

## Safety Data Sheet

Material Name: Vitamin K1-[2H7]

SDS ID: 1922P-I

**Section 1 - PRODUCT AND COMPANY IDENTIFICATION****Material Name**

Vitamin K1-[2H7]

**Product Code**

Product Code 5072-ISO

**Product Use**

General industrial, research and development

**Restrictions on Use**

Material for use only in TSCA exempt applications: Substances used for research and development, pesticides, foods and food additives, drugs, and cosmetics.

**Details of the supplier of the safety data sheet**

Entegris, Inc.  
129 Concord Road  
Building 2  
Billerica, MA 01821  
USA

Telephone Number: +1-952-556-4181

Telephone Number: +1-800-394-4083 (toll free within North America)

Emergency Telephone Number:

CHEMTREC - U.S. - 1-800-424-9300

CHEMTREC - Intl. - 1-703-527-3887

E-mail: Product.stewardship@entegris.com

**Section 2 - HAZARDS IDENTIFICATION****Classification in accordance with paragraph (d) of 29 CFR 1910.1200.**

None needed according to classification criteria.

**GHS Label Elements****Symbol(s)**

None needed according to classification criteria.

**Signal Word**

None needed according to classification criteria

**Hazard Statement(s)**

None needed according to classification criteria.

**Precautionary Statement(s)****Prevention**

None needed according to classification criteria.

**Response**

None needed according to classification criteria.

**Storage**

None needed according to classification criteria.

**Disposal**

Dispose of contents/container in accordance with local/regional/national/international regulations.

**Other Hazards**

None known.

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**Section 3 - COMPOSITION / INFORMATION ON INGREDIENTS**

CAS	Component Name	Percent
1233937-39-7	Vitamin K1-[2H7]	90-100

The chemical identity and/or percentage of composition is being withheld as a trade secret.

**Section 4 - FIRST AID MEASURES****Inhalation**

If adverse effects occur, remove to uncontaminated area. Give artificial respiration if not breathing. Get immediate medical attention.

**Skin**

Wash skin with soap and water for at least 15 minutes while removing contaminated clothing and shoes. Get medical attention, if needed. Thoroughly clean and dry contaminated clothing before reuse.

**Eyes**

Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Then get immediate medical attention.

**Ingestion**

If swallowed, get medical attention.

**Most Important Symptoms/Effects****Acute**

respiratory tract irritation, skin irritation, eye irritation

**Delayed**

No information on significant adverse effects.

**Note to Physicians**

Treat symptomatically and supportively.

**Section 5 - FIRE FIGHTING MEASURES****Extinguishing Media****Suitable Extinguishing Media**

regular dry chemical, carbon dioxide, water spray, foam

**Unsuitable Extinguishing Media**

high-pressure water streams

**Special Hazards Arising from the Chemical**

Slight fire hazard.

**Hazardous Combustion Products**

oxides of carbon

**Advice for firefighters**

Slight fire hazard.

**Fire Fighting Measures**

Move container from fire area if it can be done without risk. Do not scatter spilled material with high-pressure water streams. Fight fire from maximum distance or use unmanned hose holders or monitor nozzles. Cool containers with water spray until well after the fire is out. Withdraw immediately in case of rising sound from venting safety device or any discoloration of tanks due to fire. Avoid inhalation of material or combustion by-products. Stay upwind and keep out of low areas. Dike for later disposal.

**Special Protective Equipment and Precautions for Firefighters**

Wear full protective fire fighting gear including self contained breathing apparatus (SCBA) for protection against possible exposure.

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**Section 6 - ACCIDENTAL RELEASE MEASURES****Personal Precautions, Protective Equipment and Emergency Procedures**

Wear personal protective clothing and equipment.

**Methods and Materials for Containment and Cleaning Up**

Eliminate all ignition sources if safe to do so. Do not touch spilled material. Stop leak if possible without personal risk. Prevent entry into waterways, sewers, basements, or confined areas. Collect spilled material in appropriate container for disposal. Keep unnecessary people away, isolate hazard area and deny entry.

**Environmental Precautions**

Avoid release to the environment.

**Section 7 - HANDLING AND STORAGE****Precautions for Safe Handling**

Avoid breathing vapor or mist. Wash hands thoroughly after handling.

**Conditions for Safe Storage, Including any Incompatibilities**

None needed according to classification criteria.

Store and handle in accordance with all current regulations and standards. Store in a well-ventilated place.

Keep container tightly closed. Recommended storage temperature -20 °C. Keep separated from incompatible substances.

**Incompatible Materials**

oxidizing materials, bases

**Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION****Component Exposure Limits**

The following constituents are the only constituents of the product which have a PEL, TLV or other recommended exposure limit. At this time, the other constituents have no known exposure limits.

**ACGIH - Threshold Limit Values - Biological Exposure Indices (BEI)**

There are no biological limit values for any of this product's components.

**Engineering Controls**

Provide local exhaust ventilation system. Ensure compliance with applicable exposure limits.

**Individual Protection Measures, such as Personal Protective Equipment****Eye/face protection**

Wear safety glasses with side shields. Provide an emergency eye wash fountain and quick drench shower in the immediate work area.

**Skin Protection**

Wear appropriate chemical resistant clothing, lab coat.

**Respiratory Protection**

Respirators depend on exposure level. SCBA with full face piece recommended during change outs and available in case of emergency.

**Glove Recommendations**

Wear appropriate chemical resistant gloves: NBR (Nitrile rubber).

**Protective Materials**

Recommendations are based on the product type. Consult with an industrial hygienist to determine the appropriate PPE for your specific use of this material.

**Section 9 - PHYSICAL AND CHEMICAL PROPERTIES****Appearance**

yellow oil

**Physical State**

liquid

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<b>Odor</b>	Not available	<b>Color</b>	yellow
<b>Odor Threshold</b>	Not available	<b>pH</b>	Not available
<b>Melting Point</b>	-20 °C	<b>Boiling Point</b>	Not available
<b>Boiling Point Range</b>	Not available	<b>Freezing point</b>	Not available
<b>Evaporation Rate</b>	Not available	<b>Flammability (solid, gas)</b>	Not flammable
<b>Autoignition Temperature</b>	Not available	<b>Flash Point</b>	Not available
<b>Lower Explosive Limit</b>	Not available	<b>Decomposition temperature</b>	Not available
<b>Upper Explosive Limit</b>	Not available	<b>Vapor Pressure</b>	Not available
<b>Vapor Density (air=1)</b>	Not available	<b>Specific Gravity (water=1)</b>	0.999
<b>Water Solubility</b>	Not available	<b>Partition coefficient: n-octanol/water</b>	Not available
<b>Viscosity</b>	Not available	<b>Kinematic viscosity</b>	Not available
<b>Solubility (Other)</b>	Not available	<b>Density</b>	0.999 g/mL at 25 °C
<b>Physical Form</b>	liquid	<b>Molecular Formula</b>	C <sub>31</sub> ( <sup>2</sup> H <sub>7</sub> )H <sub>39</sub> O <sub>2</sub>
<b>Molecular Weight</b>	457.74 (g/mol)		

<b>Section 10 - STABILITY AND REACTIVITY</b>
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**Reactivity**

No known hazardous reactions.

**Chemical Stability**

Stable at normal temperatures and pressure.

**Possibility of Hazardous Reactions**

Will not polymerize.

**Conditions to Avoid**

Avoid contact with light. Avoid contact with incompatible materials.

**Incompatible Materials**

oxidizing materials, bases

**Hazardous decomposition products**

oxides of carbon

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**Section 11 - TOXICOLOGICAL INFORMATION****Information on Likely Routes of Exposure****Inhalation**

respiratory tract irritation

**Skin Contact**

skin irritation

**Eye Contact**

eye irritation

**Ingestion**

No data available.

**Acute and Chronic Toxicity****Component Analysis - LD50/LC50**

The components of this material have been reviewed in various sources and no selected endpoints have been identified.

**Product Toxicity Data****Acute Toxicity Estimate**

No data available.

**Immediate Effects**

respiratory tract irritation, skin irritation, eye irritation

**Delayed Effects**

No information on significant adverse effects.

**Irritation/Corrosivity Data**

respiratory tract irritation, skin irritation, eye irritation

**Respiratory Sensitization**

No data available.

**Dermal Sensitization**

No data available.

**Component Carcinogenicity**

None of this product's components are listed by ACGIH, IARC, NTP, DFG or OSHA.

**Germ Cell Mutagenicity**

No data available.

**Tumorigenic Data**

No data available.

**Reproductive Toxicity**

No data available.

**Specific Target Organ Toxicity - Single Exposure**

No target organs identified.

**Specific Target Organ Toxicity - Repeated Exposure**

No target organs identified.

**Aspiration hazard**

No data available.

**Medical Conditions Aggravated by Exposure**

No data available.

**Section 12 - ECOLOGICAL INFORMATION****Component Analysis - Aquatic Toxicity**

No LOLI ecotoxicity data are available for this product's components.

**Persistence and Degradability**

No data available.

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**Bioaccumulative Potential**

No data available.

**Mobility**

No data available.

**Other Toxicity**

No data available.

**Section 13 - DISPOSAL CONSIDERATIONS**

**Disposal Methods**

Dispose in accordance with all applicable regulations.

**Component Waste Numbers**

The U.S. EPA has not published waste numbers for this product's components.

**Section 14 - TRANSPORT INFORMATION**

**IATA Information:**

UN#: Not regulated

**IMDG Information:**

UN#: Not regulated

**US DOT Information:**

UN/NA #: Not regulated

**International Bulk Chemical Code**

This material does not contain any chemicals required by the IBC Code to be identified as dangerous chemicals in bulk.

**Section 15 - REGULATORY INFORMATION**

**U.S. Federal Regulations**

None of this product's components are listed under SARA Sections 302/304 (40 CFR 355 Appendix A), SARA Section 313 (40 CFR 372.65), CERCLA (40 CFR 302.4), TSCA 12(b), or require an OSHA process safety plan.

**SARA Section 311/312 (40 CFR 370 Subparts B and C) reporting categories**

No hazard categories applicable.

**U.S. State Regulations**

None of this product's components are listed on the state lists from CA, MA, MN, NJ or PA.

**California Safe Drinking Water and Toxic Enforcement Act (Proposition 65)**

Not listed under California Proposition 65.

**Component Analysis - Inventory**

**Vitamin K1-[2H7] (1233937-39-7)**

US	CA	AU	CN	EU	JP - ENCS	JP - ISHL	KR KECI - Annex 1	KR KECI - Annex 2
No	No	No	No	No	No	No	No	No

KR - REACH CCA	MX	NZ	PH	TH-TECI	TW, CN	VN (Draft)
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No	No	No	No	No	No	No
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**U.S. Inventory (TSCA)**

Not listed on inventory.

<b>Section 16 - OTHER INFORMATION</b>
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**NFPA Ratings**

Health: 1 Fire: 1 Instability: 0

Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe

**Preparation Date**

8/24/2022

**Key / Legend**

ACGIH - American Conference of Governmental Industrial Hygienists; ADR - European Road Transport; AU - Australia; BOD - Biochemical Oxygen Demand; C - Celsius; CA - Canada; CA/MA/MN/NJ/PA - California/Massachusetts/Minnesota/New Jersey/Pennsylvania\*; CAS - Chemical Abstracts Service; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CFR - Code of Federal Regulations (US); CLP - Classification, Labelling, and Packaging; CN - China; CPR - Controlled Products Regulations; DFG - Deutsche Forschungsgemeinschaft; DOT - Department of Transportation; DSD - Dangerous Substance Directive; DSL - Domestic Substances List; EC - European Commission; EEC - European Economic Community; EIN - European Inventory of (Existing Commercial Chemical Substances); EINECS - European Inventory of Existing Commercial Chemical Substances; ENCS - Japan Existing and New Chemical Substance Inventory; EPA - Environmental Protection Agency; EU - European Union; F - Fahrenheit; F - Background (for Venezuela Biological Exposure Indices); IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; ICAO - International Civil Aviation Organization; IDL - Ingredient Disclosure List; IDLH - Immediately Dangerous to Life and Health; IMDG - International Maritime Dangerous Goods; ISHL - Japan Industrial Safety and Health Law; IUCLID - International Uniform Chemical Information Database; JP - Japan; Kow - Octanol/water partition coefficient; KR KECI Annex 1 - Korea Existing Chemicals Inventory (KECI) / Korea Existing Chemicals List (KECL); KR KECI Annex 2 - Korea Existing Chemicals Inventory (KECI) / Korea Existing Chemicals List (KECL) , KR - Korea; LD50/LC50 - Lethal Dose/Lethal Concentration; KR REACH CCA - Korea Registration and Evaluation of Chemical Substances Chemical Control Act; LEL - Lower Explosive Limit; LLV - Level Limit Value; LOLI - List Of Lists™ - ChemADVISOR's Regulatory Database; MAK - Maximum Concentration Value in the Workplace; MEL - Maximum Exposure Limits; MX - Mexico; Ne - Non-specific; NFPA - National Fire Protection Agency; NIOSH - National Institute for Occupational Safety and Health; NJTSR - New Jersey Trade Secret Registry; Nq - Non-quantitative; NSL - Non-Domestic Substance List (Canada); NTP - National Toxicology Program; NZ - New Zealand; OSHA - Occupational Safety and Health Administration; PEL - Permissible Exposure Limit; PH - Philippines; RCRA - Resource Conservation and Recovery Act; REACH - Registration, Evaluation, Authorisation, and restriction of Chemicals; RID - European Rail Transport; SARA - Superfund Amendments and Reauthorization Act; Sc - Semi-quantitative; STEL - Short-term Exposure Limit; TCCA - Korea Toxic Chemicals Control Act; TDG - Transportation of Dangerous Goods; TH-TECI - Thailand - FDA Existing Chemicals Inventory (TECI); TLV - Threshold Limit Value; TSCA - Toxic Substances Control Act; TW - Taiwan; TWA - Time Weighted Average; UEL - Upper Explosive Limit; UN/NA - United Nations /North American; US - United States; VLE - Exposure Limit Value (Mexico); VN (Draft) - Vietnam (Draft); WHMIS - Workplace Hazardous Materials Information System (Canada).

**Other Information****Disclaimer:**

The information in this (Material) Safety Data Sheet ("(M)SDS") is believed to be current and accurate as of the time of shipment of the product by Entegris. Entegris makes no warranties, express or implied, with

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