

# **3-(m-AMINOPHENOXY)PROPYLTRIMETHOXYSILANE, tech-95** Safety Data Sheet SIA0598.0 Date of issue: 11/17/2014 Version: 1.0

SECTION 1: Identification of the su	Ibstance/mixture and of	the company/undertaking				
1.1. Product identifier						
Product form	: Substance					
Physical state	: Liquid					
Substance name	<ul> <li>3-(m-AMINOPHENOXY)PROPYLTRIMETHOXYSILANE, tech-95</li> <li>SIA0598.0</li> <li>C12H21NO4Si</li> </ul>					
Product code						
Formula						
Synonyms	: m-[3-(TRIMETHOXYSILY	PROPYL)]ANILINE; BENZENAMINE, 4-[3-				
-, -, -, -	(TRIMETHOXYSILYL)PROPOXY]-					
hemical family : ORGANOMETHOXYSILANE						
1.2. Relevant identified uses of the su	bstance or mixture and uses a	dvised against				
Use of the substance/mixture	: Chemical intermediate					
	For research and industria	I use only				
1.3. Details of the supplier of the safet	y data sheet					
GELEST, INC.						
11 East Steel Road						
Morrisville, PA 19067						
<b>USA</b> T 215-547-1015 - F 215-547-2484 - (M-F): 8:0	0 AM - 5:30 PM EST					
info@gelest.com - www.gelest.com						
1.4. Emergency telephone number						
Emergency number	: CHEMTREC: 1-800-424-9	300 (USA); +1 703-527-3887 (International)				
<u> </u>						
<b>SECTION 2: Hazards identification</b>						
2.1. Classification of the substance or	mixture					
Classification (GHS-US)						
Skin Irrit. 2 H315						
Eye Irrit. 2A H319						
Full text of H-phrases: see section 16						
2.2. Label elements						
GHS-US labeling						
Hazard pictograms (GHS-US)						
	•					
	GHS07					
Signal word (GHS-US)	: Warning					
Hazard statements (GHS-US)	: H315 - Causes skin irritati	n				
	H319 - Causes serious ey	e irritation				
Precautionary statements (GHS-US)		oves/protective clothing/eye protection/face protection	n			
	P264 - Wash hands thorou P302+P352 - If on skin: W	0 )				
		on occurs: Get medical advice/attention				
	P305+P351+P338 - IF IN	EYES: Rinse cautiously with water for several minut	es. Remove			
		and easy to do. Continue rinsing				
		on persists: Get medical advice/attention ted clothing and wash before reuse				
2.3. Other hazards		and many and wash before rease				
No additional information available						
2.4. Unknown acute toxicity (GHS-US)						
No data available						
<b>SECTION 3: Composition/informat</b>	ion on ingredients					
3.1. Substance						
Substance type	: Mono-constituent					
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Name CAS No	: 3-(m-AMINOPHENOXY)PROPYLTRIMETHOXYSILANE, tech-95 : 55648-29-8			
Name	Product identifier	%	Classification (GHS-US)	
Benzenamine, 4-[3-(trimethoxysilyl)propoxy]-	(CAS No) 55648-29-8	> 90	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:vapour), H331 Skin Irrit. 2, H315 Eye Dam. 1, H318 STOT SE 1, H370 STOT SE 3, H336	

3.2. Mixture	
Not applicable	
SECTION 4: First aid measures	
4.1. Description of first aid measures	3
First-aid measures general	<ul> <li>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.</li> </ul>
First-aid measures after inhalation	: Remove 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 effe	cts,	both acute and delayed			
Symptoms/injuries after inhalation	:	May cause irritation to the respiratory tract. Overexposure may cause: Coughing. Headache. Nausea.			
Symptoms/injuries after skin contact	:	Causes skin irritation.			
Symptoms/injuries after eye contact	:	Causes serious eye irritation.			
Symptoms/injuries 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.			

### 4.3. Indication of any immediate medical attention and special treatment needed

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.

SECTIO	ON 5: Firefighting measures	
5.1.	Extinguishing media	
Suitable e	extinguishing media	: Water spray. Foam. Carbon dioxide. Dry chemical.
5.2.	Special hazards arising from the su	ibstance or mixture
Fire haza	ard	: Irritating fumes and organic acid vapors may develop when material is exposed to elevated temperatures or open flame.
5.3.	Advice for firefighters	
Ũ	ng instructions n during firefighting	<ul> <li>Use water spray to cool exposed surfaces. Exercise caution when fighting any chemical fire.</li> <li>Do not enter fire area without proper protective equipment, including respiratory protection. Avoid all eye and skin contact and do not breathe vapor and mist.</li> </ul>

SECT	SECTION 6: Accidental release measures				
6.1.	Personal precautions, protective equipment and emergency procedures				
6.1.1.	For non-emergency personnel				
Emerge	ency procedures	: Evacuate unnecessary pers	onnel.		
6.1.2.	For emergency responders				
Protecti	ve equipment	: Equip cleanup crew with pro	oper protection.		
6.2.	Environmental precautions				
Prevent	Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters.				

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6.3. Methods and materia	I for containment and clear	ingun			
Methods for cleaning up	I for containment and clear	• •	le using an absorben	t material to collect it Sween or	
methods for 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 se	ections				
See Heading 8. Exposure contro	Is and personal protection.				
SECTION 7: Handling an	d storage				
7.1. Precautions for safe					
Precautions for safe handling		eve and skin contact and do	not breathe vapor and	d mist. Provide good ventilation in	
,		area to prevent accumulation		<u> </u>	
Hygiene measures		nds and other exposed areas and when leaving work. Was		ater before eating, drinking or ng before reuse.	
7.2. Conditions for safe s	torage, including any incon	npatibilities			
Storage conditions	•	tainer tightly closed. Store in	a dark area.		
Incompatible materials	: Moisture.		<b>6</b> 1 6		
Storage area	: Store in a	well-ventilated place. Store	away from heat.		
7.3. Specific end use(s)					
No additional information availab	le				
<b>SECTION 8: Exposure co</b>	ontrols/personal prote	ction			
8.1. Control parameters					
Methanol (67-56-1)					
USA ACGIH	ACGIH TWA (ppm)		200 ppm		
USA ACGIH	ACGIH STEL (ppm)		250 ppm		
USA NIOSH	NIOSH REL (TWA) (mg/m <sup>3</sup> )		260 mg/m <sup>3</sup>		
USA NIOSH	NIOSH REL (TWA) (ppm)		200 ppm		
USA NIOSH	NIOSH REL (STEL) (mg/m <sup>3</sup>		325 mg/m <sup>3</sup>		
USA NIOSH	NIOSH REL (STEL) (ppm)		250 ppm		
USA OSHA	OSHA PEL (TWA) (mg/m <sup>3</sup> )		260 mg/m <sup>3</sup>		
USA OSHA	OSHA PEL (TWA) (mg/m)		200 mg/m 200 ppm		
USA IDLH	US IDLH (ppm)		6000 ppm		
8.2. Exposure controls Appropriate engineering controls	- Provide l	ocal exhaust or general room	ventilation		
Personal protective equipment		0		tains and safety showers should be	
		in the immediate vicinity of a			
Hand protection	•	e or nitrile rubber gloves.			
Eye protection		goggles. Contact lenses sho	ould not be worn.		
Skin and body protection		able protective clothing.	10000 cm/m - /		
Respiratory protection	: NIUSH-C	ertified combination organic	vapor - amine gas (bro	own cannoge) respirator.	
<b>SECTION 9: Physical and</b>	d chemical properties				
9.1. Information on basic	physical and chemical prop	perties			
Physical state	: Liquid				
Appearance	: Liquid.				
Molecular mass	: 271.39 g/				
Color	: Amber. B				
Odor Odor throshold	: No data a				
Odor threshold	: No data a	available			
Refractive index	: 1.495 : No data a	available			
pH : No data available Relative evaporation rate (butyl acetate=1) : No data available					
Melting point : No data available					
Freezing point	: No data a				
Boiling point		°C @ 0.5 mm Hg			
Elash point	: 120 100 : > 110 °C	0			

Flash point

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Auto-ignition temperature :	No data available			
Decomposition temperature :	No data available			
Flammability (solid, gas) :	No data available			
Vapor pressure :	No data available			
Relative vapor density at 20 °C :	No data available			
Relative density :	1.02			
VOC content :	< 5 %			
Solubility :	Insoluble in water. Reacts with water.			
Log Pow :	No data available			
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			
Explosive 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 met	banol			
10.4. Conditions to avoid				
Heat. Open flame. Sparks.				
10.5. Incompatible materials				
Moisture. Oxidizing agent.				
10.6. Hazardous decomposition products				
Methanol. Organic amine vapors.				
<b>SECTION 11: Toxicological information</b>				
11.1. Information on toxicological effects				
Acute toxicity : Not classified				
Methanol (67-56-1)				
LD50 oral rat	6200 mg/kg			
LD50 dermal rabbit	20 g/kg			
LC50 inhalation rat (ppm)	22500 ppm (Exposure time: 8 h)			
ATE US (oral)	100 000 ma/ka body weight			

LD50 oral rat	6200 mg/kg
LD50 dermal rabbit	20 g/kg
LC50 inhalation rat (ppm)	22500 ppm (Exposure time: 8 h)
ATE US (oral)	100.000 mg/kg body weight
ATE US (dermal)	300.000 mg/kg body weight
ATE US (vapors)	3.000 mg/l/4h
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
Reproductive toxicity	: Not classified
Specific target organ toxicity (single exposure)	: Not classified
Specific target organ toxicity (repeated exposure)	: Not classified
Aspiration hazard	: Not classified
Potential Adverse human health effects and symptoms	: The hydrolysis product of this compound is methanol.
Symptoms/injuries after inhalation	: May cause irritation to the respiratory tract. Overexposure may cause: Coughing. Headache. Nausea.

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Symptoms/injuries after skin contact	: Causes skin irritation.
Symptoms/injuries after eye contact	: Causes serious eye irritation.
Symptoms/injuries 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
<b>SECTION 12: Ecological information</b>	
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])
12.2. Persistence and degradability	
No additional information available	
12.3. Bioaccumulative potential	
Methanol (67-56-1)	
BCF fish 1	< 10
Log Pow	-0.77
12.4. Mobility in soil	
No additional information available	
12.5. Other adverse effects	
Other adverse effects	: This substance may be hazardous to the environment.
Effect on ozone layer	: No additional information available
Effect on the global warming	: No known ecological damage caused by this product.
SECTION 13: Disposal consideration	15
13.1. Waste treatment methods	
Waste disposal recommendations	: May be incinerated. Dispose in a safe manner in accordance with local/national regulations.
Ecology - waste materials	: Avoid release to the environment.
SECTION 14: Transport information	
14.1. UN number	
Not regulated for transport.	
14.2. UN proper shipping name	
Not applicable	
14.3. Additional information	
Other information	: No supplementary information available.
Transport by sea	
No additional information available	
Air transport	
No additional information available	
SECTION 15: Regulatory information	1
15.1. US Federal regulations	
Methanol (67-56-1)	
Listed on the United States TSCA (Toxic Subst	ances Control Act) inventory
SARA Section 313 - Emission Reporting	1.0 %
Benzenamine, 4-[3-(trimethoxysilyl)propoxy	
Listed on the United States TSCA (Toxic Subs	
15.2. International regulations	

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Methanol (67-56-1)	
Listed on the AICS (Australian Inventory of Chemical Substances)	
Listed on the Canadian DSL (Domestic Sustances List)	
Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)	
Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)	
Listed on the Japanese ENCS (Existing & New Chemical Substances) inventory	
Listed on the Korean ECL (Existing Chemicals List)	
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 the Canadian IDL (Ingredient Disclosure List)	
Benzenamine, 4-[3-(trimethoxysilyl)propoxy]- (55648-29-8)	
Listed on the Canadian NDSL (Non-Domestic Substances List)	

### 15.3. US State regulations

3-(m-AMINOPHENOXY)PROPYLTRIMETHOXYSILANE, tech-95(55648-29-8)					
U.S California - Propo	a - Proposition 65 - Carcinogens List No				
U.S California - Proposition 65 - Developmental Toxicity		No			
U.S California - Proposition 65 - Reproductive Toxicity - Female		No			
U.S California - Proposition 65 - Reproductive No Toxicity - Male					
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 -	U.S California - Proposition 65 - Reproductive Toxicity -	No significance risk level (NSRL)	

Carcinogens List	Developmental Toxicity	Reproductive Toxicity - Female	Reproductive Toxicity - Male		
No	Yes	No	No		
Benzenamine, 4-[3-(trimethoxysilyl)propoxy]- (55648-29-8)					
U.S California -	U.S California -	U.S California -	U.S California -	No significance risk level	
Proposition 65 -	Proposition 65 -	Proposition 65 -	Proposition 65 -	(NSRL)	
Carcinogens List	Developmental Toxicity	Reproductive Toxicity -	Reproductive Toxicity -		
		Female	Male		
No	No	No	No		

### Methanol (67-56-1)

U.S. - California - Proposition 65 - Maximum Allowable Dose Levels (MADL)

U.S. - California - SCAQMD - Toxic Air Contaminants - Non-Cancer Acute

U.S. - California - SCAQMD - Toxic Air Contaminants - Non-Cancer Chronic

U.S. - California - Toxic Air Contaminant List (AB 1807, AB 2728)

U.S. - Colorado - Hazardous Wastes - Discarded Chemical Products, Off-Specification Species, Container and Spill Residues

U.S. - Connecticut - Hazardous Air Pollutants - HLVs (30 min)

U.S. - Connecticut - Hazardous Air Pollutants - HLVs (8 hr)

U.S. - Connecticut - Volatile Substances

U.S. - Delaware - Pollutant Discharge Requirements - Reportable Quantities

U.S. - Idaho - Non-Carcinogenic Toxic Air Pollutants - Acceptable Ambient Concentrations

- U.S. Idaho Non-Carcinogenic Toxic Air Pollutants Emission Levels (ELs)
- U.S. Idaho Occupational Exposure Limits TWAs
- U.S. Illinois Toxic Air Contaminants
- U.S. Louisiana Reportable Quantity List for Pollutants
- U.S. Maine Air Pollutants Hazardous Air Pollutants
- U.S. Maine Chemicals of High Concern
- U.S. Massachusetts Allowable Ambient Limits (AALs)
- U.S. Massachusetts Allowable Threshold Concentrations (ATCs)
- U.S. Massachusetts Oil & Hazardous Material List Groundwater Reportable Concentration Reporting Category 1
- U.S. Massachusetts Oil & Hazardous Material List Groundwater Reportable Concentration Reporting Category 2
- U.S. Massachusetts Oil & Hazardous Material List Reportable Quantity
- U.S. Massachusetts Oil & Hazardous Material List Soil Reportable Concentration Reporting Category 1
- U.S. Massachusetts Oil & Hazardous Material List Soil Reportable Concentration Reporting Category 2
- U.S. Massachusetts Right To Know List
- U.S. Massachusetts Threshold Effects Exposure Limits (TELs)
- U.S. Massachusetts Toxics Use Reduction Act
- U.S. Michigan Occupational Exposure Limits Skin Designations
- U.S. Michigan Occupational Exposure Limits STELs
- U.S. Michigan Occupational Exposure Limits TWAs
- U.S. Michigan Polluting Materials List
- U.S. Minnesota Chemicals of High Concern
- U.S. Minnesota Groundwater Health Risk Limits
- U.S. Minnesota Hazardous Substance List

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Methanol (67-56-1)				
U.S Minnesota - Permissible Exposure Limits - Skin Designations				
U.S Minnesota - Permissible Exposure Limits - STELs				
U.S Minnesota - Permissible Exposure Limits - TWAs				
U.S New Hampshire - Regulated Toxic Air Pollutants - Ambient Air Levels (AALs) - 24-Hour				
U.S New Hampshire - Regulated Toxic Air Pollutants - Ambient Air Levels (AALs) - Annual				
U.S New Jersey - Discharge Prevention - List of Hazardous Substances				
U.S New Jersey - Environmental Hazardous Substances List				
U.S New Jersey - Right to Know Hazardous Substance List				
U.S New Jersey - Special Health Hazards Substances List				
U.S New Jersey - Water Quality - Ground Water Quality Criteria				
U.S New Jersey - Water Quality - Practical Quantitation Levels (PQLs)				
U.S New York - Occupational Exposure Limits - Skin Designations				
U.S New York - Occupational Exposure Limits - TWAs				
U.S New York - Reporting of Releases Part 597 - List of Hazardous Substances				
U.S North Dakota - Air Pollutants - Guideline Concentrations - 1-Hour				
U.S North Dakota - Air Pollutants - Guideline Concentrations - 8-Hour				
U.S North Dakota - Hazardous Wastes - Discarded Chemical Products, Off-Specification Species, Container and Spill Residues				
U.S Oregon - Permissible Exposure Limits - TWAs				
U.S Pennsylvania - RTK (Right to Know) - Environmental Hazard List				
U.S Pennsylvania - RTK (Right to Know) List				
U.S Rhode Island - Air Toxics - Acceptable Ambient Levels - 1-Hour				
U.S Rhode Island - Air Toxics - Acceptable Ambient Levels - Annual				
U.S South Carolina - Toxic Air Pollutants - Maximum Allowable Concentrations				
U.S South Carolina - Toxic Air Pollutants - Pollutant Categories				
U.S Tennessee - Occupational Exposure Limits - Skin Designations				
U.S Tennessee - Occupational Exposure Limits - STELs				
U.S Tennessee - Occupational Exposure Limits - TWAs				
U.S Texas - Effects Screening Levels - Long Term				
U.S Texas - Effects Screening Levels - Short Term				
U.S Vermont - Permissible Exposure Limits - Skin Designations				
U.S Vermont - Permissible Exposure Limits - STELs				
U.S Vermont - Permissible Exposure Limits - TWAs				
U.S Washington - Dangerous Waste - Discarded Chemical Products List				
U.S Washington - Permissible Exposure Limits - Skin Designations				
U.S Washington - Permissible Exposure Limits - STELs				
U.S Washington - Permissible Exposure Limits - TWAs				
SECTION 16: Other information				

### 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.

#### Full text of H-phrases::

Acute Tox. 3 (Dermal)	Acute toxicity (dermal) Category 3
Acute Tox. 3 (Inhalation:vapour)	Acute toxicity (inhalation:vapor) Category 3
Acute Tox. 3 (Oral)	Acute toxicity (oral) Category 3
Eye Dam. 1	Serious eye damage/eye irritation Category 1
Eye Irrit. 2A	Serious eye damage/eye irritation Category 2A
Flam. Liq. 2	Flammable liquids Category 2
Skin Irrit. 2	Skin corrosion/irritation Category 2
STOT SE 1	Specific target organ toxicity (single exposure) Category 1
STOT SE 3	Specific target organ toxicity (single exposure) Category 3
H225	Highly flammable liquid and vapor
H301	Toxic if swallowed
H311	Toxic in contact with skin
H315	Causes skin irritation
H318	Causes serious eye damage
H319	Causes serious eye irritation
H331	Toxic if inhaled
H336	May cause drowsiness or dizziness
H370	Causes damage to organs

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HMIS III Rating	
Health	: 3 Serious Hazard - Major injury likely unless prompt action is taken and medical treatment is given
Flammability	: 1 Slight Hazard
Physical	: 1 Slight Hazard

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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