

1: Identification of substance / mixture

1. Product Identifier

Substance

Product Name **Eugenol**
Product Code 050295
CAS Number 97-53-0
Other Names 4-Allylguaiacol
IUPAC
MFCN Number
EC/EINECS 202-589-1
REACH Number

2. Relevant identified uses of the substance or mixture and uses advised against

Research and Development

3. Details of the supplier of the safety data sheet

Fluorochem Ltd
Unit 14, Graphite Way
Hadfield
Derbyshire
SK13 1QH
United Kingdom

Telephone: +44(0)1457 860111
Fax number: +44(0)1457 892799
Email: MSDS@fluorochem.co.uk



4. Emergency telephone number

07855 268577

2. Hazards Identification

1. Classification of the substance or mixture

H302	Acute Tox. 4	R22
H315	Skin Irrit. 2	R38
H319	Eye Irrit. 2	R36
H332	Acute Tox. 4	R20
H335	STOT SE 3a	R37

* The risk codes have been generated using Annex VII of directive 67/548/EEC. Risk code combinations are not included.

2. Label elements

Signal Word **Warning**

Hazard Statements

H302	Harmful if swallowed.
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H332	Harmful if inhaled.
H335	May cause respiratory irritation.

Precautionary Phrases

P264	Wash hands thoroughly after handling.
P302 + P352	IF ON SKIN: Wash with plenty of soap and water.
P304 + P340	IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

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P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P332 + P313	If skin irritation occurs: Get medical advice/attention.
P337 + P313	If eye irritation persists: Get medical advice/attention.

3. Other Hazards

Additional precautionary phrases are located throughout the safety data sheet

3.Composition / Information on Ingredients

1. Substances

Eugenol

Assay:100% **CAS Number :**97-53-0

2. Mixtures

Not Relevant

4.First Aid Measures

1.Description of first aid measures

<i>Skin Contact</i>	IF ON SKIN: Wash with plenty of soap and water. If skin irritation occurs: Get medical advice/ attention.
<i>Eye Contact</i>	If eye irritation persists: Get medical advice/attention. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
<i>Ingestion</i>	Wash out mouth with water.
<i>Inhalation</i>	IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

2.Most important symptoms and effects

No symptoms.

3.Indication of any immediate medical attention

Call a POISON CENTER or doctor/physician if you feel unwell.
No additional measures required

5.Firefighting measures

1.Extinguishing Media

<i>Suitable</i>	Carbon dioxide. Dry chemical powder. Water.
<i>Unsuitable</i>	Do not use water with a full water jet

2.Special Hazards arising from the substance or mixture

In combustion toxic fumes may form.

3.Advice for Fire Fighters

Wear protective clothing to prevent contact with skin and eyes.
Wear self-contained breathing apparatus.

6.Accidental Release Measures

1.Personnal Precautions

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Refer to section 8 of SDS for personal protection details.

2.Environmental Precautions

Do not discharge into drains or rivers.

3.Methods & Materials

Mix with sand or vermiculite.
Transfer to a suitable container.

7.Handling and Storage

1.Personnal Precautions

<i>Safe Handling</i>	Handle in fume hood. Wash hands immediately after contamination. Wash handsoughly after handling.
<i>Protection against explosions and fires</i>	Take off contaminated clothing and wash before reuse. normal measures for preventive fire protection

2.Conditions for safe storage, including any incompatibilities

<i>Managing Storage Risks</i>	Keep container tightly closed. Store in cool, well ventilated area.
<i>Storage Controls</i>	No special requirements
<i>Maintaining Integrity</i>	Keep in tightly closed container in cool area away from direct sunlight or heat sources.
<i>Other advice</i>	Store in a well-ventilated place. Keep container tightly closed.

3.Specific End Uses

The end use(s) have not been fully determined. The substance is supplied for Research and Development purposes by professionals only.

8.Exposure Controls/Personal Protection

1. Control Parameters

No Data Available

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2.Exposure Controls

<i>General protective and hygiene measures</i>	Wear protective gloves/protective clothing/eye protection/face protection. . The standard precautionary measures should be adhered to when handling Wash hands during breaks and at the end of handling the material Immediately remove any contaminated clothing
<i>Engineering measures</i>	Use only outdoors or in a well-ventilated area. Ensure there is sufficient ventilation of the area.
<i>Eye / Face Protection</i>	Safety Glasses.
<i>Hand protection</i>	Protective gloves.
<i>Respiratory protection</i>	Avoid breathing dust/fume/gas/mist/vapours/spray.. Respiratory protection not required.
<i>Skin protection</i>	Protective clothing.
<i>Other personal protection advice</i>	no data

9.Physical and Chemical Properties

1. Physical and Chemical Properties

Appearance	Clear colourless to yellow liquid
Odour	Clove-like
Odour threshold	Not Applicable
PH	Not Applicable
Melting point / Freezing point	-9°C
Initial boiling point and boiling range	254°C
Flash point	127°C
Evaporation rate	Not Applicable
Flammability(solid,gas)	Not Applicable
Upper/lower flammability or explosive limits	Not Applicable
Vapour pressure	0.1 kPa @ 78°C
Vapour density	Not Applicable
Relative density	1.07
Solubility(ies):	Alcohol. Ether. Chloroform. Very slightly in water
Partition coefficient: n-octanol/water	Not Applicable
Auto-ignition temperature	Not Applicable
Decomposition temperature	Not Applicable
Viscosity	Not Applicable
Explosive properties	Not Applicable
Oxidising properties	Not Applicable

2.Other Information

No additional information available

10.Stability and Reactivity

1.Reactivity

no unusual reactivity

2. Stability

Stable under normal conditions.

3. Possibility of Hazardous Reactions

no hazardous reactions known

4. Conditions to Avoid

no specific conditions to avoid

5. Incompatible Materials

Strong oxidizing agents.

6. Hazardous Decomposition Products

In combustion emits toxic fumes.

In combustion emits toxic fumes of carbon dioxide / carbon monoxide.

11. Toxicology information

1. Information

<i>Acute Toxicity</i>	Inhalation LC (Rat) >2580mg/m ³ /4H Intraperitoneal LDLo (Rat) 800mg/kg Oral LD50 (Mouse) 3g/kg Oral LD50 (Rat) 1930mg/kg
<i>Skin corrosion/irritation</i>	irritant for skin and mucous membranes Skin (Rabbit) 100mg/24H SEV Skin (Human) 40mg/48H MLD Skin (Man) 16mg/48H MOD Skin (Pig) 50mg/48H MLD
<i>Serious eye Damage/irritation</i>	irritant effect
<i>Respiratory or skin sensitisation</i>	No sensitizing effect known
<i>Germ Cell mutagenicity</i>	Cyt (Human) Lym 170mg/L/24H Dnd (Rat) Lvr 50 umol/L Mmo - Sat 50ug/plate (-S9) Oms - Ham - Ovr 400 mg/L
<i>Carcinogenicity</i>	Orl (Mouse) TDLo: 37080 mg/kg/2Y-I
<i>Reproductive toxicity</i>	not known
<i>STOT-single exposure</i>	not known
<i>STOT-repeated exposure</i>	not known
<i>Aspiration hazard</i>	not known

2. Additional

To the best of our knowledge the acute and chronic toxicity of this substance is not fully known.

No classification data on carcinogenic properties of this material is available from the EPA, IARC, NTP, OSHA or ACGIH

12. Ecological Information

1. Toxicity

not known

2.Persistence and degradability

not known

3.Bio-Accumulative Potential

not known

4.Mobility and Soil

not known

5.Results of PBT & vPvB assessment

not known

6.Other adverse effects

not known

13.Disposal Considerations

1.Waste Treatment Methods

Disposal Operations Consult state, local or national regulations for proper disposal.
Hand over to authorised disposal company as hazardous waste.

Disposal of Packaging Disposal must be made according to official regulations.

14. Transport Information

Air (ICAO)

Not classified as hazardous for transport

Road (ADR)

Not classified as hazardous for transport

Sea (IMDG)

Not classified as hazardous for transport

15.Safety, health and environmental regulations

1.Safety, health and environmental regulations:

product is not subject to any additional regulations or provisions

2. Safety Assessment

No Chemical Safety Assessment

16. Other Information**1. Other Information:**

ADR: Accord Europeen sur le transport des marchandises Dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by road)

RID: Reglement International concernant le transport des marchandises dangereuses par chemin de fer (Regulations concerning the International transport of Dangerous Goods by Rail)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

IATA-DGR: Dangerous Goods Regulations by the International Air Transport Association

ICAO: International Civil Aviation Organization

ICAO-TI: Technical Instructions by the ICAO

GHS: Globally Harmonized System of Classification and Labelling of Chemicals

CAS: Chemical Abstracts Service

2. Associated risk phrases according to european directive 67/548/EEC

R20	Harmful by inhalation.
R22	Harmful if swallowed.
R36	Irritating to eyes.
R37	Irritating to respiratory system.
R38	Irritating to skin.

3. Disclaimer

The product listed is for research and development purposes only and not for human or animal use. As such, in most cases, the toxicological, ecological and physicochemical properties have not been fully determined and the product should be treated with respect and always handled under suitable conditions by appropriately qualified personnel. The responsible party shall use this datasheet only in conjunction with other sources of information gathered by them, and should make an independent judgement of suitability, to ensure proper use and protect the health and safety of employees. This information is furnished without warranty and any use of the product not in conformance with this material safety data sheet, or in combination with any other product or process, is the responsibility of the user.