO ADDITIONAL DATA AVAILABLE.	
	SERIOUS EYE DAMAGE/EYE IRRITATION CATEGORY 2 - (H319)	
CLASSIFICATION (EU1272/2008)	SKIN SENSITIZATION CATEGORY 1B - (H317)	
2.2 LABEL ELEMENTS	Label in accordance with Regulation (EC) No 1272/2008.	
GHS LABEL	GHS07	
Signal Word	WARNING	
Contains	Eugenol, Beta Caryophyllene.	
HAZARDS STATEMENT	H317 - May cause an allergic skin reaction H319 - Causes serious eye irritation	
Precautionary Statements	P261 - Avoid breathing dust/fume/gas/mist/vapors/spray P280 - Wear protective gloves and eye/face protection P321 - Specific treatment (see .? on this label) 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 P362 + P364 - Take off contaminated clothing and wash it before reuse P102 - Keep out of reach of children P501 - Dispose of contents/containers in accordance with local regulations	
SUPPLEMENTARY PRECAUTIONARY STATEMENTS	None.	
	 Section 16 (Other Information): Risk & Safety phrases in full.	
2.3 OTHER HAZARDS		
ADVERSE PHYSIO-CHEMICAL PROPERTIES NO DATA.		
Adverse effects on human health	MAY BE HARMFUL IF SWALLOWED. MAY BE HARMFUL IN CONTACT WITH SKIN, CAUSES MILD SKIN IRRITATION, TOXIC TO AQUATILIFE.	
PBT or vPvB according to Annex XIII NO DATA		
SECTION 3: COMPOSITION OF INGREDIEN	its	
3.2		
MIXTURES	80 - <90% EUGENOL CAS-No: 97-53-0 EC No: 202-589-1	



CLASSIFICATION (EC 1272/2008) (H317) AQUATIC ACUTE 2 (H401)	ACUTE TOX. 5 (H303) SKIN IRRIT. 3 (H316) EYE IRRIT. 2A (H319) SKIN SENS. 1B
1 - <10% BETA CARYOPHYLLENE CLASSIFICATION (EC 1272/2008)	CAS-No: 87-44-5 EC No: 201-746-1 ASP. TOX. 1 (H304) SKIN SENS. 1B (H317) AQUATIC CHRONIC 4 (H413)
1 - <10% EUGENYL ACETATE CLASSIFICATION (EC 1272/2008)	CAS-No: 93-28-7 EC No: 202-235-6 ACUTE TOX. 4 (H302) AQUATIC ACUTE 2 (H401)

SECTION 4: FIRST AID MEASURES		
4.1 DESCRIPTION OF FIRST AID MEASURES		
GENERAL INFORMATION	ALWAYS REMOVE CONTAMINATED CLOTHING IMMEDIATELY.	
Inhalation	GET MEDICAL ATTENTION IMMEDIATELY. REMOVE FROM EXPOSURE SITE TO FRESH AIR, KEEP AT REST, AND OBTAIN MEDICAL ATTENTION.	
Ingestion	GET MEDICAL ATTENTION IMMEDIATELY. IMMEDIATELY CALL THE DOCTOR. RINSE MOUTH WITH WATER AND OBTAIN MEDICAL ATTENTION.	
SKIN CONTACT	REMOVE CONTAMINATED CLOTHES. WASH THOROUGHLY WITH SOAP AND WATER. CONTACT PHYSICIAN IF IRRITATION PERSISTS.	
EYE CONTACT	FLUSH IMMEDIATELY WITH WATER FOR AT LEAST 15 MINUTES. CONTACT PHYSICIAN IF SYMPTOMS PERSIST.	
4.2 MOST IMPORTANT SYMPTOMS & EFFECTS (ACUTE & DELAYED)	ITCHING. RASHES. HIVES. MAY CAUSE REDNESS AND TEARING OF THE EYES. BURNING SENSATION.	
4.3 INDICATION OF ANY IMMEDIATE MEDICAL ATTENTION OR SPECIAL TREATMENT REQUIRED	MAY CAUSE SENSITIZATION IN SUSCEPTIBLE PERSONS. TREAT SYMPTOMATICALLY.	
5.1 Extinguishing material	FOAM, CO2, DRY CHEMICAL POWDER.	
5.2 SPECIAL HAZARDS ARISING FROM THE SUBSTANCE OR MIXTURE	BURNING PRODUCES IRRITATING, TOXIC AND OBNOXIOUS FUMES	
5.3 Advice for fire-fighters	SPECIAL PROTECTIVE EQUIPMENT FOR FIRE-FIGHTERS: WEAR POSITIVE-PRESSURE SELF-CONTAINED BREATHING APPARATUS (SCBA) AND APPROPRIATE PROTECTIVE CLOTHING.	
SECTION 6: ACCIDENTAL RELEASE MEAS	URES	
6.1	ENSURE ADEQUATE VENTILATION OF THE WORKING AREA, EVACUATE PERSONNEL TO SAFE AREA, WEAR SUITABLE PROTECTIVE EQUIPMENT. NO SMOKING, SPARKS, FLAMES OR OTHER SOURCES OF IGNITION NEAR SPILLAGE. AVOID CONTACT WITH SKIN, EYES AND CLOTHING. AVOID INHALATION.	
6.1 PERSONAL PRECAUTIONS 6.2 ENVIRONMENTAL PRECAUTIONS	Ensure adequate ventilation of the working area, evacuate personnel to safe area, wear suitable protective equipment. No smoking, sparks, flames or other sources of ignition near spillage. Avoid contact with skin,	

Advice for fire-fighters	WEAR POSITIVE-PRESSURE SELF-CONTAINED BREATHING APPARATUS (SCBA) AND APPROPRIATE PROTECTIVE CLOTHING.	
SECTION 6: ACCIDENTAL RELEASE MEASUR	KES CONTRACTOR OF THE PROPERTY	
6.1	ENSURE ADEQUATE VENTILATION OF THE WORKING AREA, EVACUATE PERSONNEL TO SAFE AREA, WEAR SUITABLE PROTECTIVE	
PERSONAL PRECAUTIONS	EQUIPMENT. NO SMOKING, SPARKS, FLAMES OR OTHER SOURCES OF IGNITION NEAR SPILLAGE. AVOID CONTACT WITH SKIN, EYES AND CLOTHING. AVOID INHALATION.	
6.2	DO NOT DISCHARGE INTO DRAINS, WATER COURSES OR ONTO THE GROUND. DISPOSE OF IN LINE WITH LOCAL AUTHORITY	
ENVIRONMENTAL PRECAUTIONS	GUIDELINES.	
6.3	REMOVE IGNITION SOURCES. PROVIDE ADEQUATE VENTILATION. AVOID EXCESSIVE INHALATION OF VAPOURS. CONTAIN	
METHODS & MATERIAL FOR CONTAINMENT AND CLEANING	SPILLAGE IMMEDIATELY BY USE OF SAND OR INERT POWDER. DISPOSE OF ACCORDING TO LOCAL REGULATIONS. COVER WITH	
UP	an inert, inorganic, non-combustible absorbent material (e.g dry-lime, sand, soda ash).	
6.4	REFER & CONSIDER SECTION 8.	
REFERENCES TO OTHER SECTIONS	REFER & CONSIDER SECTION 13.	
SECTION 7: HANDLING & STORAGE		
	HANDLE IN ACCORDANCE WITH GOOD HYGIENE AND SAFETY PRACTICE. KEEP AWAY FROM HEAT, SPARKS, OPEN FLAMES AND	
7.1	HOT SURFACES NO SMOKING. USE PERSONAL PROTECTIVE EQUIPMENT AS REQUIRED. USE IN ACCORDANCE WITH GOOD	
PRECAUTIONS FOR SAFE-HANDLING	MANUFACTURING AND INDUSTRIAL HYGIENE PRACTICES. USE IN AREAS WITH ADEQUATE VENTILATION DO NOT EAT, DRINK OR	

SMOKE WHEN USING THIS PRODUCT.



7.2
CONDITIONS FOR SAFE STORAGE, INCLUDING ANY INCOMPATIBILITIES

STORAGE CLASS: FLAMMABLE LIQUID STORAGE. STORE ONLY IN THE ORIGINAL RECEPTACLE. KEEP CONTAINER TIGHTLY SEALED. KEEP IN COOL, DRY, VENTILATED STORAGE AND CLOSED CONTAINERS. KEEP AWAY FROM HEAT.

7.3

SPECIFIC END USE(S)

THE INFORMATION REQUIRED IS CONTAINED IN THIS MATERIAL SAFETY DATA.

SECTION 8: EXPOSURE CONTROLS & PERSONAL PROTECTION

8.1
CONTROL PARAMETERS

THIS PRODUCT, AS SUPPLIED, DOES NOT CONTAIN ANY HAZARDOUS MATERIALS WITH OCCUPATIONAL EXPOSURE LIMITS ESTABLISHED BY THE REGION SPECIFIC REGULATORY BODIES.

8.2

EXPOSURE CONTROLS



EYE PROTECTION	WEAR PROTECTIVE GLOVES/EYE PROTECTION/FACE PROTECTION. AVOID CONTACT WITH EYES. WEAR APPROVED SAFETY	
	GOGGLES. (EN166)	
	AVOID CONTACT WITH SKIN. WASH HANDS BEFORE BREAKS AND AT END OF WORK. WEAR PROTECTIVE GLOVES. DIN/EN	
HAND PROTECTION	374. THE GLOVE MATERIAL HAS TO BE IMPERMEABLE AND RESISTANT TO THE PRODUCT / THE SUBSTANCE / THE PREPARATION.	
	PENETRATION TIME OF GLOVE MATERIAL: THE EXACT BREAK THROUGH TIME HAS TO BE FOUND OUT BY THE MANUFACTURER OF	
	THE PROTECTIVE GLOVES AND HAS TO BE OBSERVED.	
RESPIRATORY EQUIPMENT	DO NOT INHALE GASES / FUMES / AEROSOLS. CERTIFIED RESPIRATORY PROTECTIVE DEVICE RECOMMENDED.	
HYGIENE MEASURES	GOOD PERSONAL HYGIENE PRACTICES ARE ALWAYS ADVISABLE, ESPECIALLY WHEN WORKING WITH CHEMICALS / OILS.	
ENGINEERING MEASURES	None.	
SKIN PROTECTION	WEAR PROTECTIVE CLOTHING TO REDUCE THE RISK OF SKIN AND EYE CONTACT.	
Personal Protection	AVOID INHALATION OF THE PRODUCT. AVOID CONTACT WITH SKIN AND EYES. AVOID CONTACT WITH SKIN AND EYES. USE	
PERSONAL PROTECTION	PERSONAL PROTECTION ACCORDING TO DIRECTIVE 89/686/EEC.	
OTHER PROTECTION	WEAR SUITABLE PROTECTION TO AVOID CONTACT WITH SKIN AND EYES. DO NOT INHALE VAPOURS.	
Process Conditions	Ensure area is well ventilated. Avoid vapour inhalation. Safety shower & Eye Bath.	
ENVIROMENTAL EXPOSURE CONTROLS	AVOID DISCHARGING INTO DRAINAGE WATER.	

SECTION 9: PHYSICAL & CHEMICAL PROPERTIES

9.1	
PHYSICAL & CHEMICAL PROPERTIES	
Appearance	LIQUID
COLOUR	YELLOW — DARK BROWN
Odour	CHARACTERISTIC
RELATIVE DENSITY @ 20°C	1.046
FLASH POINT (°C)	>93°C.
Refractive Index @ 20 °C	1.527 – 1.538
SOLUBILITY IN WATER @ 20 °C	INSOLUBLE IN WATER.
9.2 OTHER INFORMATION	
9.2.1 INFORMATION WITH REGARD TO PHYSICAL HAZARD CLASSES	NO DATA.
9.2.2 OTHER SAFETY CHARACTERISTICS	NO DATA.



SECTION 10: STABILITY & REACTIVITY	
10.1 REACTIVITY	NOT APPLICABLE.
10.2 CHEMICAL STABILITY	Stable under suggested storage conditions (<15°C). Stable under normal conditions.
10.3 POSSIBILITY OF HAZARDOUS REACTIONS	NONE UNDER NORMAL PROCESSING.
10.4 CONDITIONS TO AVOID	STORAGE AT HIGH TEMPERATURES. DO NOT STORE ABOVE 15°C. AVOID HEAT, FLAMES AND OTHER SOURCES OF IGNITION.
10.5 INCOMPATIBLE MATERIALS	AVOID CONCENTRATED ACIDS, ALKALIS & OXIDISING AGENTS.
10.6 HAZARDOUS DECOMPOSITION PRODUCTS	THIS PRODUCT DOES NOT DECOMPOSE UNDER NORMAL CONDITIONS. UNDER FIRE CONDITIONS THE PRODUCT WILL PRODUCE A MIXTURE OF IRRITATING FUMES & SMOKE & CARBON MONOXIDE.

SECTION 11: TOXICOLOGICAL INFORMATION		
11.1 TOXICOLOGICAL EFFECTS		
Acute Toxicity	The following values are calculated based on chapter 3.1 of the GHS document ATEMIX (oral) $18,\!761.90~\text{mg/kg}$	
Skin irritation	MAY CAUSE IRRITATION. PROLONGED CONTACT MAY CAUSE REDNESS AND IRRITATION.	
<u> </u>	SPECIFIC TEST DATA FOR THE SUBSTANCE OR MIXTURE IS NOT AVAILABLE. CAUSES SERIOUS EYE IRRITATION.	
EYE DAMAGE OR IRRITATION	(BASED ON COMPONENTS). MAY CAUSE REDNESS, ITCHING, AND PAIN.	
RESPIRATORY OR SKIN SENSITIVITY	SPECIFIC TEST DATA FOR THE SUBSTANCE OR MIXTURE IS NOT AVAILABLE. MAY CAUSE IRRITATION OF RESPIRATORY TRACT. 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).	
GERM CELL MUTAGENICITY	Not classified. However product contains a substance suspected of causing genetic defects.	
CARCINOGENICITY	Not classified. However product contains a substance suspected of causing genetic defects.	
REPRODUCTIVE TOXICITY	NO DATA.	
STOT – SINGLE EXPOSURE	NO DATA.	
STOT — REPEATED EXPOSURE	NO DATA.	
ASPIRATION HAZARD	SPECIFIC TEST DATA FOR THE SUBSTANCE OR MIXTURE IS NOT AVAILABLE. INGESTION MAY CAUSE GASTROINTESTINAL IRRITATION, NAUSEA, VOMITING AND DIARRHEA.	
11.2 INFORMATION ON OTHER HAZARDS	NO DATA.	
SECTION 12: ECOLOGICAL INFORMATION		
12.1 Toxicity	NO DATA	
12.2 PERSISTENCE & DEGRADABILITY	No Data.	
12.3 BIO- ACCUMULATIVE POTENTIAL	EUGENOL PARTITION COEFFICIENT: 2.49	
12.4	NO DATA	



MOBILITY IN SOIL		
12.5 RESULTS OF PBT & VPVB ASSESSMENT	NO DATA.	
12.6 ENDOCRINE DISRUPTING PROPERTIES	NO DATA.	
12.7 OTHER ADVERSE EFFECTS	NO DATA.	
SECTION 13: DISPOSAL INFORMATION		
13.1 WASTE TREATMENT METHODS	ALWAYS RECOVER SPILLED PRODUCT. DISCARD WASTE MATERIAL WITH AUTHORIZED WASTE MANAGEMENT SERVICES. ACT IN ACCORDANCE WITH LOCAL & NATIONAL WASTE REGULATIONS.	

SECTION 14: TRANSPORT INFORMATION	
14.1 TRANSPORT INFORMATION	
UN NUMBER	NOT CLASSIFIED.
14.2 UN Shipping Name	NONE.
14.3 TRANSPORT HAZARD CLASS(ES)	None.
14.4 PACKING GROUP	NONE.
14.5 ENVIROMENTAL HAZARDS	NO ADDITIONAL DATA.
14.6 SPECIAL PRECAUTIONS FOR USER	SEE SECTIONS 6-8.
14.7 TRANSPORT IN BULK ACCORDING TO ANNEX II OF MARPOL73/78 & THE IBC CODE.	NONE.
SECTION 15: REGULATORY INFORMATION	
15.1 PRODUCT SPECIFIC SAFETY, HEALTH & ENVIRONMENTAL REGULATIONS & LEGISLATION	
EU DIRECTIVES	REGULATION (EC) NO 2020/878 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL OF 18 TH DECEMBER 2006. CONCERNING THE REGISTRATION, EVALUATION, AUTHORIZATION & RESTRICTION OF CHEMICALS (REACH), ESTABLISHING A EUROPEAN CHEMICALS AGENCY, AMENDING DIRECTIVE 1999/45/EC AND REPEALING COUNCIL REGULATION (EEC) NO793/93 & COMMISSION REGULATION (EC) NO1488/94 AS WELL AS COUNCIL DIRECTIVE 76/769/EEC & COMMISSION DIRECTIVE 91/155/ECC, 93/67/ECC, 93/105/EEC & 2000/21/EC (INCLUDING AMENDMENTS)
STATUTORY INSTRUMENTS	THE CHEMICALS (HAZARD INFORMATION & PACKAGING FOR SUPPLY REGULATIONS 2009 (S.I.2009 No 716).
Approved Code of Practice	CLASSIFICATION & LABELLING OF SUBSTANCES & PREPARATIONS DANGEROUS FOR SUPPLY. SAFETY DATA SHEETS FOR SUBSTANCES & PREPARATIONS.
	SHILLIS FOR SUBSTAINCES OF FREFARATIONS.



15.2	ÅN ASSESSMENT HAS NOT BEEN EXECUTED AS THIS IS NOT A HAZARDOUS MATERIAL ACCORDING TO
CHEMICAL SAFETY ASSESSMENT	ARTICLE 31 OF REACH 1907/2006.

SECTION 16: OTHER INFORMATION	
Hazard and/ or Precautionary Statements in full	H302 - Harmful if swallowed H303 - May be harmful if swallowed H304 - May be fatal if swallowed and enters airways H316 - Causes mild skin irritation H317 - May cause an allergic skin reaction H319 - Causes serious eye irritation H401 - Toxic to aquatic life H413 - May cause long lasting harmful effects to aquatic life
TRAINING INSTRUCTIONS: REFER TO POSSIBLE HAZARD BEFORE USE OF THIS PRODUCT.	
ABBREVIATIONS & ACRONYMS:	
MSDS	MATERIAL SAFETY DATA SHEET.
INCI	International Nomenclature of Cosmetic Ingredients.
CAS	CHEMICAL ABSTRACT SERVICE.
IMDG	INTERNATIONAL MARITIME CODE FOR DANGEROUS GOODS.
ADR	ACCORD EUROPEAN SUR LE TRANSPORT DES MERCHANDISES DANGEREUSES PAR ROUTE (EUROPEAN AGREEMENT CONCERNING THE INTERNATIONAL CARRIAGE OF DANGEROUS GOODS BY ROAD).
RID	International Carriage of Dangerous Goods by Rail.
ICAO	International Civil Aviation Organization.
ADN	INTERNATIONAL CARRIAGE OF DANGEROUS GOODS BY INLAND WATERWAYS.
GHS	GLOBALLY HARMONIZED SYSTEM OF CLASSIFICATION & LABELLING OF CHEMICALS.
TREM CARD	TRANSPORT EMERGENCY CARD.
STOT	SPECIFIC TARGET ORGAN TOXICITY.

DOCUMENTATION REVISION	
DATE	CHANGE DESCRIPTION
10 [™] APRIL 2018	Data Launch
OCTOBER 2020	Reviewed
JANUARY 2023	REVIEW
15 th January 2024	Changes in section: 2, 3, 11, 12.