

## SAFETY DATA SHEET

Creation Date 29-May-2015

Revision Date 26-May-2017

Revision Number 3

### 1. Identification

**Product Name** p-Toluidine

**Cat No. :** AC376350000; AC376350010; AC376350250; AC376352500;  
AC376350050

**Synonyms** 4-Aminotoluene; 4-Methylaniline

**Recommended Use** Laboratory chemicals.

**Uses advised against** Not for food, drug, pesticide or biocidal product use

#### Details of the supplier of the safety data sheet

##### Company

Fisher Scientific	Acros Organics
One Reagent Lane	One Reagent Lane
Fair Lawn, NJ 07410	Fair Lawn, NJ 07410
Tel: (201) 796-7100	

##### **Emergency Telephone Number**

For information **US** call: 001-800-ACROS-01 / **Europe** call: +32 14 57 52 11  
Emergency Number **US**:001-201-796-7100 / **Europe**: +32 14 57 52 99  
**CHEMTREC** Tel. No.**US**:001-800-424-9300 / **Europe**:001-703-527-3887

### 2. Hazard(s) identification

#### Classification

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Acute oral toxicity	Category 3
Acute dermal toxicity	Category 3
Acute Inhalation Toxicity - Dusts and Mists	Category 3
Serious Eye Damage/Eye Irritation	Category 2
Skin Sensitization	Category 1
Carcinogenicity	Category 2

#### Label Elements

##### **Signal Word**

Danger

##### **Hazard Statements**

Toxic if swallowed  
Toxic in contact with skin  
May cause an allergic skin reaction  
Causes serious eye irritation  
Toxic if inhaled  
Suspected of causing cancer

**Precautionary Statements****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  
 Contaminated work clothing should not be allowed out of the workplace  
 Wear protective gloves/protective clothing/eye protection/face protection

**Response**

IF exposed or concerned: Get medical attention/advice

**Inhalation**

IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing  
 Call a POISON CENTER or doctor/physician

**Skin**

IF ON SKIN: Wash with plenty of soap and water  
 Call a POISON CENTER or doctor/physician if you feel unwell  
 Remove/Take off immediately all contaminated clothing  
 Wash contaminated clothing before reuse  
 If skin irritation or rash occurs: Get medical advice/attention

**Eyes**

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing  
 If eye irritation persists: Get medical advice/attention

**Ingestion**

IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician  
 Rinse mouth

**Storage**

Store locked up  
 Store in a well-ventilated place. Keep container tightly closed

**Disposal**

Dispose of contents/container to an approved waste disposal plant

**Hazards not otherwise classified (HNOC)**

Very toxic to aquatic life  
 Toxic to aquatic life with long lasting effects

### 3. Composition / information on ingredients

Component	CAS-No	Weight %
p-Toluidine	106-49-0	>95

### 4. First-aid measures

**Eye Contact**

Immediate medical attention is required. Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes.

**Skin Contact**

Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Immediate medical attention is required.

<b>Inhalation</b>	Remove from exposure, lie down. Move to fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. Immediate medical attention is required.
<b>Ingestion</b>	Call a physician immediately. Clean mouth with water.
<b>Most important symptoms/effects</b>	May cause allergic skin reaction. . Symptoms of allergic reaction may include rash, itching, swelling, trouble breathing, tingling of the hands and feet, dizziness, lightheadedness, chest pain, muscle pain or flushing
<b>Notes to Physician</b>	Treat symptomatically

## 5. Fire-fighting measures

<b>Suitable Extinguishing Media</b>	Water spray. Carbon dioxide (CO <sub>2</sub> ). Dry chemical. Use water spray to cool unopened containers. Chemical foam. Cool closed containers exposed to fire with water spray.
<b>Unsuitable Extinguishing Media</b>	No information available
<b>Flash Point</b>	87 °C / 188.6 °F
<b>Method -</b>	No information available
<b>Autoignition Temperature</b>	480 °C / 896 °F
<b>Explosion Limits</b>	
<b>Upper</b>	No data available
<b>Lower</b>	No data available
<b>Sensitivity to Mechanical Impact</b>	No information available
<b>Sensitivity to Static Discharge</b>	No information available

### Specific Hazards Arising from the Chemical

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<sub>x</sub>) Carbon monoxide (CO) Carbon dioxide (CO<sub>2</sub>)

### 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.

### NFPA

<b>Health</b> 3	<b>Flammability</b> 1	<b>Instability</b> 0	<b>Physical hazards</b> N/A
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## 6. Accidental release measures

<b>Personal Precautions</b>	Remove all sources of ignition. Take precautionary measures against static discharges.
<b>Environmental Precautions</b>	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. See Section 12 for additional ecological information. Avoid release to the environment. Collect spillage.
<b>Methods for Containment and Clean Up</b>	Provide adequate ventilation. Sweep up or vacuum up spillage and collect in suitable container for disposal. Remove all sources of ignition.

## 7. Handling and storage

<b>Handling</b>	Do not breathe dust. Do not get in eyes, on skin, or on clothing. Take precautionary measures against static discharges. Use only in area provided with appropriate exhaust ventilation. Minimize dust generation and accumulation. Keep away from open flames, hot surfaces and sources of ignition.
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**Storage** Keep in a dry, cool and well-ventilated place. Keep container tightly closed. Keep away from heat and sources of ignition. Keep away from direct sunlight. Keep locked-up.

## 8. Exposure controls / personal protection

### Exposure Guidelines

Component	ACGIH TLV	OSHA PEL	NIOSH IDLH	Mexico OEL (TWA)
p-Toluidine	TWA: 2 ppm Skin	(Vacated) TWA: 2 ppm (Vacated) TWA: 9 mg/m <sup>3</sup> Skin		

### Legend

ACGIH - American Conference of Governmental Industrial Hygienists

OSHA - Occupational Safety and Health Administration

**Engineering Measures** 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 and 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.

**Hygiene Measures** Handle in accordance with good industrial hygiene and safety practice.

## 9. Physical and chemical properties

<b>Physical State</b>	Solid
<b>Appearance</b>	Light brown
<b>Odor</b>	aromatic
<b>Odor Threshold</b>	No information available
<b>pH</b>	7.8 7 g/l aq.sol
<b>Melting Point/Range</b>	41 - 46 °C / 105.8 - 114.8 °F
<b>Boiling Point/Range</b>	200 °C / 392 °F
<b>Flash Point</b>	87 °C / 188.6 °F
<b>Evaporation Rate</b>	Not applicable
<b>Flammability (solid,gas)</b>	No information available
<b>Flammability or explosive limits</b>	
<b>Upper</b>	No data available
<b>Lower</b>	No data available
<b>Vapor Pressure</b>	1.3 mbar @ 43 °C
<b>Vapor Density</b>	Not applicable
<b>Specific Gravity</b>	1.05
<b>Solubility</b>	Soluble in water
<b>Partition coefficient; n-octanol/water</b>	No data available
<b>Autoignition Temperature</b>	480 °C / 896 °F
<b>Decomposition Temperature</b>	No information available
<b>Viscosity</b>	Not applicable
<b>Molecular Formula</b>	C7 H9 N
<b>Molecular Weight</b>	107.15

## 10. Stability and reactivity

<b>Reactive Hazard</b>	None known, based on information available
<b>Stability</b>	Light sensitive.
<b>Conditions to Avoid</b>	Temperatures above 220°C. Exposure to light. Incompatible products. Keep away from open flames, hot surfaces and sources of ignition.
<b>Incompatible Materials</b>	Acids, Strong oxidizing agents, Acid anhydrides, Acid chlorides, Chloroformates
<b>Hazardous Decomposition Products</b>	Nitrogen oxides (NOx), Carbon monoxide (CO), Carbon dioxide (CO <sub>2</sub> )
<b>Hazardous Polymerization</b>	No information available.
<b>Hazardous Reactions</b>	None under normal processing.

## 11. Toxicological information

### Acute Toxicity

#### Product Information Component Information

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
p-Toluidine	LD50 = 336 mg/kg ( Rat )	LD50 = 890 mg/kg ( Rabbit )	LC50 > 640 mg/m <sup>3</sup> ( Rat ) 1 h

**Toxicologically Synergistic Products** No information available

### Delayed and immediate effects as well as chronic effects from short and long-term exposure

<b>Irritation</b>	Irritating to eyes
<b>Sensitization</b>	May cause sensitization by skin contact
<b>Carcinogenicity</b>	The table below indicates whether each agency has listed any ingredient as a carcinogen.

Component	CAS-No	IARC	NTP	ACGIH	OSHA	Mexico
p-Toluidine	106-49-0	Not listed	Not listed	A3	Not listed	Not listed

<b>Mutagenic Effects</b>	No information available
<b>Reproductive Effects</b>	No information available.
<b>Developmental Effects</b>	No information available.
<b>Teratogenicity</b>	No information available.
<b>STOT - single exposure</b>	None known
<b>STOT - repeated exposure</b>	None known
<b>Aspiration hazard</b>	No information available
<b>Symptoms / effects, both acute and delayed</b>	Symptoms of allergic reaction may include rash, itching, swelling, trouble breathing, tingling of the hands and feet, dizziness, lightheadedness, chest pain, muscle pain or flushing
<b>Endocrine Disruptor Information</b>	No information available
<b>Other Adverse Effects</b>	See actual entry in RTECS for complete information.

## 12. Ecological information

### Ecotoxicity

The product contains following substances which are hazardous for the environment. Very toxic to aquatic organisms.

Component	Freshwater Algae	Freshwater Fish	Microtox	Water Flea
p-Toluidine	EC50: = 118 mg/L, 48h (Tetrahymena pyriformis)	LC50: 100 - 220 mg/L, 96h static (Brachydanio rerio) LC50: 135 - 163 mg/L, 96h flow-through (Pimephales promelas)	EC50 = 150 mg/L 24 h EC50 = 4.27 mg/L 30 min	Not listed

**Persistence and Degradability** Soluble in water Persistence is unlikely based on information available.

**Bioaccumulation/ Accumulation** No information available.

**Mobility** . Will likely be mobile in the environment due to its water solubility.

Component	log Pow
p-Toluidine	1.6

### 13. Disposal considerations

**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
p-Toluidine - 106-49-0	U353	-

### 14. Transport information

#### DOT

UN-No UN3451  
 Proper Shipping Name TOLUIDINES, SOLID  
 Hazard Class 6.1  
 Packing Group II

#### TDG

UN-No UN3451  
 Proper Shipping Name TOLUIDINES, SOLID  
 Hazard Class 6.1  
 Packing Group II

#### IATA

UN-No UN3451  
 Proper Shipping Name TOLUIDINES, SOLID  
 Hazard Class 6.1  
 Packing Group II

#### IMDG/IMO

UN-No UN3451  
 Proper Shipping Name TOLUIDINES, SOLID  
 Hazard Class 6.1  
 Packing Group II

### 15. Regulatory information

#### International Inventories

Component	TSCA	DSL	NDSL	EINECS	ELINCS	NLP	PICCS	ENCS	AICS	IECSC	KECL
p-Toluidine	X	X	-	203-403-1	-		X	X	X	X	X

#### Legend:

X - Listed

E - Indicates a substance that is the subject of a Section 5(e) Consent order under TSCA.

F - Indicates a substance that is the subject of a Section 5(f) Rule under TSCA.

N - Indicates a polymeric substance containing no free-radical initiator in its inventory name but is considered to cover the designated polymer made with any free-radical initiator regardless of the amount used.

P - Indicates a commenced PMN substance

R - Indicates a substance that is the subject of a Section 6 risk management rule under TSCA.

S - Indicates a substance that is identified in a proposed or final Significant New Use Rule

T - Indicates a substance that is the subject of a Section 4 test rule under TSCA.

XU - Indicates a substance exempt from reporting under the Inventory Update Rule, i.e. Partial Updating of the TSCA Inventory Data Base Production and Site Reports (40 CFR 710(B)).

Y1 - Indicates an exempt polymer that has a number-average molecular weight of 1,000 or greater.

Y2 - Indicates an exempt polymer that is a polyester and is made only from reactants included in a specified list of low concern reactants that comprises one of the eligibility criteria for the exemption rule.

### U.S. Federal Regulations

TSCA 12(b) Not applicable

SARA 313 Not applicable

#### SARA 311/312 Hazard Categories

Acute Health Hazard	Yes
Chronic Health Hazard	Yes
Fire Hazard	No
Sudden Release of Pressure Hazard	No
Reactive Hazard	No

CWA (Clean Water Act) Not applicable

Clean Air Act Not applicable

OSHA Occupational Safety and Health Administration  
Not applicable

#### CERCLA

This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302)

Component	Hazardous Substances RQs	CERCLA EHS RQs
p-Toluidine	100 lb	-

**California Proposition 65** This product does not contain any Proposition 65 chemicals

### U.S. State Right-to-Know Regulations

Component	Massachusetts	New Jersey	Pennsylvania	Illinois	Rhode Island
p-Toluidine	X	X	X	X	X

### U.S. Department of Transportation

Reportable Quantity (RQ):	N
DOT Marine Pollutant	N
DOT Severe Marine Pollutant	N

### U.S. Department of Homeland Security

This product does not contain any DHS chemicals.

### Other International Regulations

Mexico - Grade No information available

## 16. Other information

**Prepared By** Regulatory Affairs  
Thermo Fisher Scientific  
Email: EMSDS.RA@thermofisher.com

**Creation Date** 29-May-2015  
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**Print Date**

26-May-2017

**Revision Summary**

This document has been updated to comply with the US OSHA HazCom 2012 Standard replacing the current legislation under 29 CFR 1910.1200 to align with the Globally Harmonized System of Classification and Labeling of Chemicals (GHS).

**Disclaimer**

The information provided in 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 guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered 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 materials or in any process, unless specified in the text

**End of SDS**