

Safety Data Sheet



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1. PRODUCT AND COMPANY IDENTIFICATION

Product name: D-GAMMA Tocopherol 90
 Manufacturer: Tama Biochemical Co., Ltd.
 Address: 23-3, Nishishinjuku 1-chome, Shinjuku-ku, Tokyo
 160-0023, Japan
 Department in charge: Quality Assurance Dept.
 Telephone number: +81-3-5321-6051
 Emergency telephone number: Same as above
 Facsimile number: +81-3-5321-6055
 Recommended use of the product and restrictions on use: Food additive



Represented in the USA by
 TRI-K Industries, Inc.
 2 Stewart Court • PO Box 10
 Denville, NJ 07834 USA
 Tel: (973) 298-8850
 Fax: (973) 298-8940
 www.tri-k.com info@tri-k.com

2. HAZARDS IDENTIFICATION

GHS Classification: Not a hazardous substance according to the Globally Harmonized System (GHS)
 GHS Label elements:
 Symbols/Pictogram: None
 Signal word: None
 Hazardous information: None
 Precautionary statements: None

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance or mixture: Mixture
 Common chemical name or general name and composition: Tocopherols 95%
 Rapeseed oil (Canola oil) 5%
 Representative compound and composition: d-gamma Tocopherol, C₂₈H₄₈O₂ 90%
 CAS RN: Tocopherols 1406-66-2
 d-gamma Tocopherol 54-28-4
 Rapeseed oil (Canola oil) 120962-03-0
 Class reference number in the gazette list:
 Japanese Chemical Substances Control Act: 9-864 (Tocopherols)
 Industrial Safety and Health Act: Existing Chemical Substance

4. FIRST-AID MEASURES

Inhalation:	Supply fresh air and get medical attention immediately.
Skin contact:	Not harmful. Wash with soap and water and rinse thoroughly. If any irritation occurs and get medical attention.
Eye contact:	Flush immediately with plenty of water and get medical attention immediately.
Ingestion:	If swallowed in a small amount, no problem. If swallowed in large amount, gargle, and drink plenty of water to vomit, and get medical attention immediately.
Protection for first-aiders:	Use protective equipment as required.

5. FIRE-FIGHTING MEASURES

Extinguishing media:	Dry chemical extinguisher, carbon dioxide or foam
Prohibited media:	Water
Specific hazards with regard to fire-fighting:	No information
Protection for fire-fighters:	Fighters should be wear protective clothing and respirator.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures:	Use protective equipment as required.
Environmental precautions:	Avoid entering the river or affecting to the environment.
Methods and materials for neutralization containment and clean up:	In case of large spills, use earth and sand to prevent spread and collect it in empty air tight containers. For small amounts, collect with dry sand, oil disposer, cloth, etc.

7. HANDLING AND STORAGE

Handling:	Wear personal protective gloves/protective clothing/eye protection/face protection. Although the risk when contact is low, avoid contact with the skin and mucous membranes and contact with eyes. After handling, wash thoroughly with soap and water.
Storage:	Store in a tight container, avoid high temperature and high humidity.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Acceptable concentration:	No information
Engineering controls:	Install local exhaust fan, if necessary.
Protective equipment:	
Respiratory protection:	Unspecified

Hand protection:	Protective gloves
Eye protection:	Safety glasses. A face-shield, if necessary.
Skin and body protection:	Protective clothing. Safety shoes, if necessary.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state:	Pale yellow to reddish brown, clear and viscous liquid.
Odor:	Faint characteristic odor
Melting point/Freezing point:	No data available
Boiling point:	No data available
Flamability:	Flammable
Explosion limit:	No data available
Flash point:	250°C (Cleaveland open cup)
Auto-ignition temperature:	No data available
Decomposition temperature:	No data available
pH:	No data available
Dynamic viscosity:	No data available
Solubility:	Insoluble in water. Miscible with ethanol or hexane.
Octanol-water partition coefficient:	No data available
Vapor pressure:	No data available
Density (Specific gravity):	0.93-0.96
Vapor density:	No data available
Particle property:	No data available

10. STABILITY AND REACTIVITY

Reactivity:	No information
Chemical stability:	Stable in the air at the normal temperature
Hazardous reactions:	None under normal processing
Conditions to avoid:	Extremes of temperature, humidity and direct sunlight
Incompatible materials:	High temperature substances, strong oxidizing agents
Hazardous decomposition products:	Carbon monoxide(CO), Carbon dioxide(CO ₂)

11. TOXICOLOGICAL INFORMATION

(1) Tocopherol*

*The information in this section is pertains for Tocopherol Acetate.

Acute toxicity:	LD ₅₀ >5g/kg (rat oral) ¹⁾
Skin corrosion/irritation:	Non-irritant (human, rabbit) ¹⁾

Serious eye damage/eye irritation:	Non-irritant (rabbit) ¹⁾
Respiratory or skin sensitization:	No skin sensitization (human, guinea pig) ¹⁾
Germ cell mutagenicity:	Negative (chinese hamster ovarian cell) ¹⁾
Carcinogenicity:	Negative ²⁾
Reproductive toxicity:	Negative ^{3,4)}
Specific target organ:	
Single exposure:	No information
Repeated exposure:	Subacute toxicity: No abnormality observed(3.5g/kg feeding stuff, rat oral). ⁵⁾ Chronic toxicity: Very less toxic ^{5,6)}
Aspiration hazard:	No information
(2) Canola oil	
Acute toxicity:	No information
Skin corrosion/irritation:	Slight irritation
Serious eye damage/eye irritation:	May cause irritation.
Respiratory or skin sensitization:	No information
Germ cell mutagenicity:	No information
Carcinogenicity:	No alert in IARC, ACGIH, NTP, EPA
Reproductive toxicity:	No information
Specific target organ:	
Single exposure:	May cause nausea and vomiting in large doses. Exposure to high concentrations may cause unconsciousness.
Repeated exposure:	Chronic exposure may cause nausea and vomiting.
Aspiration hazard:	No information

12. ECOLOGICAL INFORMATION

Ecotoxicity:	No information
Persistent/Degradability:	No information
Bioaccumulation potential:	No information
Mobility in soil:	No information
Impact on the ozone layer:	No information

13. DISPOSAL CONSIDERATIONS

Residues:	Dispose in accordance with all applicable regulations.
Contaminated vessel and package:	Dispose in accordance with all applicable regulations.

14. TRANSPORT INFORMATION

International restriction:

UN Number:	Not applicable
Proper shipping name:	Not applicable
Class:	Not applicable
Packing group:	Not applicable
Marine pollutant:	Not applicable

Domestic restriction:

Rail and road transportation information:	Refer to applicable laws and regulations.
Marin transportation information:	Refer to applicable laws and regulations.
Aviation transportation information:	Refer to applicable laws and regulations.
Specific precautionary transport measures and conditions:	Before loading, make sure that no leakage happened. Avoid overturn, fall-down, direct sunlight and any other damage, both on loading and transporting.

15. REGULATORY INFORMATION

Domestic regulation:

CHRIP MITI No.:	9-864 (Tocopherols)
Fire and Disaster Management Act:	Designated flammable goods (Combustible liquids)
Act on Securing Quality, Efficacy and Safety of Products Including Pharmaceuticals and Medical Devices:	Not applicable
Food Sanitation Act:	Applicable (Food additive) ⁷⁾
Pollutant Release and Transfer Register (PRTR):	Not applicable
Poisonous and Deleterious Substances Control Law:	Not applicable

USA Federal regulations:

TSCA Inventory:	CAS RN 1406-66-2 (Tocopherols) CAS RN 120962-03-0 (Canola oil)
SARA 311/312 Hazard categories:	Not considered a hazard.
SARA 313 Toxic chemicals:	Not applicable
SARA 302 Extremely hazardous substances:	Not applicable

HMIS-Rating (0-4)HMIS: Health:1 Flammability:1 Reactivity:0
(Rating: None=0, Least=1, Moderate=2, High=3, Extremely high=4)

California Proposition 65: Not applicable

EU Regulations:

EINECS: No. 200-201-5 ([2R[2R*(4R*,8R*)]]-3,4-dihydro-2,7,8-trimethyl-2-(4,8,12-trimethyltridecyl)-2H-benzopyran-6-ol)
No. 232-299-0 (Rape oil)

SVHC: Not applicable

Regulatory information with regard to this preparation in your country or region should be examined by your own responsibility.

16. OTHER INFORMATION

References:

- 1) 日本医薬品添加剤協会ホームページ
<http://www.jpec.gr.jp/detail=normal&date=safetydata/sa/dasu5.html>
- 2) Dysmsza HA and Park J., Excess dietary vitamin E in rats. Fed Am Soc Exp Biol 34:912, (1975).
- 3) Krasavage, W. J. and Terhaar C.J., d-alpha-Tocopheryl poly(ethylene glycol) 1000 succinate. Acute toxicity, subchronic feeding, reproduction, and teratologic studies in the rat. J. Agric. Food Chem. 25: 273-278 (1977).
- 4) Martin, M. M. and Hurly L. S., Effect of large amounts of vitamin E during pregnancy and lactation. Am. J. Clin. Nutr. 30: 1629-37 (1977).
- 5) Yang, N. Y. J. and Desai I. D., Effect of High Levels of Dietary Vitamin E on Hematological Indices and Biochemical Parameters in Rats. J. Nutr. 107: 1410-1417 (1977).
- 6) Wheldon, G.H., Bhatt A., Keller P. and Hummler H. d,1-alpha-Tocopheryl acetate (vitamin E): a long term toxicity and carcinogenicity study in rats. Int. J. Vitam. Nutr. Res. 53: 287-296 (1983)
- 7) 第9版 食品添加物公定書 (Japan's Specifications and Standards for Food Additives 9th Ed) 収載

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