

According to Regulation (EC) No 1907/2006

According to Regulation (EC) No 2020/878

2-Phenylethanol

Version number: 3.0
Issued: 2024-01-18
Replaces SDS: 2022-07-26



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

1.1. Product identifier

Trade name

2-Phenylethanol

CAS number

60-12-8

EC number

200-456-2

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

Relevant identified uses

Research and development.

Not suitable for use in

Not suitable for human consumption or veterinary purposes.

1.3. Details of the supplier of the safety data sheet

Supplier

Molekula Group

Address

Molekula Ltd, Lingfield Way, Darlington,
DL1 4XX Darlington
United Kingdom

Telephone

+44 (0) 3302 000 333

Email

info@molekula.com

Web site

www.molekula.com

Contact person

Kevin Banks

Email

+44 (0) 7769276927

1.4. Emergency telephone number

Poison center/Additional emergency number

0344 892 0111 - National Poisons Information Service (Newcastle Centre)

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SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008

Classification

Acute toxicity, oral, hazard category 4
Acute toxicity, dermal, hazard category 3
Skin irritation, hazard category 2
Eye irritation, hazard category 2
Reproductive toxicity, hazard category 2

Hazard statements

H302, H311, H315, H319, H361

2.2. Label elements

Labelling according to Regulation (EC) No 1272/2008

Hazard pictograms



Signal word

Danger

Hazard statements

H302 Harmful if swallowed.
H311 Toxic in contact with skin.
H315 Causes skin irritation.
H319 Causes serious eye irritation.
H361 Suspected of damaging fertility or the unborn child.

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Precautionary statements

P201 Obtain special instructions before use.
 P202 Do not handle until all safety precautions have been read and understood.
 P264 Wash skin thoroughly after handling.
 P280 Wear protective gloves/protective clothing/eye protection/face protection.
 P312 Call a POISON CENTER/doctor if you feel unwell.
 P330 Rinse mouth.
 P301 + P312 IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.
 P302 + P352 IF ON SKIN: Wash with plenty of water/.
 P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 P308 + P313 IF exposed or concerned: Get medical advice/attention.
 P332 + P313 If skin irritation occurs: Get medical advice/attention.
 P337 + P313 If eye irritation persists: Get medical advice/attention.
 P405 Store locked up.
 P501 Dispose of contents/container to .
 P361 + P364 Take off immediately all contaminated clothing and wash it before reuse.
 P362 + P364 Take off contaminated clothing and wash it before reuse.

2.3. Other hazards

No data available

SECTION 3: Composition/information on ingredients

3.1. Substances

Chemical name	CAS No. EC No. REACH No. Index No.	Concentration	Classification	H-phrase M factor acute M factor chronic	Note
2-Phenylethanol	60-12-8 200-456-2 - -	100%	Acute Tox. 4 - oral, Acute Tox. 3 - dermal, Skin Irrit. 2, Eye Irrit. 2, Repr. 2	H302, H311, H315, H319, H361 - -	-

Molecular weight

122.16

Substance additional information

For the complete text of H- / EUH-statements mentioned in this section, see section 16.

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SECTION 4: First aid measures

4.1. Description of first aid measures

IF exposed or concerned: Get medical advice/attention. First aiders/ medical personnel need to protect themselves. Show this Safety Data Sheet (SDS) to medical personnel.

Inhalation

IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER/doctor. If breathing stops, provide artificial respiration. For breathing difficulties oxygen may be necessary.

Skin contact

Toxic in contact with skin. In case of skin contact: IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower]. Immediately call a POISON CENTER/doctor.

Eye contact

Remove contact lenses if present. Rinse eyes with water. Continue to rinse for at least 15 minutes and seek medical attention.

Ingestion

IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell. Rinse mouth. Do not induce vomiting. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs.

Information for doctors

No data available.

4.2. Most important symptoms and effects, both acute and delayed

The severity of the symptoms described will vary dependant of the concentration and the length of exposure. See section 11 for more detailed information on health effects and symptoms.

Inhalation

Single exposure may cause the following adverse effects: May cause respiratory irritation.

Skin contact

Single exposure may cause the following adverse effects: Unconsciousness, possibly death.

Eye contact

Single exposure may cause the following adverse effects: Severe irritation.

Ingestion

Single exposure may cause the following adverse effects: Severe abdominal pain. May cause severe internal injury.

4.3. Indication of any immediate medical attention and special treatment needed

Treat symptomatically. No special treatment requirement.

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SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media

In case of fire: Use foam, carbon dioxide, dry powder or water fog to extinguish.

Unsuitable extinguishing media

No specific fire fighting procedure given.

5.2. Special hazards arising from the substance or mixture

Specific hazards: Combustible. Toxic.

Thermal decomposition or combustion may liberate carbon oxides and other toxic gases or vapours.

Carbon monoxide (CO). Carbon dioxide (CO₂).

Vapours are heavier than air and may travel along the floor and in the bottom of containers. Forms explosive mixtures with air on intense heating.

5.3. Advice for firefighters

Special protective equipment for fire-fighters

Evacuate area. Avoid breathing gas, fume, vapours or spray. Cool containers exposed to heat with water spray and remove container, if no risk is involved.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Avoid breathing dust/fume/gas/mist/vapours/spray. Provide adequate ventilation. Avoid contact with skin and eyes. Avoid dust formation. For personal protection, see section 8.

6.2. Environmental precautions

Avoid discharge into drains, water courses or onto the ground.

6.3. Methods and material for containment and cleaning up

Collect spillage with shovel, broom or the like and reuse, if possible. Dispose of large amounts of spillage/waste according to agreement with local authorities.

6.4. Reference to other sections

For personal protection, see section 8. For waste disposal, see section 13.

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SECTION 7: Handling and storage

7.1. Precautions for safe handling

Preventive handling precautions

For precautions see section 2.2. Do not handle until all safety precautions have been read and understood. Do not handle broken packages without protective equipment. This product is toxic. Keep containers tightly closed. Immediate first aid is necessary. Wear protective clothing, gloves, eye and face protection. Avoid contact with skin and eyes. Do not breathe dust/fume/gas/mist/vapours/spray. Avoid ingestion and inhalation. Keep away from food, drink and animal feeding stuffs. Do not eat, drink or smoke when using this product. Do not reuse empty containers.

General hygiene

Observe good chemical hygiene practices. Remove contaminated clothing immediately and wash skin with soap and water. Remove contaminated clothing and launder thoroughly before re-use. Wash skin thoroughly after handling.

7.2. Conditions for safe storage, including any incompatibilities

Store at room temperature. Store in a dry place. Store in a closed container.

Storage class : Toxic storage.

7.3. Specific end use(s)

No specific usage precautions noted.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

No data available

8.2. Exposure controls

Eye / face protection

Wear eye protection. Eye glasses with side protection DIN-/EN-Norms: DIN EN 166

Hand protection

Wear protective gloves.

Recommended gloves: Butyl rubber.

Glove Thickness: 0.7mm

Breakthrough time: 8 hours

Always inspect gloves before use. If signs of wear and tear are noticed then the gloves should be replaced.

No specific hygiene procedures noted, but good personal hygiene practices are always advisable, especially when working with chemicals. Wash contaminated skin thoroughly after handling.

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Other skin protection

Wash skin thoroughly after handling.

Respiratory protection

Provide adequate ventilation. If ventilation is insufficient, suitable respiratory protection must be provided.

Environmental exposure controls

Avoid discharge into drains.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state

Liquid

Colour

Colourless.

Odour

Characteristic.

Melting point / freezing point

-27 °C

Boiling point or initial boiling point and boiling range

219 - 221 °C

Method

(1,000 hPa)

Flammability

No data available

Lower and upper explosion limit

No data available

Flash point

102 °C

Method

CC (Closed cup).

Auto-ignition temperature

No data available

Decomposition temperature

No data available

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pH

6 - 7

Method

20g/l (20°C)

Kinematic viscosity

No data available

Solubility

Soluble in water.

Partition coefficient n-octanol/water

No data available

Vapour pressure

No data available

Density and/or relative density

1.02 g/cm³

Method

(20°C)

Relative vapour density

No data available

Particle characteristics

No data available

9.2. Other information

No data available

SECTION 10: Stability and reactivity

10.1. Reactivity

Forms explosive mixtures with air on intense heating.

10.2. Chemical stability

Stable under normal temperature conditions. Stable under the prescribed storage conditions.

Test for peroxide formation periodically and before distillation.

10.3. Possibility of hazardous reactions

There are no known conditions that are likely to result in a hazardous situation.

10.4. Conditions to avoid

Keep away from heat, sparks and open flame.

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10.5. Incompatible materials

Strong oxidising substances, strong acids and strong bases.

10.6. Hazardous decomposition products

See section 5.

SECTION 11: Toxicological information

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

Acute toxicity

Product / Substance name CAS / EC no.	Dose descriptor	Value / Dose	Exposure route	Duration of exposure	Test animals	Remarks
2-Phenylethanol 60-12-8 / 200-456-2	Acute Toxicity (Oral LD50):	1,609.3mg/kg	-	-	Rat	(External MSDS)
2-Phenylethanol 60-12-8 / 200-456-2	Acute Toxicity (Dermal LD50):	805mg/kg	-	-	Rabbit	(External MSDS)
2-Phenylethanol 60-12-8 / 200-456-2	Acute Toxicity (Inhalation LC50):	> 1.38mg/l	Aerosol.	4 hours	Rat	(External MSDS)

Skin corrosion/irritation

Product / Substance name CAS / EC no.	Result
2-Phenylethanol 60-12-8 / 200-456-2	Causes skin irritation.

Serious eye damage/irritation

Product / Substance name CAS / EC no.	Result
2-Phenylethanol 60-12-8 / 200-456-2	Causes serious eye irritation.

Respiratory or skin sensitisation

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Product / Substance name CAS / EC no.	Result	Species	Method / Guideline
2-Phenylethanol 60-12-8 / 200-456-2	Negative.	Mouse	(OECD Test Guideline 429)

Germ cell mutagenicity

Product / Substance name CAS / EC no.	Result	Species	Method / Guideline	Other
2-Phenylethanol 60-12-8 / 200-456-2	Negative.	Escherichia coli/ Salmonella typhimurium	Ames test	(OECD Test Guideline 471)

Aspiration hazard

Based on available data, the classification criteria are not met.

11.2. Information on other hazards

No data available

SECTION 12: Ecological information

12.1. Toxicity

Acute fish toxicity

Product / Substance name CAS / EC no.	Measurement type	Value / Result	Duration of exposure	Species	Method / Guideline
2-Phenylethanol 60-12-8 / 200-456-2	LC50	464mg/l	96 hours	Leuciscus idus (Golden orfe)	(DIN 38412)

Acute algae toxicity

Product / Substance name CAS / EC no.	Measurement type	Value / Result	Duration of exposure	Species	Method / Guideline
2-Phenylethanol 60-12-8 / 200-456-2	ErC50	1,300mg/l	72 hours	Desmodesmus subspicatus (green algae)	(DIN 38412)

Acute crustacean toxicity

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Product / Substance name CAS / EC no.	Measurement type	Value / Result	Duration of exposure	Species
2-Phenylethanol 60-12-8 / 200-456-2	EC50	287.17mg/l	48 hours	Daphnia magna

Micro-/macro organism toxicity

Product / Sub- stance name CAS / EC no.	Measurement type	Value / Result	Duration of expos- ure	Species	Method / Guideline
2-Phenylethanol 60-12-8 / 200-456-2	EC50	> 100mg/l	3 hours	Activated sludge.	(OECD Test Guideline 209)

12.2. Persistence and degradability
Persistence and degradability

Product / Substance name CAS / EC no.	Type of test	Duration	Result	Method / Guideline
2-Phenylethanol 60-12-8 / 200-456-2	aerobic	14 days	93.1% - The product is readily biodegradable.	(OECD Test Guideline 301B)

12.3. Bioaccumulative potential
No data available

12.4. Mobility in soil
No data available

12.5. Results of PBT and vPvB assessment
No data available

12.6. Endocrine disrupting properties
This product does not contain any known or suspected endocrine disruptors.

12.7. Other adverse effects
No data available

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SECTION 13: Disposal considerations

13.1. Waste treatment methods

Disposal considerations

Dispose of contents/container in accordance with local regulations.

SECTION 14: Transport information

14.1. UN number

2810

14.2. UN proper shipping name

ADR / RID / ADN proper shipping name

TOXIC LIQUID, ORGANIC, N.O.S. (2-Phenylethanol)

IMDG proper shipping name

TOXIC LIQUID, ORGANIC, N.O.S. (2-Phenylethanol)

IATA proper shipping name

Toxic liquid, organic, n.o.s. (2-Phenylethanol)

14.3. Transport hazard class(es)

Label

ADR/RID/ADN



6.1

IMDG



6.1

IATA



6.1

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ADR / RID Class

6.1

ADR / RID Classification code

T1

ADR / RID hazard identification number

60

IMDG Class

6.1

IATA Class

6.1

ADN Class

6.1

ADN Class Code

T1

14.4. Packing group

ADR / RID / ADN: III

IMDG: III

IATA: III

14.5. Environmental hazards

IMDG EmS

F-A, S-A

14.6. Special precautions for user

Tunnel restriction code: E

Transport category: 2

14.7. Maritime transport in bulk according to IMO instruments

IBC Instruction: IBC03

SECTION 15: Regulatory information

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

EU regulations

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

This material safety data sheet complies with the requirements of Regulation (EU) 2020/878.

National regulations

No data available

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15.2. Chemical safety assessment

No chemical safety assessment has been carried out.

SECTION 16: Other information

Phrase meaning

Acute Tox. 4 - oral - Acute toxicity, oral, hazard category 4

Acute Tox. 3 - dermal - Acute toxicity, dermal, hazard category 3

Skin Irrit. 2 - Skin irritation, hazard category 2

Eye Irrit. 2 - Eye irritation, hazard category 2

Repr. 2 - Reproductive toxicity, hazard category 2

H302 Harmful if swallowed.

H311 Toxic in contact with skin.

H315 Causes skin irritation.

H319 Causes serious eye irritation.

H361 Suspected of damaging fertility or the unborn child.