

SAFETY DATA SHEET

1. PRODUCT

1.1 Product identifiers

Name: N-[3-(Trimethoxysilyl)propyl]aniline

CAS-No.: 3068-76-6

1.2 Relevant identified uses of the substance or mixture and uses advised against

Identified uses : Laboratory chemicals, Synthesis of substances

2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)

Skin corrosion (Category 1B), H314

Serious eye damage (Category 1), H318

Skin sensitisation (Category 1), H317

Germ cell mutagenicity (Category 2), H341

Carcinogenicity (Category 2), H351


Specific target organ toxicity - repeated exposure (Category 1), Blood, H372

Acute aquatic toxicity (Category 3), H402

Chronic aquatic toxicity (Category 3), H412

For the full text of the H-Statements mentioned in this Section, see Section 16.

2.2 GHS Label elements, including precautionary statements

Pictogram	
Signal word	Danger
Hazard statement(s)	H314 Causes severe skin burns and eye damage. H317 May cause an allergic skin reaction. H318 Causes serious eye damage. H341 Suspected of causing genetic defects. H351 Suspected of causing cancer. H372 Causes damage to organs (Blood) through prolonged or repeated exposure. H412 Harmful to aquatic life with long lasting effects.

Precautionary statement(s)	<p>P201 Obtain special instructions before use.</p> <p>P202 Do not handle until all safety precautions have been read and understood.</p> <p>P260 Do not breathe dust/ fume/ gas/ mist/ vapours/ spray.</p> <p>P264 Wash skin thoroughly after handling.</p> <p>P270 Do not eat, drink or smoke when using this product.</p> <p>P272 Contaminated work clothing should not be allowed out of the workplace.</p> <p>P273 Avoid release to the environment.</p> <p>P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.</p> <p>P301 + P330 + P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.</p> <p>P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.</p> <p>P304 + P340 + P310 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER/doctor.</p> <p>P305 + P351 + P338 + P310 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER/doctor.</p> <p>P308 + P313 IF exposed or concerned: Get medical advice/ attention.</p> <p>P333 + P313 If skin irritation or rash occurs: Get medical advice/ attention.</p> <p>P363 Wash contaminated clothing before reuse.</p> <p>P405 Store locked up.</p> <p>P501 Dispose of contents/ container to an approved waste disposal plant.</p>
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2.3 Hazards not otherwise classified (HNOC) or not covered by GHS

No data available

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Mixtures

Formula: $C_{12}H_{21}NO_3Si$
Molecular weight: 255.39 g/mol

Hazardous components

Component	Classification	Concentration
N-[3-(Trimethoxysilyl)propyl]aniline		
CAS-No. 3068-76-6 EC-No. 221-328-2	Skin Corr. 1B; Eye Dam. 1; H314	<= 100 %
Aniline		
CAS-No. 62-53-3 EC-No. 200-539-3	Flam. Liq. 4; Acute Tox. 3; Eye Dam. 1; Skin Sens. 1; Muta. 2; Carc. 2; STOT RE 1; Aquatic Acute 1; Aquatic Chronic 1; H227, H301 + H311 + H331, H317, H318, H341, H351, H372, H410	>= 1 -< 5 %
Methanol		
CAS-No. 67-56-1 EC-No. 200-659-6	Flam. Liq. 2; Acute Tox. 3; STOT SE 1; H225, H301 + H311 + H331, H370	>= 0.1 -< 1 %

For the full text of the H-Statements mentioned in this Section, see Section 16.

4. FIRST AID MEASURES

4.1 Description of first aid measures

General advice
Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.
If inhaled
If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.
In case of skin contact
Take off contaminated clothing and shoes immediately. Wash off with soap and plenty of water. Take victim immediately to hospital. Consult a physician.
In case of eye contact
Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician. Continue rinsing eyes during transport to hospital.
If swallowed

Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

4.2 Most important symptoms and effects, both acute and delayed

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

4.2 Indication of any immediate medical attention and special treatment needed

No data available

5. FIREFIGHTING MEASURES

5.1 Extinguishing media

Suitable extinguishing media

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

5.2 Special hazards arising from the substance or mixture

No data available

5.3 Advice for firefighters

Wear self-contained breathing apparatus for firefighting if necessary.

5.4 Further information

No data available

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Use personal protective equipment. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas.

For personal protection see section 8.

6.2 Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

6.3 Methods and materials for containment and cleaning up

Soak up with inert absorbent material and dispose of as hazardous waste. Keep in suitable, closed containers for disposal.

6.4 Reference to other sections

For disposal see section 13.

7. HANDLING AND STORAGE

7.1 Precautions for safe handling

Avoid contact with skin and eyes. Avoid inhalation of vapour or mist.

For precautions see section 2.2.

7.2 Conditions for safe storage, including any incompatibilities

Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

Light sensitive. Store under inert gas.

Storage class (TRGS 510): Non-combustible, acute toxic Cat.3 / toxic hazardous materials or hazardous materials

causing chronic effects

7.3 Specific end use(s)

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

Components with workplace control parameters

Component	CAS-No.	Value	Control parameters	Basis
Aniline	62-53-3	TWA	2 ppm	USA. ACGIH Threshold Limit Values (TLV)
	Remarks	Methemoglobinemia Substances for which there is a Biological Exposure Index or Indices (see BEI® section) Confirmed animal carcinogen with unknown relevance to humans Danger of cutaneous absorption		
		TWA	2.000000 ppm	USA. ACGIH Threshold Limit Values (TLV)
		Methemoglobinemia Substances for which there is a Biological Exposure Index or Indices (see BEI® section) Confirmed animal carcinogen with unknown relevance to humans Danger of cutaneous absorption		
		TWA	5.000000 ppm 19.000000 mg/m3	USA. Occupational Exposure Limits (OSHA) -Table Z-1 Limits for Air Contaminants
		Skin contact does contribute to exposure.		
		TWA	5.000000 ppm 19.000000 mg/m3	USA. Occupational Exposure Limits (OSHA) -Table Z-1 Limits for Air Contaminants
		Skin designation The value in mg/m3 is approximate.		
		Potential Occupational Carcinogen See Appendix A		
		TWA	5.000000 ppm mg/m3	USA. Occupational Exposure Limits (OSHA) -Table Z-1 Limits for Air Contaminants
		Skin designation The value in mg/m3 is approximate.		
		Potential Occupational Carcinogen See Appendix A		
		TWA	5 ppm 19 mg/m3	USA. Occupational Exposure Limits (OSHA) -Table Z-1 Limits for Air Contaminants
		Skin designation The value in mg/m3 is approximate.		
		Potential Occupational Carcinogen See Appendix A		
		PEL	2 ppm 7.6 mg/m3	California permissible exposure limits for chemical contaminants (Title 8, Article 107)
		Skin		
Methanol	67-56-1	TWA	200.000000 ppm	USA. ACGIH Threshold Limit Values (TLV)
		Headache Nausea Dizziness Eye damage Substances for which there is a Biological Exposure Index or Indices (see BEI® section) Danger of cutaneous absorption		
		STEL	250.000000 ppm	USA. ACGIH Threshold Limit Values (TLV)
		Headache Nausea Dizziness Eye damage Substances for which there is a Biological Exposure Index or Indices (see BEI® section) Danger of cutaneous absorption		
		TWA	200.000000 ppm 260.000000 mg/m3	USA. NIOSH Recommended Exposure Limits
		Potential for dermal absorption		
		ST	250.000000 ppm 325.000000 mg/m3	USA. NIOSH Recommended Exposure Limits
		Potential for dermal absorption		
		TWA	200.000000 ppm 260.000000 mg/m3	USA. Occupational Exposure Limits (OSHA) -Table Z-1 Limits for Air Contaminants
		The value in mg/m3 is approximate.		
		TWA	200 ppm	USA. ACGIH Threshold Limit Values (TLV)

Component	CAS-No.	Value	Control parameters	Basis
		Headache Nausea Dizziness Eye damage Substances for which there is a Biological Exposure Index or Indices (see BEI® section) Danger of cutaneous absorption		
		STEL	250 ppm	USA. ACGIH Threshold Limit Values (TLV)
		Headache Nausea Dizziness Eye damage Substances for which there is a Biological Exposure Index or Indices (see BEI® section) Danger of cutaneous absorption		
		TWA	200 ppm 260 mg/m ³	USA. NIOSH Recommended Exposure Limits
		Potential for dermal absorption		
		ST	250 ppm 325 mg/m ³	USA. NIOSH Recommended Exposure Limits
		Potential for dermal absorption		
		TWA	200 ppm 260 mg/m ³	USA. Occupational Exposure Limits (OSHA) -Table Z-1 Limits for Air Contaminants
		The value in mg/m ³ is approximate.		
		STEL	250 ppm 325 mg/m ³	USA. OSHA -TABLE Z-1 Limits for Air Contaminants -1910.1000
		Skin notation		
		TWA	200 ppm 260 mg/m ³	USA. OSHA -TABLE Z-1 Limits for Air Contaminants -1910.1000
		Skin notation		

Hazardous components without workplace control parameters

Biological occupational exposure limits

Component	CAS-No.	Parameters	Value	Biological specimen	Basis
Aniline	62-53-3	Aniline		Urine	ACGIH -Biological Exposure Indices (BEI)
	Remarks	End of shift (As soon as possible after exposure ceases)			
		Aniline		Released from hemoglobin in blood	ACGIH -Biological Exposure Indices (BEI)
		End of shift (As soon as possible after exposure ceases)			
		p-Aminophenol	50.0000 mg/l	Urine	ACGIH -Biological Exposure Indices (BEI)
		End of shift (As soon as possible after exposure ceases)			
Methanol	67-56-1	Methanol	15.0000 mg/l	Urine	ACGIH -Biological Exposure Indices (BEI)
		End of shift (As soon as possible after exposure ceases)			
		Methanol	15 mg/l	Urine	ACGIH -Biological Exposure Indices (BEI)
		End of shift (As soon as possible after exposure ceases)			

8.2 Exposure controls

Appropriate engineering controls

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

Personal protective equipment

Eye/face protection	Tightly fitting safety goggles. Faceshield (8-inch minimum). Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).
Skin protection	Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.
Body Protection	Complete suit protecting against chemicals, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.
Respiratory protection	Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).
Control of environmental exposure	Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Appearance	Form: clear, liquid Colour: yellow
Odour	No data available
Odour Threshold	No data available
pH	No data available
Melting point/freezing point	No data available
Initial boiling point and boiling range	310 °C (590 °F) - lit.
Flash point	110 °C (230 °F) - closed cup
Evaporation rate	No data available
Flammability (solid, gas)	No data available
Upper/lower flammability or explosive limits	No data available
Vapour pressure	No data available
Vapour density	No data available
Relative density	1.07 g/mL at 25 °C (77 °F)
Water solubility	No data available
Partition coefficient: n-octanol/water	No data available
Auto-ignition temperature	No data available
Decomposition temperature	No data available
Viscosity	No data available
Explosive properties	No data available
Oxidizing properties	No data available

9.2 Other safety information

No data available

10. STABILITY AND REACTIVITY

10.1 Reactivity

No data available

10.2 Chemical stability

Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions

No data available

10.4 Conditions to avoid

Exposure to moisture Exposure to sunlight.

10.5 Incompatible materials

Strong oxidizing agents, Water

10.6 Hazardous decomposition products

Hazardous decomposition products formed under fire conditions. - Carbon oxides, Nitrogen oxides (NO_x), silicon oxides

Other decomposition products - No data available

In the event of fire: see section 5

11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute toxicity
No data available No data available Inhalation: No data available Inhalation: No data available Dermal: No data available Dermal: No data available No data available No data available
Skin corrosion/irritation
No data available No data available
Serious eye damage/eye irritation
No data available No data available
Respiratory or skin sensitisation
No data available No data available
Germ cell mutagenicity
No data available No data available
Carcinogenicity
IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC. NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP. OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.
Reproductive toxicity
No data available No data available No data available No data available
Specific target organ toxicity -single exposure
No data available
Specific target organ toxicity -repeated exposure
No data available
Aspiration hazard
No data available
Additional Information
RTECS: Not available To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated. Inhalation of vapors may cause:, Cough, Headache, Nausea, Skin contact may provoke the following symptoms:, allergic dermatitis Stomach - Irregularities - Based on Human Evidence Stomach - Irregularities - Based on Human Evidence (Aniline) Stomach - Irregularities - Based on Human Evidence (Methanol)

12. ECOLOGICAL INFORMATION

12.1 Toxicity

No data available

No data available

12.2 Persistence and degradability

No data available

12.3 Bioaccumulative potential

No data available

12.4 Mobility in soil

No data available

12.5 Results of PBT and vPvB assessment

PBT/vPvB assessment not available as chemical safety assessment not required/not conducted

12.6 Other adverse effects

An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

Harmful to aquatic life with long lasting effects.

No data available

13. DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Product
Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber.
Contaminated packaging
Dispose of as unused product.

14. TRANSPORT INFORMATION

DOT (US)

UN number: 3267 Class: 8 Packing group: II

Proper shipping name: Corrosive liquid, basic, organic, n.o.s. (N-[3-(Trimethoxysilyl)propyl]aniline)

Reportable Quantity (RQ):

Poison Inhalation Hazard: No

IMDG

UN number: 3267 Class: 8 Packing group: II EMS-No: F-A, S-B

Proper shipping name: CORROSIVE LIQUID, BASIC, ORGANIC, N.O.S. (N-[3-(Trimethoxysilyl)propyl]aniline)

IATA

UN number: 3267 Class: 8 Packing group: II

Proper shipping name: Corrosive liquid, basic, organic, n.o.s. (N-[3-(Trimethoxysilyl)propyl]aniline)

15. REGULATORY INFORMATION

SARA 302 Components

The following components are subject to reporting levels established by SARA Title III, Section 302:

Component	CAS-No.	Revision Date
Aniline	62-53-3	1993-04-24

SARA 313 Components

The following components are subject to reporting levels established by SARA Title III, Section 313:

Component	CAS-No.	Revision Date
Aniline	62-53-3	1993-04-24

Massachusetts Right To Know Components

Component	CAS-No.	Revision Date
Aniline	62-53-3	1993-04-24

Pennsylvania Right To Know Components

Component	CAS-No.	Revision Date
N-[3-(Trimethoxysilyl)propyl]aniline	3068-76-6	
Aniline	62-53-3	1993-04-24
Methanol	67-56-1	2007-07-01

New Jersey Right To Know Components

Component	CAS-No.	Revision Date
N-[3-(Trimethoxysilyl)propyl]aniline	3068-76-6	
Aniline	62-53-3	1993-04-24
Methanol	67-56-1	2007-07-01

California Prop. 65 Components

WARNING! This product contains a chemical known to the State of California to cause cancer.

Component	CAS-No.	Revision Date
Aniline	62-53-3	2007-09-28

WARNING: This product contains a chemical known to the State of California to cause birth defects or other reproductive harm.

Component	CAS-No.	Revision Date
Methanol	67-56-1	2012-03-16

16. OTHER INFORMATION

Full text of H-Statements referred to under sections 2 and 3.

Acute Tox. Acute toxicity

Aquatic Acute Acute aquatic toxicity

Aquatic Chronic Chronic aquatic toxicity

Carc. Carcinogenicity

Eye Dam. Serious eye damage

Flam. Liq. Flammable liquids

H225 Highly flammable liquid and vapour.

H227 Combustible liquid.

H301 + H311 +H331 Toxic if swallowed, in contact with skin or if inhaled

H314 Causes severe skin burns and eye damage.

H317 May cause an allergic skin reaction.

H318 Causes serious eye damage.

H341 Suspected of causing genetic defects.

H351 Suspected of causing cancer.

H370 Causes damage to organs.

H372 Causes damage to organs (ORGAN_REPEAT) through prolonged or repeated exposure.

H402 Harmful to aquatic life.

H410 Very toxic to aquatic life with long lasting effects.

H412 Harmful to aquatic life with long lasting effects.

Muta. Germ cell mutagenicity

Skin Corr. Skin corrosion

Skin Sens. Skin sensitisation

STOT RE Specific target organ toxicity - repeated exposure

STOT SE Specific target organ toxicity - single exposure

HMIS Rating

Health hazard: 3

Chronic Health Hazard: *

Flammability: 1

Physical Hazard 0

NFPA Rating

Health hazard: 3

Fire Hazard: 1

Reactivity Hazard: 0
