

# • SAFETY DATA SHEET

Version 6.9  
Revision Date 01/29/2026  
Print Date 01/30/2026

## SECTION 1. IDENTIFICATION

### 1.1 Product identifiers

Product name : R-Phycoerythrin

Product Number : 52412

Brand : Sigma

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

Identified uses : Laboratory chemicals, Synthesis of substances

Uses advised against : The product is being supplied under the TSCA R&D Exemption (40 CFR Section 720.36). It is the recipient's responsibility to comply with the requirements of the R&D exemption. The product may not be used for a non-exempt commercial purpose under TSCA unless appropriate consent is granted in writing by MilliporeSigma.

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

Company : Sigma-Aldrich Inc.  
3050 SPRUCE ST  
ST. LOUIS MO 63103  
UNITED STATES

Telephone : +1 314 771-5765

Fax : +1 800 325-5052

### 1.4 Emergency telephone number

Emergency Phone # : 800-424-9300 CHEMTREC (USA) +1-703-527-3887 CHEMTREC (International) 24 Hours/day; 7 Days/week

## SECTION 2. HAZARDS IDENTIFICATION

**GHS classification in accordance with the OSHA Hazard Communication Standard (29 CFR 1910.1200)**

**Hazards for the product as supplied**

Short-term (acute) aquatic hazard : Category 3

**Other hazards**

None known.

**GHS label elements**

Hazard statements : H402 Harmful to aquatic life.

Precautionary statements : **Prevention:**  
P273 Avoid release to the environment.

**Disposal:**  
P501 Dispose of contents/ container to an approved waste disposal plant.

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**SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS**

Substance / Mixture : Mixture

CAS-No. : Not Assigned

**Components**

Chemical name	CAS No./Unique ID	Concentration (% w/w)	Trade secret
ammonium sulphate	7783-20-2*	>= 50 - < 70	-

\* Indicates that the identifier is a CAS No.  
Actual concentration is withheld as a trade secret

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**SECTION 4. FIRST AID MEASURES**

If inhaled : After inhalation: fresh air.

In case of skin contact : In case of skin contact: Take off immediately all contaminated clothing. Rinse skin with water/ shower.

In case of eye contact : After eye contact: rinse out with plenty of water. Remove contact lenses.

If swallowed : After swallowing: make victim drink water (two glasses at most). Consult doctor if feeling unwell.

Most important symptoms and effects, both acute and delayed : The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

Protection of first-aiders : For personal protection see section 8.

Notes to physician : No data available

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## SECTION 5. FIREFIGHTING MEASURES

Suitable extinguishing media : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable extinguishing media : For this substance/mixture no limitations of extinguishing agents are given.

Specific hazards during fire fighting : Not combustible.

Ambient fire may liberate hazardous vapours.

Hazardous combustion products : Nitrogen oxides (NO<sub>x</sub>)

Sulphur oxides

Oxides of phosphorus

Sodium oxides

Specific extinguishing methods : No data available

Further information : Suppress (knock down) gases/vapours/mists with a water spray jet.  
Prevent fire extinguishing water from contaminating surface water or the ground water system.

Special protective equipment for fire-fighters : In the event of fire, wear self-contained breathing apparatus.

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## SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures : Advice for non-emergency personnel:  
Do not breathe vapours, aerosols.  
Evacuate the danger area, observe emergency procedures, consult an expert.

Advice for emergency responders:  
For personal protection see section 8.

Environmental precautions	: Do not let product enter drains.
Methods and materials for containment and cleaning up	: Cover drains. Collect, bind, and pump off spills. Observe possible material restrictions (see sections 7 and 10). Take up with liquid-absorbent material (e.g. Chemizorb® ). Dispose of properly. Clean up affected area.

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## SECTION 7. HANDLING AND STORAGE

For precautions see section 2.2.

Further information on storage conditions	: Tightly closed.
Storage class	: 12, Non Combustible Liquids
Recommended storage temperature	: 36 - 46 °F / 2 - 8 °C
Further information on storage stability	: Store under inert gas. Light sensitive.

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## SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### Ingredients with workplace control parameters

Contains no substances with occupational exposure limit values.

**Engineering measures** : No data available

### Personal protective equipment

Respiratory protection : Not required; except in case of aerosol formation.

Hand protection

Material	: Nitrile rubber
Break through time	: 480 min
Glove thickness	: 0.11 mm
Protective index	: Full contact
Manufacturer	: Dermatril® (KCL 740 / Aldrich Z677272, Size M)

Material	: Nitrile rubber
Break through time	: 480 min
Glove thickness	: 0.11 mm

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Protective index	: Splash contact
Manufacturer	: Dermatril® (KCL 740 / Aldrich Z677272, Size M)
Manufacturer	: data source: KCL GmbH, D-36124 Eichenzell, phone +49 (0)6659 87300, e-mail sales@kcl.de, test method: EN374
Remarks	: Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands. If used in solution, or mixed with other substances, and under conditions which differ from EN 374, contact the supplier of the CE approved gloves. This recommendation is advisory only and must be evaluated by an industrial hygienist and safety officer familiar with the specific situation of anticipated use by our customers. It should not be construed as offering an approval for any specific use scenario.
Eye protection	: Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU). Safety glasses
Hygiene measures	: Change contaminated clothing. Wash hands after working with substance.

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## SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	: liquid
Color	: No data available
Odor	: No data available
Odor Threshold	: No data available
pH	: No data available
Melting point	: No data available
Boiling point/boiling range	: No data available
Flash point	: Not applicable
Evaporation rate	: No data available
Flammability (solid, gas)	: No data available

Flammability (liquids)	: The product is not flammable.
Burning rate	: No data available
Self-ignition	: Not applicable
Upper explosion limit / Upper flammability limit	: Not applicable
Lower explosion limit / Lower flammability limit	: Not applicable
Vapor pressure	: No data available
Relative vapour density	: No data available
Relative density	: No data available
Density	: No data available
Water solubility	: No data available
Partition coefficient: n- octanol/water	: No data available
Autoignition temperature	: Not applicable
Decomposition temperature	: No data available
Viscosity, dynamic	: No data available
Viscosity, kinematic	: No data available
Flow time	: No data available
Explosive properties	: Not classified as explosive.
Oxidizing properties	: none
Particle characteristics Particle size	: No data available

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## SECTION 10. STABILITY AND REACTIVITY

Reactivity	: No data available
Chemical stability	: The product is chemically stable under standard ambient conditions (room temperature) .

Possibility of hazardous reactions : No data available

Conditions to avoid : Exposure to light.  
no information available

Incompatible materials : No data available

Hazardous decomposition products : In the event of fire: see section 5

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## **SECTION 11. TOXICOLOGICAL INFORMATION**

### **11.1 Information on toxicological effects**

#### **Mixture**

##### **Acute toxicity**

Oral: No data available

Inhalation: No data available

Dermal: No data available

Acute toxicity estimate Dermal - 4,024 mg/kg  
(Calculation method)  
No data available

##### **Skin corrosion/irritation**

Remarks: No data available

##### **Serious eye damage/eye irritation**

Remarks: No data available

##### **Respiratory or skin sensitization**

No data available

##### **Germ cell mutagenicity**

No data available

##### **Carcinogenicity**

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

OSHA: No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens.

##### **Reproductive toxicity**

No data available

No data available

##### **Specific target organ toxicity - single exposure**

No data available

**Specific target organ toxicity - repeated exposure**

No data available

**Aspiration hazard**

No data available

**11.2 Additional Information**

Hazardous properties cannot be excluded but are unlikely when the product is handled appropriately.

**Components****ammonium sulphate****Acute toxicity**

LD50 Oral - Rat - male and female - 4,250 mg/kg

(OECD Test Guideline 401)

Inhalation: No data available

LD50 Dermal - Rat - male and female - > 2,000 mg/kg

(OECD Test Guideline 434)

**Skin corrosion/irritation**

Skin - Rabbit

Result: No skin irritation - 20 h

Remarks: (ECHA)

**Serious eye damage/eye irritation**

Eyes - Rabbit

Result: No eye irritation

Remarks: (ECHA)

**Respiratory or skin sensitization**

Maximisation Test - Guinea pig

Result: negative

(US-EPA)

**Germ cell mutagenicity**

Test Type: Ames test

Test system: *S. typhimurium*

Result: negative

Test Type: Mutagenicity (mammal cell test): chromosome aberration.

Test system: Human lymphocytes

Result: negative

Test Type: In vitro mammalian cell gene mutation test

Test system: Chinese hamster lung cells

Result: negative

Species: Mouse - male - Bone marrow

Remarks: (ECHA)

**Carcinogenicity**

No data available

**Reproductive toxicity**

No data available



**Specific target organ toxicity - single exposure**

No data available

**Specific target organ toxicity - repeated exposure****Aspiration hazard**

No data available

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**SECTION 12. ECOLOGICAL INFORMATION****Ecotoxicity****Product:**

Toxicity to fish : Remarks: No data available

**Components:****ammonium sulphate:**

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): 53 mg/l  
End point: mortality  
Exposure time: 96 h  
Analytical monitoring: yes  
Remarks: (ECHA)

Toxicity to daphnia and other aquatic invertebrates : EC50 (Ceriodaphnia (water flea)): 121.7 mg/l  
End point: Immobilization  
Exposure time: 48 h  
Test Type: static test  
Analytical monitoring: yes  
Method: US-EPA

Toxicity to algae/aquatic plants : ErC50 (Chlorella vulgaris (Fresh water algae)): 2,700 mg/l  
Exposure time: 18 Days  
Test Type: static test  
Remarks: (ECHA)

Toxicity to fish (Chronic toxicity) : EC10 (Lepomis macrochirus): 5.29 mg/l  
Exposure time: 30 d  
Test Type: flow-through test  
Analytical monitoring: yes  
Remarks: (ECHA)

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : EC10 (Daphnia (water flea)): 3.12 mg/l  
End point: reproduction rate  
Exposure time: 70 d  
Test Type: semi-static test  
Analytical monitoring: yes  
Method: US-EPA

Toxicity to : EC50 (activated sludge): 1,618 mg/l

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microorganisms

Exposure time: 30 min

Test Type: static test

Method: OECD Test Guideline 209

## **Persistence and degradability**

### **Product:**

Biodegradability : Remarks: No data available

### **Components:**

#### **ammonium sulphate:**

Biodegradability : Remarks: The methods for determining biodegradability are not applicable to inorganic substances.

## **Bioaccumulative potential**

### **Product:**

Bioaccumulation : Remarks: No data available

### **Components:**

#### **ammonium sulphate:**

Partition coefficient: n-octanol/water : Remarks: Not applicable for inorganic substances

## **Mobility in soil**

### **Product:**

Stability in soil : Remarks: No data available

## **Other adverse effects**

### **Components:**

#### **ammonium sulphate:**

Results of PBT and vPvB assessment : Substance does not meet the criteria for PBT or vPvB according to Regulation (EC) No 1907/2006, Annex XIII.

Additional ecological information : Biological effects:

Fertilising effect possible.

Discharge into the environment must be avoided.

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## SECTION 13. DISPOSAL CONSIDERATIONS

### Disposal methods

Waste from residues : Waste material must be disposed of in accordance with the national and local regulations. Leave chemicals in original containers. No mixing with other waste. Handle uncleaned containers like the product itself.

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## SECTION 14. TRANSPORT INFORMATION

### International Regulations

#### IATA-DGR

Not regulated as a dangerous good

#### IMDG-Code

Not regulated as a dangerous good

#### Transport in bulk according to IMO instruments

Not applicable for product as supplied.

### National Regulations

#### 49 CFR Road

Not regulated as a dangerous good

Poison Inhalation Hazard : No

### Special precautions for user

Remarks : Not classified as dangerous in the meaning of transport regulations.

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## SECTION 15. REGULATORY INFORMATION

### CERCLA Reportable Quantity

Components	CAS-No.	Component RQ (lbs)	Calculated product RQ (lbs)
disodium hydrogen orthophosphate	7558-79-4	5000	

### SARA 304 Extremely Hazardous Substances Reportable Quantity

Components	CAS-No.	Component RQ (lbs)	Calculated product RQ (lbs)
sodium azide	26628-22-8	1000	

### SARA 302 Extremely Hazardous Substances Threshold Planning Quantity

This material does not contain any components with a section 302 EHS TPQ.

**SARA 311/312 Hazards** : No SARA Hazards

**SARA 313** : The following components are subject to reporting levels established by SARA Title III, Section 313:

ammonium sulphate	7783-20-2	>= 50 - < 70 %
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**US State Regulations**

**Massachusetts Right To Know**

ammonium sulphate	7783-20-2
disodium hydrogen orthophosphate	7558-79-4
sodium azide	26628-22-8

**Massachusetts Right To Know**

ammonium sulphate	7783-20-2
water	7732-18-5
disodium hydrogen orthophosphate	7558-79-4
sodium azide	26628-22-8

**Pennsylvania Right To Know**

ammonium sulphate	7783-20-2
water	7732-18-5
disodium hydrogen orthophosphate	7558-79-4

**Pennsylvania Right To Know**

ammonium sulphate	7783-20-2
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**Maine Chemicals of High Concern**

water	7732-18-5
disodium hydrogen orthophosphate	7558-79-4

**Vermont Chemicals of High Concern**

water	7732-18-5
disodium hydrogen orthophosphate	7558-79-4

**Washington Chemicals of High Concern**

water	7732-18-5
disodium hydrogen orthophosphate	7558-79-4

**New Jersey Right To Know**

ammonium sulphate	7783-20-2
water	7732-18-5
disodium hydrogen orthophosphate	7558-79-4

**The components of this product are reported in the following inventories:**

TSCA : Product contains substance(s) not listed on TSCA inventory.

**TSCA list**

No substances are subject to a Significant New Use Rule.

No substances are subject to TSCA 12(b) export notification requirements.

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## SECTION 16. OTHER INFORMATION

### Full text of other abbreviations

AIIC - Australian Inventory of Industrial Chemicals; ASTM - American Society for the Testing of Materials; bw - Body weight; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DOT - Department of Transportation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; EHS - Extremely Hazardous Substance; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonised System; GLP - Good Laboratory Practice; HMIS - Hazardous Materials Identification System; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organisation; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardisation; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; MSHA - Mine Safety and Health Administration; n.o.s. - Not Otherwise Specified; NFPA - National Fire Protection Association; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NTP - National Toxicology Program; NZIoC - New Zealand Inventory of Chemicals; OECD - Organisation for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; RCRA - Resource Conservation and Recovery Act; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RQ - Reportable Quantity; SADT - Self-Accelerating Decomposition Temperature; SARA - Superfund Amendments and Reauthorization Act; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TECI - Thailand Existing Chemicals Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative

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