

SAFETY DATA SHEET

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifiers

Product name o-Toluidine
CAS number 95-53-4
Synonyms ortho-Tolidine; 2-Aminotoluene; 2-Methylaniline

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

Identified uses Laboratory chemicals.

1.3 Details of the supplier of the safety data sheet

Company Lab Alley, LLC
12501 Pauls Valley Road
Austin, Texas 78737
U.S.A.
Telephone 512-668-9918
Fax 512-886-4008

1.4 Emergency telephone

Emergency Phone # US & Canada: 1-800-535-5053 INFOTRAC
International 1-352-323-3500 INFOTRAC


SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

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

Flammable Liquids	Category 4
Acute Oral Toxicity	Category 3
Acute Dermal Toxicity	Category 4
Acute Inhalation Toxicity - Vapors	Category 3
Skin Corrosion/Irritation	Category 2
Serious Eye Damage/Eye Irritation	Category 1

2.2 GHS Label elements, including precautionary statements

Pictogram	
Signal Word	Danger
Hazard statements	Combustible liquid. Harmful in contact with skin. Causes skin irritation. Causes serious eye damage. Suspected of causing genetic defects. May cause cancer. Toxic if swallowed or if inhaled.
Precautionary statements	<p>Prevention: Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Use personal protective equipment as required. Wash face, hands, and any exposed skin thoroughly after handling. Do not eat, drink, or smoke when using this product. Avoid breathing dust/fume/gas/mist/vapors/spray. Use only outdoors or in a well-ventilated area. Keep away from heat/sparks/open flames/hot surfaces. No smoking. Keep cool.</p> <p>Response: IF exposed or concerned: Get medical attention/advice.</p> <p>IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/physician.</p> <p>IF ON SKIN: Wash with plenty of soap and water. Call a POISON CENTER or doctor/physician if you feel unwell. If skin irritation occurs: Get medical advice/attention. Take off contaminated clothing and wash before reuse.</p> <p>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 or doctor/physician.</p> <p>IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician. Rinse mouth.</p> <p>Fire: In case of fire, use CO2, dry chemical, or foam for extinction.</p> <p>Storage: Store locked up. Store in a well-ventilated place. Keep container tightly closed.</p>

Disposal: Dispose of contents/container to an approved waste disposal plant.

2.3 Hazards not otherwise classified (HNOC) or not covered by GHS

Very toxic to aquatic life.
Warning: Cancer.

SECTION 3: Composition/information on ingredients

3.1 Components

Chemical name	Common name and synonyms	CAS number	Concentration
o-Toluidine	ortho-Tolidine; 2-Aminotoluene; 2-Methylaniline	95-53-4	<=100%

SECTION 4: First aid measures

4.1 Description of first-aid measures

General advice

If inhaled	Remove to fresh air. If not breathing, give artificial respiration. Do not use mouth-to-mouth method if victim ingested or inhaled the substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Immediate medical attention is required.
In case of skin contact	Wash off immediately with plenty of water for at least 15 minutes. Immediate medical attention is required.
In case of eye contact	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. In the case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
If swallowed	Do NOT induce vomiting. Call a physician or poison control center immediately.

4.2 Most important symptoms and effects, both acute and delayed

Difficulty in breathing. Causes eye burns. Causes severe eye damage. Symptoms of overexposure may be headache, dizziness, tiredness, nausea, and vomiting.

4.3 Indication of any immediate medical attention and special treatment needed

Show this safety data sheet to the doctor in attendance. Immediate medical attention is required. Treat symptomatically.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media Water spray. Carbon dioxide (CO₂). Dry chemical. Chemical foam. Water mist may be used to cool closed containers.

Unsuitable extinguishing media No information available.

5.2 Specific hazards arising from the substance or mixture

Combustible material. Flammable. Containers may explode when heated. Do not allow run-off from fire-fighting to enter drains or water courses.

Hazardous Combustion Products: Nitrogen oxides (NO_x). Carbon monoxide (CO). Carbon dioxide (CO₂).

5.3 Special protective equipment and precautions for firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear. Thermal decomposition can lead to release of irritating gases and vapors.

5.4 Further information

Flash Point 85 °C / 185 °F

Autoignition Temperature 480 °C / 896 °F

Explosion limits

Upper 7.50%

Lower 1.50%

Sensitivity to Mechanical Impact No information available.

Sensitivity to Static Discharge No information available.

NFPA

Health	Flammability	Instability	Physical hazards
3	2	0	N/A

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Ensure adequate ventilation. Use personal protective equipment as required. Keep people away from and upwind of spill/leak. Evacuate personnel to safe areas. Remove all sources of ignition. Take precautionary measures against static discharges.

6.2 Environmental precautions

Do not flush into surface water or sanitary sewer system. Do not allow material to contaminate ground water system. Prevent product from entering drains. Local authorities should be advised if significant spillages cannot be contained.

6.3 Methods and materials for containment and cleaning up

Keep in suitable, closed containers for disposal. Soak up with inert absorbent material. Remove all sources of ignition.

6.4 Reference to other sections

See Section 2 for full list of hazard and precaution statements.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Precautions on safe handling

Do not get in eyes, on skin, or on clothing. Wear personal protective equipment/face protection. Use only under a chemical fume hood. Do not breathe mist/vapors/spray. Do not ingest. If swallowed, then seek immediate medical assistance. Keep away from open flames, hot surfaces, and sources of ignition.

Hygiene measures

Handle in accordance with good industrial hygiene and safety practice.

7.2 Conditions for safe storage, including any incompatibilities

Storage conditions

Keep in a dry, cool, and well-ventilated place. Keep container tightly closed. Keep away from heat, sparks, and flame. Protect from direct sunlight. Keep locked up. Keep under nitrogen. Keep containers tightly closed in a dry, cool, and well-ventilated place.

Incompatibilities

Strong oxidizing agents. Strong acids.

SECTION 8: Exposure controls/personal protection

8.1 Occupational exposure limits

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Component	Type	Value	
o-Toluidine	(Vacated) TWA	5 ppm	22 mg/m ³
	TWA	5 ppm	22 mg/m ³

US. ACGIH Threshold Limit Values

Component	Type	Value
o-Toluidine	TWA	2 ppm

US. NIOSH: Pocket Guide to Chemical Hazards

Component	Type	Value
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o-Toluidine	IDLH	50 ppm
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Biological occupational exposure limits

No information available.

8.2 Exposure controls

Appropriate engineering controls

Ensure adequate ventilation, especially in confined areas. Ensure that eyewash stations and safety showers are close to the workstation location.

Personal protective equipment

Eye/face protection

Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

Skin protection

Wear appropriate protective gloves and clothing to prevent skin exposure.

Body Protection

Wear appropriate protective gloves and clothing to prevent skin exposure.

Respiratory protection

Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

Recommended Filter type: Particulates filter conforming to EN 143. Ammonia and organic ammonia derivatives filter. Type K. Green, conforming to EN 14387.

Control of environmental exposure

No information available.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical State	Liquid
Appearance	Light yellow
Odor	Rotten-egg like
Odor Threshold	No information available
pH	7.5 - 8 g/l aq. sol
Melting Point/Range	-23°C / -9.4°F
Boiling Point/Range	199 - 200°C / 390.2 - 392°F

Evaporation Rate	No information available
Flammability (solid)	Not applicable
Flammability or explosive limit	
Upper	7.50%
Lower	1.50%
Vapor Pressure	0.3 mbar @ 20°C
Vapor Density	3.7 (Air = 1.0)
Density	No information available
Solubility	No information available
Partition coefficient; n-octanol/water	No data available
Autoignition Temp	480°C / 896°F
Decomposition Temp	> 200°C
Viscosity	No information available
Molecular Formula	C7 H9 N
Molecular Weight	107.15 g/mol
VOC Content(%)	No information available
Oxidizing properties	No information available

9.2 Other safety information

No information available.

SECTION 10: Stability and reactivity

10.1 Reactivity

None known, based on information available.

10.2 Chemical stability

Stable under normal conditions. Light sensitive. Air sensitive.

10.3 Possibility of hazardous reactions

None under normal processing.

10.4 Conditions to avoid

Exposure to air. Exposure to light. Incompatible products. Keep away from open flames, hot surfaces, and sources of ignition.

10.5 Incompatible materials

Strong oxidizing agents, Strong acids.

10.6 Hazardous decomposition products

Nitrogen oxides (NOx), Carbon monoxide (CO), Carbon dioxide (CO2).

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Product Information, Component Information

Acute toxicity

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
o-Toluidine	670 mg/kg (Rat)	3235 mg/kg (Rabbit)	862 ppm (Rat) 4h

Skin corrosion/irritation

No information available.

Serious eye damage/eye irritation

No information available.

Respiratory or skin sensitization

No information available.

Germ cell mutagenicity

No information available.

Carcinogenicity

Component	CAS	IARC	NTP	ACGIH	OSHA	Mexico
o-Toluidine	95-53-4	Group 1	Known	A3	X	A3

Specific target organ toxicity - single exposure

None known.

Specific target organ toxicity - repeated exposure

None known.

Reproductive toxicity

No information available.

Chronic effects

Symptoms of overexposure may be headache, dizziness, tiredness, nausea, and vomiting.

11.2 Additional Information

The toxicological properties have not been fully investigated.

SECTION 12: Ecological information

12.1 Toxicity

Very toxic to aquatic organisms.

Product		Species	Test Results
o-Toluidine	EC50	Desmodesmus subspicatus	3.7 mg/L, 96h static
	EC50	Desmodesmus subspicatus	3.9 mg/L, 72h
	EC50	Microtox	13.2 mg/L, 30 min

12.2 Persistence and degradability

Persistence is unlikely.

12.3 Bio accumulative potential

No information available.

12.4 Mobility in soil

Likely mobile in the environment due to its water solubility.

12.5 Results of PBT and vPvB assessment

No information available.

12.6 Endocrine disrupting properties

No information available.

12.7 Other adverse effects

No information available.

SECTION 13: Disposal considerations

13.1 Waste Disposal Methods

Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations to ensure complete and accurate classification.

Component	RCRA - U Series Wastes	RCRA - P Series Wastes
o-Toluidine - 95-53-4	U328	-

SECTION 14: Transport information

DOT (US)

UN-No UN1708
Proper Shipping Name TOLUIDINES, LIQUID
Hazard Class 6.1
Packing Group II

IMDG

UN-No UN1708
Proper Shipping Name TOLUIDINES, LIQUID
Hazard Class 6.1
Packing Group II

IATA

UN-No UN1708
Proper Shipping Name TOLUIDINES, LIQUID
Hazard Class 6.1

SECTION 15: Regulatory information

US federal regulations This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not applicable.

CERCLA Hazardous Substance List (40 CFR 302.4)

Listed, o-Toluidine (CAS #95-53-4), RQ: 100 lb.

SARA 304 Emergency release notification

Not regulated.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)

Not regulated.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

SARA 302 Extremely hazardous substance

Not listed.

SARA 311/312 Hazardous

See Section 2 for more information.

SARA 313 (TRI reporting)

Listed, o-Toluidine (CAS #95-53-4).

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

Listed, o-Toluidine (CAS #95-53-4).

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Not regulated.

Safe Drinking Water Act

Not regulated.

FEMA Priority Substances Respiratory Health and Safety in the Flavor Manufacturing Workplace

Not listed.

US state regulations

US. Massachusetts RTK - Substance List

Listed, o-Toluidine (CAS #95-53-4).

US. New Jersey Worker and Community Right-to-Know Act

Listed, o-Toluidine (CAS #95-53-4).

US. Pennsylvania Worker and Community Right-to-Know Law

Listed, o-Toluidine (CAS #95-53-4).

California Proposition 65

Listed, o-Toluidine (CAS #95-53-4).

SECTION 16: Other information

Issue date: 10/16/2024

SECTION 17: Disclaimer

The information provided on this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.