



8210 N. Austin Avenue, Morton Grove, IL 60053-3205, U.S.A.
 847-967-6000 800-323-8144
 (Monday - Friday: 7:30 a.m. - 4:00 p.m. CST)

Emergency Contact:
 INFOTRAC 800-535-5053 [U.S.A.]

Name: (R)-(-)-Benzoin
 Code: 1-002541-100, 1-010245-100, 1-010251-100

SAFETY DATA SHEET

SECTION 1 IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY

- 1.1 Product Identifier
 - Name (R)-(-)-Benzoin
 - Code 1-002541-100, 1-010245-100, 1-010251-100
- 1.2 Use of Substance/Mixture
 - Use Analytical—Chiral reagent
- 1.3 Details of Manufacturer/Supplier
 - Company Regis Technologies, Inc.
 8210 N. Austin Avenue
 Morton Grove, IL 60053
 847-967-6000; 800-323-8144 (toll free)
 Email: cservice@registech.com
 www.registech.com
- 1.4 Emergency Telephone
 - INFOTRAC 800-535-5053 [U.S.A.]

SECTION 2 HAZARDS IDENTIFICATION

- 2.1 Classification of the Substance or Mixture
 - GHS Classification Not a hazardous substance or mixture.
- 2.2 GHS Label Elements, including precautionary statements
 - GHS Label Elements Not required.
 - Precautionary Statements
 - [Response] P302+P352-IF ON SKIN: Wash with plenty of soap and 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.
 - [Storage] P404: Store in a closed container.
 P411+P235+P410: Store at temperatures not exceeding +25 °C/+77°F. Keep cool. Protect from light.
- 2.3 Hazards not otherwise classified (HNOC) or not covered by GHS – none
 No ingredients are hazardous according to OSHA criteria.

SECTION 3 COMPOSITION / INFORMATION ON INGREDIENTS

Name (R)-(-)-Benzoin

Synonyms Ethanone, 2-hydroxy-1,2-diphenyl-, (R)- (9CI); Benzoin, (-)- (8CI); (-)-2-Hydroxy-1,2-diphenylethanone; (-)-2-Hydroxy-2-phenylacetophenone; L-Benzoin;

Hazardous components

Component	Classification	Concentration
(R)-(-)-Benzoin	Not classifiable under GHS.	98-100% (>98% ee)
CAS No. 5928-66-5		
EC No. No data available		
Chem. Formula C ₁₄ H ₁₂ O ₂		
Mol. Weight 212.25		

For full text of the H-Statements mentioned in this Section, see Section 16.

Some abbreviations used throughout this MSDS: NA=not applicable; NE=not established; U=unknown/unavailable; NL=not listed; N=no; Y=yes.



Name: (R)-(-)-Benzoin
 Code: 1-002541-100, 1-010245-100, 1-010251-100

..... **SAFETY DATA SHEET**

SECTION 4 **FIRST AID MEASURES**

- 4.1 Description of first aid measures
 - General: No data available on the specific product.
 - Eye contact: Rinse eyes with plenty of water for at least 15 minutes; lift eyelids occasionally. If irritation persists, consult physician.
 - Skin contact: Immediately remove contaminated clothing and shoes, then wash skin with soap and plenty of water. If irritation persists, consult physician.
 - Inhalation: Remove to fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration and keep person warm and at rest. Consult physician.
 - Ingestion: Never give anything by mouth to an unconscious person. Avoid vomiting. Consult physician immediately.
 - Physician note: Symptomatic and supportive care. There is no specific antidote.
- 4.2 Most important symptoms and effects, both acute and delayed.
 The most important known symptoms or effects, if any, are described in Section 2.2 and/or in Section 11.
- 4.3 Indication of immediate medical attention and special treatment needed.
 No data available.

SECTION 5 **FIRE-FIGHTING MEASURES**

- 5.1 Suitable Extinguishing Media
 Carbon dioxide, dry chemical powder, or appropriate foam.
- 5.2 Specific hazards arising from the chemical.
 Avoid inhalation of material or combustion by-products.
 Emits toxic fumes under fire conditions: May emit carbon oxides.
- 5.3 Advice for fire-fighters
 Wear protective clothing to prevent contact with skin and eyes as appropriate to the general conditions.

SECTION 6 **ACCIDENTAL RELEASE MEASURES**

- 6.1 Personal precautions, protective equipment, and emergency procedures
 For non-emergency personnel - Avoid material contact or inhalation of dusts or contaminated mists. Evacuate unnecessary personnel from area.

 For emergency responders – Wear protective clothing to prevent contact with skin and eyes. Avoid breathing dusts. See Section 8.3.
- 6.2 Environmental precautions
 Prevent material from entering drains.
- 6.3 Methods of clean up
 Ventilate area. Isolate spilled material. If in solution, absorb using chemically compatible spill pillows, or similar adsorbent material.
 If dry, sweep up without raising dust, seal in appropriate hazardous waste container, and hold for proper waste disposal. Keep out of water supplies and sewers. Wash spill site after material pickup is complete.

SECTION 7 **HANDLING AND STORAGE**

- 7.1 Safe Handling Precautions
 Provide appropriate exhaust ventilation at places where dust is formed.
 Wear suitable protective equipment to avoid contact with skin, eyes, or inhalation of dusts.
 May be irritating to skin or eyes. May be irritating to mucous membranes, if mists are inhaled. May be harmful if ingested.
 Wash after handling.

Some abbreviations used throughout this MSDS: NA=not applicable; NE=not established; U=unknown/unavailable; NL=not listed; N=no; Y=yes.



Name: (R)-(-)-Benzoin
 Code: 1-002541-100, 1-010245-100, 1-010251-100

.....**SAFETY DATA SHEET**.....

7.2 Storage Conditions

Store tightly closed in a cool, dry, and well ventilated place. Store at temperatures not exceeding -20 °C/-4 °F. Protect from light. Store away from incompatible materials (See Section 10.).

SECTION 8 EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1 Control parameters

Exposure limits: (R)-(-)-Benzoin, 99% (>98% ee) –
 OSHA – PEL No limits established.
 ACGIH – TLV No limits established.

Environmental Do not empty into drains.

8.2 Appropriate engineering controls

Safety shower and eye wash
 Local exhaust and mechanical ventilation required. Hood recommended. Fume scrubber.

8.3 Personal protection

Eye/Face Chemical safety eyewear or goggles.
 Hand Compatible chemical-resistant gloves.
 Respiratory If exposure to mists likely: NIOSH/MSHA approved respirator for dusts, and organic vapor and mists as appropriate for solvent that the material may be dissolved in.
 Dermal (not hand) Protective Clothing (e.g., lab coat)
 Hygiene Avoid inhalation, ingestion; contact with eyes, skin, and clothing; Avoid prolonged or repeated exposure. Wash thoroughly after handling.

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on physical and chemical data

Appearance	Form: powder	
	Colour: light yellow	
Odor	Camphor	
Odor threshold	No data available.	
pH	Neutral	
Melting point/freezing point	135-137°C (275-279°F)	
Initial boiling point and range:	No data available.	
Flash point	No data available.	
Evaporation rate (BuAc = 1.0)	No data available.	
Flammability (gas, liquid, solid)	No data available.	
OSHA Flammability Class	No data available.	
Flammability or explosive limits (%v/v)	UEL (upper explosive limit)	No data available.
	LEL (lower explosive limit)	No data available.
Vapor pressure (mmHg)	No data available.	
Vapor density (air=1):	No data available.	
Relative density (g/cm ³)	No data available.	
Solubility(ies):		
Water	No data available.	
Water reactive	No data available.	
Solubility (other)	No data available.	
Partition coefficient: N-octanol/water	Kow (Pow) = No data available.	
Auto-ignition temperature	No data available.	
Decomposition temperature	No data available.	
Viscosity (dynamic, kinematic - specify)	No data available.	

Some abbreviations used throughout this MSDS: NA=not applicable; NE=not established; U=unknown/unavailable; NL=not listed; N=no; Y=yes.



8210 N. Austin Avenue, Morton Grove, IL 60053-3205, U.S.A.
 847-967-6000 800-323-8144
 (Monday - Friday: 7:30 a.m. - 4:00 p.m. CST)

Emergency Contact:
 INFOTRAC 800-535-5053 [U.S.A.]

Name: (R)-(-)-Benzoin
 Code: 1-002541-100, 1-010245-100, 1-010251-100

..... **SAFETY DATA SHEET**

SECTION 10 **STABILITY AND REACTIVITY**

- 10.1 Reactivity
 No dangerous reaction known under conditions of normal use.
- 10.2 Chemical Stability
 Stable if stored dry, under nitrogen in light-tight containers, in the dark, at or below +4°C (+40°F).
- 10.3 Possibility of hazardous reactions
 No hazardous reactions known under conditions of normal use.
- 10.4 Conditions to avoid
 Avoid incompatibilities.
 Keep out of water supplies and sewers.
- 10.5 Incompatible materials
 Light (photosensitive), heat—Discolors or decomposes upon exposure to light or heat.
 Strong oxidizing agents
- 10.6 Hazardous decomposition products
 Combustion carbon oxides

SECTION 11 **TOXICOLOGICAL INFORMATION**.....

- 11.1 Toxicological Information

Acute toxicity	Oral LD50	No data available.
	Inhalation LC50	No data available.
	Dermal LD50	No data available.
	Other acute toxicity	No data available.
Skin corrosion/irritation	No data available.	
Serious eye damage/irritation	No data available.	
Respiratory irritation	No data available.	
Respiratory or skin sensitization	No data available.	
Germ cell mutagenicity	No data available.	
Carcinogenicity		
IARC	No data available.	
NTP	No data available.	
OSHA	No data available.	
Reproductive toxicity (Including teratogenicity)	No data available.	
Specific target organ toxicity (STOT)		
STOT-single exposure	No data available.	
STOT-repeated exposure	No data available.	
Aspiration hazard	No data available.	
RTECS Number	This compound may react similar to (R,S)-Benzoin, CAS #119-53-9, RTECS # DI1590000, however no specific information is available on the enantiomer.	
- 11.2 Further Information

Potential health effects	
Eye	May be irritating.
Skin	May be irritating.
Inhalation	May be irritating to mucous membranes and respiratory tract. May be harmful.
Ingestion	May be harmful.
Symptoms	See above route. Pre-existing conditions that may be aggravated: not determined.
Miscellaneous	No data available.

Some abbreviations used throughout this MSDS: NA=not applicable; NE=not established; U=unknown/unavailable; NL=not listed; N=no; Y=yes.



8210 N. Austin Avenue, Morton Grove, IL 60053-3205, U.S.A.
 847-967-6000 800-323-8144
 (Monday - Friday: 7:30 a.m. - 4:00 p.m. CST)

Emergency Contact:
 INFOTRAC 800-535-5053 [U.S.A.]

Name: (R)-(-)-Benzoin
 Code: 1-002541-100, 1-010245-100, 1-010251-100

..... **SAFETY DATA SHEET**

SECTION 12 **ECOLOGICAL INFORMATION**

- 12.1 Ecotoxicity No data available.
- 12.2 Persistence and degradability No data available.
- 12.3 Bioaccumulative potential BCF = No data available.
- 12.4 Motility in soil Log Kow = No data available.
- 12.5 Other adverse effects No data available.

SECTION 13 **DISPOSAL CONSIDERATIONS**

- 13.1 Disposal methods
 Waste Disposal That which cannot be recovered or recycled, should be disposed of in accordance with all applicable international, national, regional, state, and local laws. Do NOT dump into any sewer, on ground, or into any body of water.

SECTION 14 **TRANSPORT INFORMATION**

- 14.1 DOT (US) Not regulated
- 14.2 IMDG Not regulated
- 14.3 IATA Not regulated

SECTION 15 **REGULATORY INFORMATION**

- 15.1 Safety, health and Environmental regulations specific for the product in question.

NFPA: H0 F0 R0 HMIS: H0 F0 PH0

- 15.2 Chemical Inventory Lists

.....(R)-(-)-Benzoin

CAS Number 5928-66-5

TSCA: NL

EINECS: NL

Number NA

CERCLA [Section 103 (40 CFR 302.4)]: NL

RQ (lbs) NA

RCRA Waste Code NA

Clean Air Act

[Section 112r (40 CFR 68)]: NL

TQ (lbs) NA

Contains Ozone Depleters (Class I or Class II) N

[Section 103 (40 CFR 302.4)]: NL

SARA Title III Notification [40 CFR 302.4]:

Section 302/304 (EHS) Ingredient [40 CFR 355.3] NL

TPQ (lbs) NA

RQ (lbs) NA

Section 313 Ingredient [40 CFR 372.65] NL

SARA Hazards Acute..... N Chronic..... N Fire N Pressure N Reactivity N

OSHA Process Safety [29 CFR 1910.119]: NL

TQ (lbs) NA

U.S. State Lists: NL

States NJ, PA

On CA 65 Significant Risk Level NL

Some abbreviations used throughout this MSDS: NA=not applicable; NE=not established; U=unknown/unavailable; NL=not listed; N=no; Y=yes.



8210 N. Austin Avenue, Morton Grove, IL 60053-3205, U.S.A.
 847-967-6000 800-323-8144
 (Monday - Friday: 7:30 a.m. - 4:00 p.m. CST)

Emergency Contact:
 INFOTRAC 800-535-5053 [U.S.A.]

Name: (R)-(-)-Benzoin
 Code: 1-002541-100, 1-010245-100, 1-010251-100

..... **SAFETY DATA SHEET**

SECTION 16 **OTHER INFORMATION**

16.1 Literature References

None.

The above information is believed to be correct to the best of our present state knowledge, but does not purport to be all-inclusive and shall be used only as a guide. It characterizes the product with regard to the appropriate safety precautions. It does not represent a guarantee of any properties of the product.

This is the last page of this MSDS.