Printing date 01/10/2025 Reviewed on 01/10/2025

1 Identification

- · Product identifier
- · Product Name: FARNESENE
- · Part Number: S-1989
- · Application of the substance / the mixture For Laboratory Use Only
- · Uses advised against Not for Human or Animal Use
- · Details of the supplier of the safety data sheet
- · Manufacturer/Supplier:

Spex CertiPrep, LLC.

203 Norcross Ave, Metuchen,

NJ 08840 USA

732-549-7144

USMet-CRMSales@antylia.com

- · Information department: product safety department
- · Emergency telephone number:

Emergency Phone Number (24 hours)

CHEMTREC (800-424-9300) Outside US: 703-527-3887

2 Hazard(s) identification

· Classification of the substance or mixture



GHS02 Flame

Flammable Liquids 2

H225 Highly flammable liquid and vapor.



GHS06 Skull and crossbones

Acute Toxicity - Inhalation 3 H331 Toxic if inhaled.



GHS08 Health hazard

Specific Target Organ Toxicity - Single Exposure 1 H370 Causes damage to the central nervous system and the visual organs.

- · Label elements
- · GHS label elements The product is classified and labeled according to the Globally Harmonized System (GHS).
- · Hazard pictograms







GHS02

GHS06

GHS08

- · Signal word Danger
- · Hazard-determining components of labeling:
- methanol
- · Hazard statements

H225 Highly flammable liquid and vapor.

H331 Toxic if inhaled.

H370 Causes damage to the central nervous system and the visual organs.

· Precautionary statements

P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.

P240 Ground/bond container and receiving equipment.

P241 Use explosion-proof electrical/ventilating/lighting/equipment.

P242 Use only non-sparking tools.

P243 Take precautionary measures against static discharge.
P260 Do not breathe dust/fume/gas/mist/vapors/spray.

P280 Wear protective gloves/protective clothing/eye protection/face protection.

P303+P361+P353 If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.

P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.

P307+P311 IF exposed: Call a POISON CENTER or doctor/physician.

P321 Specific treatment (see on this label).

P403+P233 Store in a well-ventilated place. Keep container tightly closed.

(Contd. of page 1)



Safety Data Sheet acc. to OSHA HCS

Printing date 01/10/2025 Reviewed on 01/10/2025

Product Name: FARNESENE

P403+P235 Store in a well-ventilated place. Keep cool.

P405 Store locked up.

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

- · Classification system:
- · NFPA ratings (scale 0 4)



Health = 1 Fire = 3Reactivity = 0

· HMIS-ratings (scale 0 - 4)



Health = *1 Fire = 3Reactivity = 0

- · Other hazards
- · Results of PBT and vPvB assessment
- · PBT: Not applicable.
- · vPvB: Not applicable.

3 Composition/information on ingredients

- · Chemical characterization: Mixtures
- · Description: Mixture of the substances listed below with nonhazardous additions.

Description Azimare of the substances tisted better with homeign doub dualities.		
· Dangerous components:		
67-56-1 methanol	99.9%	
· Chemical identification of the substance/preparation		
502-61-4 Farnesene	0.1%	

4 First-aid measures

- · Description of first aid measures
- · General information:

Immediately remove any clothing soiled by the product.

Remove breathing apparatus only after contaminated clothing have been completely removed.

In case of irregular breathing or respiratory arrest provide artificial respiration.

· After inhalation:

Supply fresh air or oxygen; call for doctor.

In case of unconsciousness place patient stably in side position for transportation.

- $\cdot \textit{After skin contact:} \ Immediately \ wash \ with \ water \ and \ soap \ and \ rinse \ thoroughly.$
- $\cdot \textit{After eye contact: } \textit{Rinse opened eye for several minutes under running water. } \textit{Then consult a doctor.}$
- · After swallowing: Do not give anything to eat or drink Do not induce vomitting
- · Information for Doctor:
- · Most important symptoms and effects, both acute and delayed No further relevant information available.
- $\textbf{.} \textbf{Indication of any immediate medical attention and special treatment needed} \ \textit{No further relevant information available}.$

5 Fire-fighting measures

- · Extinguishing media
- · Suitable extinguishing agents: CO2, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- · Special hazards arising from the substance or mixture During heating or in case of fire poisonous gases are produced.
- · Advice for firefighters
- · Protective equipment: Mouth respiratory protective device.

6 Accidental release measures

· Personal precautions, protective equipment and emergency procedures

Mount respiratory protective device.

Wear protective equipment. Keep unprotected persons away.

 $\cdot \textit{Environmental precautions:}$

Dilute with plenty of water.

Do not allow to enter sewers/ surface or ground water.

· Methods and material for containment and cleaning up:

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).

Dispose contaminated material as waste according to section 13.

Ensure adequate ventilation.



Printing date 01/10/2025 Reviewed on 01/10/2025

Product Name: FARNESENE

(Contd. of page 2)

· Reference to other sections

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

· Protective Action Criteria for Chemicals

· Froiecuve Action Crueria for Chemicais	
· PAC-1:	
67-56-1 methanol	530 ppm
· PAC-2:	
67-56-1 methanol	2,100 ppm
· PAC-3:	
67-56-1 methanol	7200* ppm

7 Handling and storage

- · Handling:
- · Precautions for safe handling

Ensure good ventilation/exhaustion at the workplace.

Open and handle receptacle with care.

Prevent formation of aerosols.

· Information about protection against explosions and fires:

Keep ignition sources away - Do not smoke.

Protect against electrostatic charges.

Keep respiratory protective device available.

- · Conditions for safe storage, including any incompatibilities
- · Storage:
- · Requirements to be met by storerooms and receptacles: Store in a cool location.
- · Information about storage in one common storage facility: Not required.
- · Further information about storage conditions:

Keep receptacle tightly sealed.

Store in cool, dry conditions in well sealed receptacles.

Specific end use(s) No further relevant information available.

8 Exposure controls/personal protection

- $\cdot \textbf{\textit{Additional information about design of technical systems:}} \ \textit{No further data; see section 7.}$
- · Control parameters

Components with limit values that require monitoring at the workplace: 67-56-1 methanol PEL Long-term value: 260 mg/m³, 200 ppm REL Short-term value: 325 mg/m³, 250 ppm Long-term value: 260 mg/m³, 200 ppm

TLV Short-term value: 250 ppm Long-term value: 200 ppm

Skin

Skin; BEI

· Ingredients with biological limit values:

67-56-1 methanol

BEI 15 mg/L

Medium: urine Time: end of shift

Parameter: Methanol (background, nonspecific)

- · Additional information: The lists that were valid during the creation were used as basis.
- · Exposure controls
- · Personal protective equipment:
- · General protective and hygienic measures:

Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing.

Wash hands before breaks and at the end of work.

Store protective clothing separately.

· Respiratory protection:

In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.

(Contd. on page 4)

Printing date 01/10/2025 Reviewed on 01/10/2025

Product Name: FARNESENE

(Contd. of page 3)

· Protection of hands:



The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

· Material of gloves

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

- Penetration time of glove material The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.
- · Eye protection:

Solids content:

0.0%



9 Physical and chemical properties	9 Physical and chemical properties				
Information on basic physical and c General Information Appearance: Form: Color: Odor: Odour Threshold:	hemical properties Liquid According to product specification Characteristic Not applicable.				
· pH-value:	Not applicable.				
· Change in condition Melting point/Melting range: Boiling point/Boiling range:	Undetermined. 64.7 °C (148.5 °F)				
· Flash point:	< 23 °C (< 73.4 °F)				
· Flammability (solid, gaseous):	Highly flammable.				
· Auto igniting:	455 °C (851 °F)				
· Decomposition temperature:	Not applicable.				
· Ignition temperature:	Product is not selfigniting.				
· Danger of explosion:	Product is not explosive. However, formation of explosive air/vapor mixtures are possible.				
· Explosion limits: Lower: Upper:	5.5 Vol % 44 Vol %				
· Vapor pressure at 20 °C (68 °F):	128 hPa (96 mm Hg)				
Density at 20 °C (68 °F) Relative density Vapor density Evaporation rate	0.78921 g/cm³ (6.58596 lbs/gal) Not applicable. Not applicable. Not applicable.				
· Solubility in / Miscibility with Water:	Fully miscible.				
· Partition coefficient (n-octanol/water): Not applicable.					
· Viscosity: Dynamic: Kinematic:	Not applicable. Not applicable.				
· Solvent content: Organic solvents: VOC content:	99.9 % 99.90 %				

(Contd. on page 5)



Printing date 01/10/2025 Reviewed on 01/10/2025

Product Name: FARNESENE

(Contd. of page 4)

· Other information

No further relevant information available.

10 Stability and reactivity

- · Reactivity No further relevant information available.
- · Chemical stability
- Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications.
- · Possibility of hazardous reactions No dangerous reactions known.
- · Conditions to avoid No further relevant information available.
- · Incompatible materials: No further relevant information available.
- · Hazardous decomposition products: No dangerous decomposition products known.

11 Toxicological information

- · Information on toxicological effects
- · Acute toxicity:

· LD/LC50 values that are	relevant for	classification:
---------------------------	--------------	-----------------

67-56-1 methanol

Oral | LD50 | 5,628 mg/kg (rat) Dermal | LD50 | 15,800 mg/kg (rabbit)

- Primary irritant effect:
- · on the eye: No irritating effect.
- · Sensitization: No sensitizing effects known.
- · Additional toxicological information:

The product shows the following dangers according to internally approved calculation methods for preparations: Toxic

· Carcinogenic categories

· IARC (International Agency for Research on Cancer)

None of the ingredients is listed.

· NTP (National Toxicology Program)

None of the ingredients is listed.

· OSHA-Ca (Occupational Safety & Health Administration)

None of the ingredients is listed.

12 Ecological information

- · Toxicity
- $\cdot \textbf{\textit{Aquatic toxicity:}} \ \textit{No further relevant information available}.$
- $\cdot \textit{Persistence and degradability} \ \textit{No further relevant information available}.$
- · Behavior in environmental systems:
- · Bioaccumulative potential No further relevant information available.
- · Mobility in soil No further relevant information available.
- · Additional ecological information:
- · General notes:

Water hazard class 1 (Self-assessment): slightly hazardous for water

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

- · Results of PBT and vPvB assessment
- · **PBT**: Not applicable.
- · vPvB: Not applicable.
- · Other adverse effects No further relevant information available.

13 Disposal considerations

- · Waste treatment methods
- · Recommendation: Must not be disposed of together with household garbage. Do not allow product to reach sewage system.
- · Uncleaned packagings:
- · Recommendation: Disposal must be made according to official regulations.
- · Recommended cleansing agent: Water, if necessary with cleansing agents.

(Contd. on page 6)

Reviewed on 01/10/2025 Printing date 01/10/2025

Product Name: FARNESENE

(Contd. of page 5)

14 Transport information				
· UN-Number				
· DOT, ADR, IMDG, IATA	UN1230			
· UN proper shipping name · DOT	Methanol			
$\cdot ADR$	1230 METHANOL			
· IMDG, IATA	METHANOL			
· Transport hazard class(es) · DOT				
TOXIC S				
· Class · Label	3 Flammable liquids 3, 6.1			
· ADR				
· Class · Label	3 Flammable liquids 3+6.1			
· IMDG				
· Class · Label	3 Flammable liquids 3/6.1			
· IATA				
· Class · Label	3 Flammable liquids 3 (6.1)			
· Packing group · DOT, ADR, IMDG, IATA	II			
· Environmental hazards:	Not applicable.			
 Special precautions for user Hazard identification number (Kemler code): EMS Number: 	Warning: Flammable liquids 336 F-E,S-D			
· Stowage Category · Stowage Code	B SW2 Clear of living quarters.			
· Transport in bulk according to Annex II of MARPOL73/78 and the IBC Co	de Not applicable.			
· Transport/Additional information:				
· ADR · Excepted quantities (EQ)	Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml			
· IMDG · Limited quantities (LQ) · Excepted quantities (EQ)	1L Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml			

Printing date 01/10/2025 Reviewed on 01/10/2025

Product Name: FARNESENE

(Contd. of page 6)

· UN "Model Regulation":

UN 1230 METHANOL, 3 (6.1), II

15 Regulatory information

- · Safety, health and environmental regulations/legislation specific for the substance or mixture No further relevant information available.
- · Sara
- · Section 313 (Specific toxic chemical listings):

67-56-1 methanol

· TSCA (Toxic Substances Control Act):

All components have the value ACTIVE.

· Hazardous Air Pollutants

67-56-1 methanol

· Proposition 65

· Chemicals known to cause cancer:

None of the ingredients is listed.

· Chemicals known to cause reproductive toxicity for females:

None of the ingredients is listed.

· Chemicals known to cause reproductive toxicity for males:

None of the ingredients is listed.

· Chemicals known to cause developmental toxicity:

67-56-1 methanol

- · Carcinogenic categories
- · EPA (Environmental Protection Agency)

None of the ingredients is listed.

· TLV (Threshold Limit Value)

None of the ingredients is listed.

· NIOSH-Ca (National Institute for Occupational Safety and Health)

None of the ingredients is listed.

- · GHS label elements The product is classified and labeled according to the Globally Harmonized System (GHS).
- · Hazard pictograms







GHS02

GHS06

6

GHS08

· Signal word Danger

· Hazard-determining components of labeling:

methanol

Hazard statements

H225 Highly flammable liquid and vapor.

H331 Toxic if inhaled.

H370 Causes damage to the central nervous system and the visual organs.

· Precautionary statements

P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.

P240 Ground/bond container and receiving equipment.

P241 Use explosion-proof electrical/ventilating/lighting/equipment.

P242 Use only non-sparking tools.

P243 Take precautionary measures against static discharge.
P260 Do not breathe dust/fume/gas/mist/vapors/spray.

P280 Wear protective gloves/protective clothing/eye protection/face protection.

P303+P361+P353 If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.

P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.

P307+P311 IF exposed: Call a POISON CENTER or doctor/physician.

P321 Specific treatment (see on this label).

P403+P233 Store in a well-ventilated place. Keep container tightly closed.

P403+P235 Store in a well-ventilated place. Keep cool.

P405 Store locked up.

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

· Chemical safety assessment: A Chemical Safety Assessment has not been carried out.



Printing date 01/10/2025 Reviewed on 01/10/2025

Product Name: FARNESENE

(Contd. of page 7)

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· Department issuing SDS: product safety department

· Contact:

Spex CertiPrep, LLC. 1-732-549-7144

· Date of preparation / last revision 01/10/2025

· Abbreviations and acronyms:

ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road) IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation IATA: International Air Transport Association

EINECS: European Inventory of Existing Commercial Chemical Substances ELINCS: European List of Notified Chemical Substances CAS: Chemical Abstracts Service (division of the American Chemical Society)

NFPA: National Fire Protection Association (USA) HMIS: Hazardous Materials Identification System (USA)

VOC: Volatile Organic Compounds (USA, EU) LC50: Lethal concentration, 50 percent LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic vPvB: very Persistent and very Bioaccumulative

NIOSH: National Institute for Occupational Safety OSHA: Occupational Safety & Health TLV: Threshold Limit Value

PEL: Permissible Exposure Limit REL: Recommended Exposure Limit

REL: Recommenaed Exposure Limit
BEI: Biological Exposure Limit
Flammable Liquids 2: Flammable liquids – Category 2
Acute Toxicity - Inhalation 3: Acute toxicity – Category 3
Specific Target Organ Toxicity - Single Exposure 1: Specific target organ toxicity (single exposure) – Category 1

US -