

# Safety Data Sheet

## beta-Ionone R

Revision date : 2025/08/08  
Version: 6.0

Page: 1/11  
(30035178/SDS\_GEN\_US/EN)

### 1. Identification

#### Product identifier used on the label

**beta-Ionone R**

#### Recommended use of the chemical and restriction on use

Recommended use\*: Chemical, Chemical for detergents, Cosmetic and oral care chemical, flavoring substance

Unsuitable for use: Not intended for sale to or use by the general public.

\* The "Recommended use" identified for this product is provided solely to comply with a Federal requirement and is not part of the seller's published specification. The terms of this Safety Data Sheet (SDS) do not create or infer any warranty, express or implied, including by incorporation into or reference in the seller's sales agreement.

#### Details of the supplier of the safety data sheet

##### Company:

BASF CORPORATION  
100 Park Avenue  
Florham Park, NJ 07932, USA

Telephone: +1 973 245-6000

#### Emergency telephone number

##### 24 Hour Emergency Response Information

CHEMTREC: 1-800-424-9300

BASF HOTLINE: 1-800-832-HELP (4357)

#### Other means of identification

Synonyms: (E)-4-(2,6,6-Trimethyl-1-cyclohexen-1-yl)-3-buten-2-one

### 2. Hazards Identification

#### According to Regulation 2024 OSHA Hazard Communication Standard; 29 CFR Part 1910.1200

#### Classification of the product

Aquatic Acute	2
Aquatic Chronic	2

Hazardous to the aquatic environment - acute
Hazardous to the aquatic environment - chronic

#### Label elements

# Safety Data Sheet

## beta-Ionone R

Revision date: 2025/08/08  
Version: 6.0

Page: 2/11  
(30035178/SDS\_GEN\_US/EN)

Pictogram:



Hazard Statement:

H401 Toxic to aquatic life.  
H411 Toxic to aquatic life with long lasting effects.

Precautionary Statements (Prevention):

P273 Avoid release to the environment.

Precautionary Statements (Response):

P391 Collect spillage.

Precautionary Statements (Disposal):

P501 Dispose of contents/container in accordance with local regulations.

### Hazards not otherwise classified

No data available.

## 3. Composition / Information on Ingredients

**According to Regulation 2024 OSHA Hazard Communication Standard; 29 CFR Part 1910.1200**

(E)-4-(2,6,6-trimethyl-1-cyclohexen-1-yl)-3-buten-2-one

CAS Number: 79-77-6

Content (W/W): 80.0 - 100.0%

Synonym: (E)-4-(2,6,6-Trimethyl-1-cyclohexen-1-yl)-3-buten-2-one

The actual concentration is withheld as a trade secret.

## 4. First-Aid Measures

### Description of first aid measures

#### General advice:

Remove contaminated clothing.

#### If inhaled:

Keep patient calm, remove to fresh air.

#### If on skin:

Wash thoroughly with soap and water

#### If in eyes:

Wash affected eyes for at least 15 minutes under running water with eyelids held open.

# Safety Data Sheet

## beta-Ionone R

Revision date: 2025/08/08  
Version: 6.0

Page: 3/11  
(30035178/SDS\_GEN\_US/EN)

### If swallowed:

Rinse mouth and then drink 200-300 ml of water.

### Most important symptoms and effects, both acute and delayed

Symptoms: No data available.

### Indication of any immediate medical attention and special treatment needed

#### Note to physician

Treatment: Symptomatic treatment (decontamination, vital functions).

---

## 5. Fire-Fighting Measures

### Extinguishing media

Suitable extinguishing media:  
dry powder, carbon dioxide, foam, water spray

Unsuitable extinguishing media for safety reasons:  
water jet

### Special hazards arising from the substance or mixture

Hazards during fire-fighting:  
carbon oxides, harmful vapours  
The substances/groups of substances mentioned can be released in case of fire.

### Advice for fire-fighters

Protective equipment for fire-fighting:  
Wear a self-contained breathing apparatus.

### Further information:

Dispose of fire debris and contaminated extinguishing water in accordance with official regulations.  
Cool endangered containers with water-spray.

### Impact Sensitivity:

Remarks: Based on the chemical structure there is no shock-sensitivity.

---

## 6. Accidental release measures

### Personal precautions, protective equipment and emergency procedures

Use personal protective clothing. Information regarding personal protective measures, see section 8.

### Environmental precautions

May be harmful to the aquatic environment. Prevent entry into drains and surface waters. Inform authorities in the event of product spillage to water courses or sewage systems.

### Methods and material for containment and cleaning up

For small amounts: Contain with absorbent material (e.g. sand, silica gel, acid binder, general purpose binder, sawdust).  
For large amounts: Dike spillage. Pump off product.

# Safety Data Sheet

## beta-Ionone R

Revision date: 2025/08/08  
Version: 6.0

Page: 4/11  
(30035178/SDS\_GEN\_US/EN)

Dispose of absorbed material in accordance with regulations.

---

## 7. Handling and Storage

### Precautions for safe handling

Handle in accordance with good industrial hygiene and safety practice.

Protection against fire and explosion:

Take precautionary measures against static discharges. Avoid all sources of ignition: heat, sparks, open flame.

### Conditions for safe storage, including any incompatibilities

Odour-sensitive: Segregate from products releasing odours.

Further information on storage conditions: Keep container tightly closed in a cool, well-ventilated place.

---

## 8. Exposure Controls/Personal Protection

No substance specific occupational exposure limits known.

### Personal protective equipment

#### Respiratory protection:

Breathing protection if gases/vapours are formed.

#### Hand protection:

Wear chemically impervious protective gloves.

#### Eye protection:

Tightly fitting safety goggles (chemical goggles).

#### Body protection:

Body protection must be chosen based on level of activity and exposure.

#### General safety and hygiene measures:

Handle in accordance with good industrial hygiene and safety practice. Wearing of closed work clothing is recommended. No eating, drinking, smoking or tobacco use at the place of work. Hands and/or face should be washed before breaks and at the end of the shift. Store work clothing separately.

---

## 9. Physical and Chemical Properties

Physical state:	liquid
Form:	liquid
Odour:	flowery
Odour threshold:	< 100 ppm
Colour:	colourless to slightly yellow
pH value:	not applicable

# Safety Data Sheet

## beta-Ionone R

Revision date: 2025/08/08  
Version: 6.0

Page: 5/11  
(30035178/SDS\_GEN\_US/EN)

Melting point:	-35 °C ( 1,013 hPa) Literature data.	
Freezing point:	No data available.	
Boiling point:	267.1 °C ( 1,013 hPa)	
Flash point:	126 °C	(ISO 2719, closed cup)
Flammability:	hardly combustible	(derived from flash point)
Lower explosion limit:	For liquids not relevant for classification and labelling. The lower explosion point may be 5 - 15 °C below the flash point.	
Upper explosion limit:	For liquids not relevant for classification and labelling.	
Autoignition:	273 °C	(DIN EN 14522)
Vapour pressure:	approx. 0.072 hPa ( 25 °C)	(measured)
Density:	Literature data. 0.9447 g/cm3 ( 20 °C)	
Relative density:	Literature data. 0.9447 ( 20 °C)	
Relative vapour density:	Literature data. > 1 ( 20 °C) Heavier than air.	(calculated)
Partitioning coefficient n-octanol/water (log Pow):	4 ( 25 °C) Literature data.	(OECD Guideline 117)
Refractive index:	approx. 1.516 - 1.522 ( 20 °C )	
Self-ignition temperature:	Based on its structural properties the product is not classified as self-igniting.	
Thermal decomposition:	approx. 280 °C (DSC (DIN 51007)) self-accelerating reaction	
Viscosity, dynamic:	11.2 mPa.s ( 20 °C) 5.04 mPa.s ( 40 °C)	(OECD Guideline 114) (OECD Guideline 114)
Viscosity, kinematic:	11.8 mm2/s ( 20 °C) 5.43 mm2/s ( 40 °C)	(OECD Guideline 114) (OECD Guideline 114)
Solubility in water:	0.11 g/l ( 20 °C)	
Molecular weight:	192.30 g/mol	
Evaporation rate:	Value can be approximated from Henry's Law Constant or vapor pressure.	

### Particle characteristics

# Safety Data Sheet

## beta-Ionone R

Revision date: 2025/08/08  
Version: 6.0

Page: 6/11  
(30035178/SDS\_GEN\_US/EN)

Particle size distribution: The substance / product is marketed or used in a non solid or granular form.

---

## 10. Stability and Reactivity

### Reactivity

No hazardous reactions if stored and handled as prescribed/indicated.

Corrosion to metals:

No corrosive effect on metal.

Oxidizing properties:

not fire-propagating

Formation of

flammable gases:

Remarks:

Forms no flammable gases in the presence of water.

### Chemical stability

The product is stable if stored and handled as prescribed/indicated.

### Possibility of hazardous reactions

No hazardous reactions if stored and handled as prescribed/indicated.

### Conditions to avoid

Avoid all sources of ignition: heat, sparks, open flame. Avoid electro-static discharge.

### Incompatible materials

None known during use and storage if used according to instructions.

### Hazardous decomposition products

Decomposition products:

Hazardous decomposition products: No hazardous decomposition products if stored and handled as prescribed/indicated.

Thermal decomposition:

approx. 280 °C (DSC (DIN 51007))

self-accelerating reaction

---

## 11. Toxicological information

### Primary routes of exposure

Routes of entry for solids and liquids are ingestion and inhalation, but may include eye or skin contact. Routes of entry for gases include inhalation and eye contact. Skin contact may be a route of entry for liquefied gases.

### Acute Toxicity/Effects

Acute toxicity

Assessment of acute toxicity: Virtually nontoxic after a single ingestion. Virtually nontoxic after a single skin contact.

# Safety Data Sheet

## beta-Ionone R

Revision date: 2025/08/08  
Version: 6.0

Page: 7/11  
(30035178/SDS\_GEN\_US/EN)

### Oral

Type of value: LD50  
Species: rat  
Value: > 4,000 mg/kg

### Inhalation

No data available.

### Dermal

Type of value: LD50  
Species: rat (male/female)  
Value: > 2,000 mg/kg (OECD Guideline 402)  
The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

### Assessment other acute effects

Assessment of STOT single:  
Based on available data, the classification criteria are not met.

### Irritation / corrosion

Assessment of irritating effects: Not irritating to the skin. Not irritating to the eyes.

### Skin

Species: rabbit  
Result: non-irritant  
Method: OECD Guideline 404

### Eye

Species: rabbit  
Result: non-irritant  
Method: OECD Guideline 405

### Sensitization

Assessment of sensitization: The substance did not cause skin sensitization in humans.

Species: guinea pig

Result: Non-sensitizing.

Method: similar to OECD guideline 406

The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

Species: human

Result: Non-sensitizing.

Method: Human patch test

The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

### Aspiration Hazard

not applicable

## **Chronic Toxicity/Effects**

### Repeated dose toxicity

Assessment of repeated dose toxicity: No substance-specific organotoxicity was observed after repeated administration to animals.

# Safety Data Sheet

## beta-Ionone R

Revision date: 2025/08/08  
Version: 6.0

Page: 8/11  
(30035178/SDS\_GEN\_US/EN)

### Genetic toxicity

Assessment of mutagenicity: Most of the results from the available studies show no evidence of a mutagenic effect. The product has not been fully tested. The statements have been derived in parts from products of a similar structure or composition.

### Carcinogenicity

Assessment of carcinogenicity: The whole of the information assessable provides no indication of a carcinogenic effect.

### Reproductive toxicity

Assessment of reproduction toxicity: The results of animal studies gave no indication of a fertility impairing effect.

### Teratogenicity

Assessment of teratogenicity: No indications of a developmental toxic / teratogenic effect were seen in animal studies.

---

## 12. Ecological Information

### **Toxicity**

#### Aquatic toxicity

Assessment of aquatic toxicity:

Acutely toxic for aquatic organisms. The inhibition of the degradation activity of activated sludge is not anticipated when introduced to biological treatment plants in appropriate low concentrations. May cause long-term adverse effects in the aquatic environment.

#### Toxicity to fish

LC50 (96 h) 5.09 mg/l, Pimephales promelas (EPA 72-1, Flow through.)

The details of the toxic effect relate to the nominal concentration. The product has low solubility in the test medium. An aqueous solution prepared with solubilizers has been tested.

#### Aquatic invertebrates

EC50 (48 h) 4.03 mg/l, Daphnia magna (OECD Guideline 202, part 1, static)

The details of the toxic effect relate to the nominal concentration.

#### Aquatic plants

EC50 (72 h) 22.15 mg/l (growth rate), Scenedesmus subspicatus (DIN 38412 Part 9, static)

The details of the toxic effect relate to the nominal concentration. The product has low solubility in the test medium. An aqueous solution prepared with solubilizers has been tested.

#### Chronic toxicity to fish

Study scientifically not justified.

#### Chronic toxicity to aquatic invertebrates

Study scientifically not justified.

#### Assessment of terrestrial toxicity

No data available concerning terrestrial toxicity.

Study scientifically not justified.

#### Soil living organisms

Toxicity to soil dwelling organisms:



# Safety Data Sheet

## beta-Ionone R

Revision date: 2025/08/08  
Version: 6.0

Page: 9/11  
(30035178/SDS\_GEN\_US/EN)

No data available.

### Toxicity to terrestrial plants

No data available.

### Other terrestrial non-mammals

LD50 > 562 mg/kg, Agelaius phoeniceus  
Unspecified

## Microorganisms/Effect on activated sludge

### Toxicity to microorganisms

DIN EN ISO 8192-OECD 209-88/302/EEC,P. C aerobic  
activated sludge, domestic/EC50 (30 min): approx. 1,000 mg/l

## Persistence and degradability

### Assessment biodegradation and elimination (H2O)

Readily biodegradable (according to OECD criteria).

### Elimination information

70 - 80 % BOD of the ThOD (28 d) (OECD Guideline 301 F) (aerobic, activated sludge, domestic)

### Assessment of stability in water

Substance is readily biodegradable, therefore hydrolysis is not expected to be relevant.

## Bioaccumulative potential

### Assessment bioaccumulation potential

Because of the n-octanol/water distribution coefficient (log Pow) accumulation in organisms is possible.

## Mobility in soil

### Assessment transport between environmental compartments

The substance will slowly evaporate into the atmosphere from the water surface.  
Adsorption to solid soil phase is not expected.

---

## 13. Disposal considerations

### **Waste disposal of substance:**

Observe national and local legal requirements.

### **Container disposal:**

Dispose of in accordance with national, state and local regulations.

---

## 14. Transport Information

### **Land transport**

USDOT

Hazard class: 9

Packing group: III

ID number: UN 3082

# Safety Data Sheet

## beta-Ionone R

Revision date: 2025/08/08  
Version: 6.0

Page: 10/11  
(30035178/SDS\_GEN\_US/EN)

Hazard label: 9, EHSM  
Proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (contains BETA-IONONE)

### Sea transport

IMDG  
Hazard class: 9  
Packing group: III  
ID number: UN 3082  
Hazard label: 9, EHSM  
Marine pollutant: YES  
Proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (contains BETA-IONONE)

### Air transport

IATA/ICAO  
Hazard class: 9  
Packing group: III  
ID number: UN 3082  
Hazard label: 9, EHSM  
Proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (contains BETA-IONONE)

### Further information

Product may be shipped as non-hazardous in suitable packages containing a net quantity of 5 L or less under the provisions of various regulatory agencies: ADR, RID, ADN: Special Provision 375; IMDG: 2.10.2.7; IATA: A197; TDG: Special Provision 99(2); 49CFR: §171.4 (c) (2) and also the Special Provision 375 in Appendix B which is regulated in China "Regulations Concerning Road Transportation of Dangerous Goods Part 3: Index of dangerous goods name and transportation requirements" (JT/T 617.3)

## 15. Regulatory Information

### Federal Regulations

#### Registration status:

Chemical TSCA, US released / listed

Chemical TSCA, US

All substances are TSCA listed and active.

**EPCRA 311/312 (Hazard categories):** Refer to SDS section 2 for GHS hazard classes applicable for this product.

#### NFPA Hazard codes:

Health: 0 Fire: 1 Reactivity: 0 Special:

#### HMIS III rating

Health: 0 Flammability: 1 Physical hazard: 0

# Safety Data Sheet

## beta-Ionone R

Revision date: 2025/08/08  
Version: 6.0

Page: 11/11  
(30035178/SDS\_GEN\_US/EN)

### **Assessment of the hazard classes according to UN GHS criteria (most recent version):**

Aquatic Acute	2	Hazardous to the aquatic environment - acute
Aquatic Chronic	2	Hazardous to the aquatic environment - chronic

## 16. Other Information

**SDS Prepared by:**  
BASF NA Product Regulations  
SDS Prepared on: 2025/08/08

We support worldwide Responsible Care® initiatives. We value the health and safety of our employees, customers, suppliers and neighbors, and the protection of the environment. Our commitment to Responsible Care is integral to conducting our business and operating our facilities in a safe and environmentally responsible fashion, supporting our customers and suppliers in ensuring the safe and environmentally sound handling of our products, and minimizing the impact of our operations on society and the environment during production, storage, transport, use and disposal of our products.

IMPORTANT: WHILE THE DESCRIPTIONS, DESIGNS, DATA AND INFORMATION CONTAINED HEREIN ARE PRESENTED IN GOOD FAITH AND BELIEVED TO BE ACCURATE, IT IS PROVIDED FOR YOUR GUIDANCE ONLY. BECAUSE MANY FACTORS MAY AFFECT PROCESSING OR APPLICATION/USE, WE RECOMMEND THAT YOU MAKE TESTS TO DETERMINE THE SUITABILITY OF A PRODUCT FOR YOUR PARTICULAR PURPOSE PRIOR TO USE. NO WARRANTIES OF ANY KIND, EITHER EXPRESSED OR IMPLIED, INCLUDING WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, ARE MADE REGARDING PRODUCTS DESCRIBED OR DESIGNS, DATA OR INFORMATION SET FORTH, OR THAT THE PRODUCTS, DESIGNS, DATA OR INFORMATION MAY BE USED WITHOUT INFRINGING THE INTELLECTUAL PROPERTY RIGHTS OF OTHERS. IN NO CASE SHALL THE DESCRIPTIONS, INFORMATION, DATA OR DESIGNS PROVIDED BE CONSIDERED A PART OF OUR TERMS AND CONDITIONS OF SALE. FURTHER, YOU EXPRESSLY UNDERSTAND AND AGREE THAT THE DESCRIPTIONS, DESIGNS, DATA, AND INFORMATION FURNISHED BY OUR COMPANY HEREUNDER ARE GIVEN GRATIS AND WE ASSUME NO OBLIGATION OR LIABILITY FOR THE DESCRIPTION, DESIGNS, DATA AND INFORMATION GIVEN OR RESULTS OBTAINED, ALL SUCH BEING GIVEN AND ACCEPTED AT YOUR RISK.

Date / Revised: 2025/08/08  
Date / Previous version: 2022/08/31

Version: 6.0  
Previous version: 5.0

END OF DATA SHEET