

Safety Data Sheet SIA0599.1

Issue date: 11/17/2014 Revision date: 03/13/2024 Version: 1.3

# **SECTION 1: Identification**

#### 1.1. Identification

Product name : p-AMINOPHENYLTRIMETHOXYSILANE, 90%

Product code : SIA0599.1
Product form : Substance
Physical state : Solid
Formula : C9H15NO3Si

Synonyms : 4-(TRIMETHOXYSILYL)ANILINE
Chemical family : ORGANOMETHOXYSILANE

## 1.2. Recommended use and restrictions on use

Recommended use Chemical intermediate

#### 1.3. Supplier

#### GELEST, INC.

11 East Steel Road Morrisville. PA 19067

USA

T 215-547-1015 - F 215-547-2484 - (M-F): 8:00 AM - 5:30 PM EST

info@gelest.com - www.gelest.com

# 1.4. Emergency telephone number

Emergency number : CHEMTREC: 1-800-424-9300 (USA); +1 703-527-3887 (International)

# SECTION 2: Hazard(s) identification

# 2.1. Classification of the substance or mixture

#### **GHS US classification**

Skin corrosion/irritation Category 2 H315 Causes skin irritation
Serious eye damage/eye irritation Category 2A H319 Causes serious eye irritation

Full text of H statements : see section 16

# 2.2. GHS Label elements, including precautionary statements

#### **GHS US labeling**

Hazard pictograms (GHS US)



Signal word (GHS US) : Warning

Hazard statements (GHS US) : H315 - Causes skin irritation

H319 - Causes serious eye irritation

Precautionary statements (GHS US) : P264 - Wash hands thoroughly after handling.

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

 $\ensuremath{\mathsf{P302+P352}}$  - If on skin: Wash with plenty of 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

P321 - Specific treatment (see supplemental first aid instruction on this label).

P332+P313 - If skin irritation occurs: Get medical advice/attention.

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P337+P313 - If eye irritation persists: Get medical advice/attention. P362+P364 - Take off contaminated clothing and wash it before reuse.

# 2.3. Hazards not otherwise classified (HNOC)

No additional information available

## 2.4. Unknown acute toxicity (GHS US)

Not applicable

# **SECTION 3: Composition/Information on ingredients**

## 3.1. Substances

Substance type : Multi-constituent

Name : p-AMINOPHENYLTRIMETHOXYSILANE, 90%

CAS-No. : 33976-43-1

Name		Product identifier	%	GHS US classification
p-Aminophenyltrimethoxysilane		CAS-No.: 33976-43-1	> 85	Skin Irrit. 2, H315 Eye Irrit. 2A, H319
m-Aminophenyltrimethoxysilane		CAS-No.: 70411-42-6	< 15	Skin Irrit. 2, H315 Eye Irrit. 2A, H319
Methanol		CAS-No.: 67-56-1	< 0.5	Flam. Liq. 2, H225 Acute Tox. 3 (Oral), H301 Acute Tox. 3 (Dermal), H311 Acute Tox. 3 (Inhalation), H331 STOT SE 1, H370

Full text of hazard classes and H-statements : see section 16

#### 3.2. Mixtures

Not applicable

# **SECTION 4: First-aid measures**

# 4.1. Description of first aid measures

First-aid measures general : Remove contaminated clothing and shoes. In case of accident or if you feel unwell, seek medical

advice immediately (show the label where possible). If possible show this sheet; if not available

show packaging or label.

First-aid measures after inhalation : Remove victim to fresh air and keep at rest in a position comfortable for breathing. If you feel

unwell, seek medical advice.

First-aid measures after skin contact : Wash with plenty of soap and water. Get medical advice/attention.

First-aid measures after eye contact : Immediately flush eyes thoroughly with water for at least 15 minutes. Remove contact lenses, if

present and easy to do. Continue rinsing. Get medical advice/attention.

First-aid measures after ingestion : Never give anything by mouth to an unconscious person. Get medical advice/attention.

# 4.2. Most important symptoms and effects (acute and delayed)

Symptoms/effects after inhalation : May cause irritation to the respiratory tract. Overexposure may cause: Coughing. Headache.

Nausea.

Symptoms/effects after skin contact : Causes skin irritation.

Symptoms/effects after eye contact : Causes serious eye irritation.

Symptoms/effects after ingestion : May be harmful if swallowed.

Chronic symptoms : On contact with water this compound liberates methanol which is known to have a chronic effect on the central nervous system.

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# 4.3. Immediate medical attention and special treatment, if necessary

NOTE TO PHYSICIAN: This product reacts with water in the acid contents of the stomach to form methanol. The combination of visual disturbances, metabolic acidosis and formic acid in urine is evidence of methanol poisoning. The therapeutic intravenous administration of ethanol (10 mls/hour) allows methanol to be preferentially oxidized and reduces production of methanol metabolites. Acidosis must be treated with intravenous administration of sodium bicarbonate and methanol elimination may be increased by hemodialysis, as indicated. Treatment should be based on blood methanol levels and acid-base balance.

# **SECTION 5: Fire-fighting measures**

# 5.1. Suitable (and unsuitable) extinguishing media

Suitable extinguishing media : Water spray. Foam. Carbon dioxide. Dry chemical.

#### 5.2. Specific hazards arising from the chemical

Fire hazard : Irritating fumes and organic acid vapors may develop when material is exposed to elevated

temperatures or open flame.

## 5.3. Special protective equipment and precautions for fire-fighters

Firefighting instructions : Use water spray to cool exposed surfaces. Exercise caution when fighting any chemical fire.

Protection during firefighting : Do not enter fire area without proper protective equipment, including respiratory protection. Avoid

contact with skin and eyes. Do not breathe dust.

# **SECTION 6: Accidental release measures**

## 6.1. Personal precautions, protective equipment and emergency procedures

#### 6.1.1. For non-emergency personnel

Emergency procedures : Evacuate unnecessary personnel.

## 6.1.2. For emergency responders

Protective equipment : Equip cleanup crew with proper protection.

#### 6.2. Environmental precautions

Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters.

# 6.3. Methods and material for containment and cleaning up

Methods for cleaning up : Clean up any spills as soon as possible, using an absorbent material to collect it. Sweep or

shovel spills into appropriate container for disposal.

## 6.4. Reference to other sections

See Heading 8. Exposure controls and personal protection.

## **SECTION 7: Handling and storage**

#### 7.1. Precautions for safe handling

Precautions for safe handling : Avoid contact with skin and eyes. Do not breathe dust. Provide local exhaust or general room

ventilation to minimize exposure to dust.

Hygiene measures : Wash hands and other exposed areas with mild soap and water before eating, drinking or

smoking and when leaving work. Wash contaminated clothing before reuse.

## 7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Keep container tightly closed. Store in a dark area.

Incompatible materials : Moisture. Water.

Storage area : Store in a well-ventilated place. Store away from heat.

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# **SECTION 8: Exposure controls/personal protection**

# 8.1. Control parameters

Mathemat (C7 FC 4)				
Methanol (67-56-1)				
USA - ACGIH - Occupational Exposure Limits				
Local name	Methanol			
ACGIH OEL TWA	200 ppm			
ACGIH OEL STEL	250 ppm			
Remark (ACGIH)	TLV® Basis: Headache; eye dam; dizziness; nausea. Notations: Skin; BEI			
ACGIH chemical category	Skin - potential significant contribution to overall exposure by the cutaneous route			
Regulatory reference	ACGIH 2024			
USA - ACGIH - Biological Exposure Indices				
Local name	Methanol			
BEI (BLV)	15 mg/l (Medium: urine - Time: end of shift - Parameter: Methanol (background, nonspecific)			
Regulatory reference	ACGIH 2024			
USA - OSHA - Occupational Exposure Limits				
Local name	Methyl alcohol			
OSHA PEL TWA	260 mg/m³			
	200 ppm			
Regulatory reference (US-OSHA)	OSHA Annotated Table Z-1			
USA - IDLH - Occupational Exposure Limits				
IDLH	6000 ppm			
USA - NIOSH - Occupational Exposure Limits				
NIOSH REL (TWA)	260 mg/m³			
	200 ppm			
NIOSH REL (STEL)	325 mg/m³			
	250 ppm			
US-NIOSH chemical category	Potential for dermal absorption			

# 8.2. Appropriate engineering controls

Appropriate engineering controls : Provide local exhaust or general room ventilation.

# 8.3. Individual protection measures/Personal protective equipment

## Personal protective equipment:

Avoid all unnecessary exposure. Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure.

# Hand protection:

Neoprene or nitrile rubber gloves

# Eye protection:

Chemical goggles. Contact lenses should not be worn

# Skin and body protection:

Wear suitable protective clothing

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#### Respiratory protection:

Freezing point

NIOSH-certified dust and mist (orange cartridge) respirator.

# **SECTION 9: Physical and chemical properties**

# 9.1. Information on basic physical and chemical properties

Physical state : Solid

Appearance : Crystalline solid. Molecular mass 213.31 g/mol Color : Amber. Brown. Odor No data available Odor threshold : No data available рΗ No data available No data available Relative evaporation rate (butyl acetate=1) 60 - 62 °C Melting point

Boiling point : 110 - 114 °C @ 0.6 mm Hg

Flash point : 180 °C

Auto-ignition temperature : No data available
Decomposition temperature : No data available
Flammability (solid, gas) : No data available
Vapor pressure : < 0.1 mm Hg

Relative vapor density at 20°C : > 1
Relative density : > 1

Solubility : Insoluble in water. Reacts with water.

No data available

Partition coefficient n-octanol/water (Log Pow) : No data available Partition coefficient n-octanol/water (Log Kow) : No data available Viscosity, kinematic : No data available Viscosity, dynamic : No data available Explosive properties : No data available Oxidizing properties : No data available Explosion limits : No data available

## 9.2. Other information

No additional information available

# **SECTION 10: Stability and reactivity**

# 10.1. Reactivity

No additional information available

## 10.2. Chemical stability

Stable in sealed containers stored under nitrogen in the dark.

## 10.3. Possibility of hazardous reactions

Reacts with water and moisture in air, liberating methanol.

# 10.4. Conditions to avoid

Heat. Open flame. Sparks.

# 10.5. Incompatible materials

Moisture. Oxidizing agent.

# 10.6. Hazardous decomposition products

Aromatic amines. Methanol. Organic acid vapors.

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# **SECTION 11: Toxicological information**

# 11.1. Information on toxicological effects

Acute toxicity (oral) : Not classified
Acute toxicity (dermal) : Not classified
Acute toxicity (inhalation) : Not classified

Methanol (67-56-1)	
LD50 oral rat	100 mg/kg Source: National Institute of Environmental Research NCIS
LD50 dermal rabbit	300 mg/kg Source: ECHA
LC50 Inhalation - Rat [ppm]	22500 ppm (Exposure time: 8 h)

Skin corrosion/irritation : Causes skin irritation.
Serious eye damage/irritation : Causes serious eye irritation.

Respiratory or skin sensitization : Not classified
Germ cell mutagenicity : Not classified
Carcinogenicity : Not classified

None of the components in this product at concentrations >0.1% are listed by NTP or OSHA as a

carcinogen..

Reproductive toxicity : Not classified STOT-single exposure : Not classified STOT-repeated exposure : Not classified Aspiration hazard : Not classified

Potential Adverse human health effects and

Symptoms/effects after inhalation

symptoms

: The hydrolysis product of this compound is methanol.

May cause irritation to the respiratory tract. Overexposure may cause: Coughing. Headache.

Nausea.

Symptoms/effects after skin contact : Causes skin irritation.
Symptoms/effects after eye contact : Causes serious eye irritation.
Symptoms/effects after ingestion : May be harmful if swallowed.

Chronic symptoms : On contact with water this compound liberates methanol which is known to have a chronic effect

on the central nervous system.

Reason for classification : Expert judgment

# **SECTION 12: Ecological information**

# 12.1. Toxicity

Methanol (67-56-1)	
LC50 - Fish [1]	28200 mg/l (Exposure time: 96 h - Species: Pimephales promelas [flow-through])
LC50 - Fish [2]	> 100 mg/l (Exposure time: 96 h - Species: Pimephales promelas [static])
EC50 96h - Algae [1]	22000 mg/l Source: ECHA
NOEC (chronic)	208 mg/l Test organisms (species): Daphnia magna Duration: '21 d'
NOEC chronic fish	446.7 mg/l Test organisms (species): Pimephales promelas Duration: '28 d'

## 12.2. Persistence and degradability

No additional information available

# 12.3. Bioaccumulative potential

Methanol (67-56-1)	
BCF - Fish [1]	< 10

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Methanol (67-56-1)

Partition coefficient n-octanol/water (Log Pow) -0.77

# 12.4. Mobility in soil

Methanol (67-56-1)

Mobility in soil 2.75 Source: HSDB

# 12.5. Other adverse effects

Other adverse effects : This substance may be hazardous to the environment.

Effect on the ozone layer : No additional information available

# **SECTION 13: Disposal considerations**

# 13.1. Disposal methods

**Ecological information** 

Product/Packaging disposal recommendations

: May be incinerated. Dispose in a safe manner in accordance with local/national regulations.

: Avoid release to the environment.

# **SECTION 14: Transport information**

In accordance with DOT / TDG / IMDG / IATA

DOT	TDG		IMDG	IATA	
14.1. UN number					
Not regulated for transport			201		
14.2. Proper Shipping Name					
Not applicable	Not applicable		Not applicable	Not applicable	
Transport document description					
Not applicable	Not applicable		Not applicable	Not applicable	
14.3. Transport hazard class(es)					
8	Not applicable		Not applicable	Not applicable	
14.4. Packing group					
Not applicable	applicable Not applicable		Not applicable	Not applicable	
14.5. Environmental hazards					
Dangerous for the environment: No	No Dangerous for the environmen		Not applicable	Not applicable	
No supplementary information availab	ble				

# 14.6. Special precautions for user

DOT

No data available

**TDG** 

No data available

**IMDG** 

No data available

IATA

No data available

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# 14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable

# **SECTION 15: Regulatory information**

# 15.1. US Federal regulations

# p-AMINOPHENYLTRIMETHOXYSILANE, 90% (33976-43-1) TSCA Exemption/Exclusion CAUTION: This material is supplied for research and development purposes subject to the RD exemption under TSCA, 40 CFR 720.36, and must meet the requirements of the exemption, including supervision by a "technically qualified individual" as defined by 40 CFR 720.3(ee). The use of this material for "commercial purposes" as defined by 40 CFR 720.3(r) is not permitted in the United States.

Commercial status of components according to the United States Environmental Protection Agency's Toxic Substances Control Act (TSCA):

Name	CAS-No.	Listing	Commercial status	Flags
Methanol	67-56-1	Present	Active	
p-Aminophenyltrimethoxysilane	33976-43-1	Not present	-	
m-Aminophenyltrimethoxysilane	70411-42-6	Not present	-	

# Methanol (67-56-1)

Subject to reporting requirements of United States SARA Section 313

Listed on EPA Hazardous Air Pollutant (HAPS)

CERCLA RQ 5000 lb

# 15.2. International regulations

#### CANADA

## Methanol (67-56-1)

Listed on the Canadian DSL (Domestic Substances List)

#### **EU-Regulations**

#### Methanol (67-56-1)

Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)

# p-Aminophenyltrimethoxysilane (33976-43-1)

Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)

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#### **National regulations**

#### Methanol (67-56-1)

Listed introduction on Australian Industrial Chemicals Introduction Scheme (AICIS Inventory)

Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)

Listed on the Japanese ENCS (Existing New Chemical Substances) inventory

Listed on KECL/KECI (Korean Existing Chemicals Inventory)

Listed on NZIoC (New Zealand Inventory of Chemicals)

Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)

Japanese Poisonous and Deleterious Substances Control Law

Listed on INSQ (Mexican National Inventory of Chemical Substances)

Listed on CICR (Turkish Inventory and Control of Chemicals)

Listed on the TCSI (Taiwan Chemical Substance Inventory)

Listed on Thailand Existing Chemicals Inventory (DIW)

Listed on the NCI (Vietnam - National Chemical Inventory)

## 15.3. US State regulations



This product can expose you to Methanol, which is known to the State of California to cause birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

Methanol (67-56-1)					
U.S California - Proposition 65 - Carcinogens List	U.S California - Proposition 65 - Developmental Toxicity	U.S California - Proposition 65 - Reproductive Toxicity - Female	U.S California - Proposition 65 - Reproductive Toxicity - Male	No significant risk level (NSRL)	Maximum allowable dose level (MADL)
No	Yes	No	No		47000 μg/day (inhalation); 23,000 μg/day (oral)

# Methanol (67-56-1)

- U.S. Massachusetts Right To Know List
- U.S. New Jersey Right to Know Hazardous Substance List
- U.S. Pennsylvania RTK (Right to Know) Environmental Hazard List
- U.S. Pennsylvania RTK (Right to Know) List

# **SECTION 16: Other information**

# Full text of H-phrases::

u	ext of 1-philases			
	H225	Highly flammable liquid and vapor		
	H301	Toxic if swallowed		
	H311	Toxic in contact with skin		
	H315	Causes skin irritation		
	H319	Causes serious eye irritation		
	H331	Toxic if inhaled		
	H370	Causes damage to organs		

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Abbreviations and acronyms

Abbreviations: ND: Not Determined, No Data; NA: Not Applicable; LD: Lethal Dose; LC: Lethal Concentration; ATE: Acute Toxicity Estimates; H: hour; °: °C unless otherwise stated; mm: millimeters Hg, torr; PEL: permissible exposure level; TWA: time weighted average; TLV: threshold limit value; TG: Test Guideline; NIOSH: National Institute for Occupational Safety and Health; IARC: International Agency for Research on Cancer; NTP: National Toxicology Program; HMIS: Hazardous Material Information System; CAS No.: Chemcial Abstract Service Registration Number; EC No.: European Commission Registration Number; EC Index No.: European Commission Index Number; OECD: The Organisation for Economic Co-operation and Development; GHS: The Globally Harmonized System of Classification and Labelling; APF: Assigned Protection Factor.

Hazard Rating

Health : 3 Serious Hazard - Major injury likely unless prompt action is taken and medical treatment is

given

Flammability : 1 Slight Hazard - Materials that must be preheated before ignition will occur. Includes liquids,

solids and semi solids having a flash point above 200 F. (Class IIIB)

Physical : 1 Slight Hazard - Materials that are normally stable but can become unstable (self-react) at high temperatures and pressures. Materials may react non-violently with water or undergo hazardous

polymerization in the absence of inhibitors.

Prepared by safety and environmental affairs.

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SDS US (GHS HazCom 2012) - Custom

According to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

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