Material Safety Data Sheet

p-Toluidine

MSDS# 96873

Section 1 - Chemical Product and Company Identification

MSDS Name:	p-Toluidine
Catalog Numbers:	AC139090000, AC139090010, AC139090025, AC139090100, AC139091000, AC139092500 AC139092500, AC139095000, AC376350000, AC376350010, AC376352500, AC421300000 AC421300000, AC421300010, AC421302500, ACE1040567, ACE1040591
Synonyms:	4-Aminotoluene; 4-Methylaniline; 4-Methylbenzenamine; 4-Toluidine; Tolylamine.

Company Identification:	Acros Organics BVBA Janssen Pharmaceuticalaan 3a 2440 Geel, Belgium
Company Identification: (USA)	Acros Organics One Reagent Lane Fair Lawn, NJ 07410
For information in the US, call:	800-ACROS-01
For information in Europe, call:	+32 14 57 52 11
Emergency Number, Europe:	+32 14 57 52 99
Emergency Number US:	201-796-7100
CHEMTREC Phone Number, US:	800-424-9300
CHEMTREC Phone Number, Europe:	703-527-3887

Section 2 - Composition, Information on Ingredients

CAS#:	106-49-0
Chemical Name:	p-Toluidine
%:	>96
EINECS#:	203-403-1

Hazard Symbols: T N

Risk Phrases: 23/24/25 36 40 43 50

Section 3 - Hazards Identification

EMERGENCY OVERVIEW

Danger! Light sensitive. Methemoglobin former - can cause cyanosis. May be fatal if inhaled. May cause blood abnormalities. Potential cancer hazard. Combustible solid. Harmful if swallowed or absorbed through the skin. Causes eye, skin, and respiratory tract irritation. Target Organs: Blood, kidneys, cardiovascular system, eyes, skin.

Potential Health Effects

Eye:	Causes eye irritation.
Skin:	Causes skin irritation. Harmful if absorbed through the skin. If absorbed, causes symptoms similar to those of inhalation.
Ingestion:	May cause irritation of the digestive tract. May be harmful if swallowed. May form methemoglobin which in sufficient concentration causes cyanosis (bluish discoloration of skin due to deficient oxygenation of the blood).

Inhalation:	May be fatal if inhaled. May cause drowsiness, unconsciousness, and central nervous system depression. Inhalation causes anoxia due to the formation of methemoglobin and hematuria. Inhalation may lead to dizziness, weakness, and drowsiness, leading to stupor, unconsciousness, and even death. Inhalation may produce headache and cyanosis of the lips, the mucous membranes, and the fingernail beds, and the tongue. Exposure may affect the kidney and bladder as evidenced by blood in the urine.
Chronic:	Possible cancer hazard based on tests with laboratory animals. Chronic inhalation may cause effects similar to those of acute inhalation. Chronic exposure leads to anemia, anorexia, weight loss, and cutaneous lesions.

Section 4 - First Aid Measures

Eyes:	In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical aid immediately.
Skin:	In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Get medical aid immediately. Wash clothing before reuse.
Ingestion:	If swallowed, do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical aid.
Inhalation:	POISON material. If inhaled, get medical aid immediately. Remove victim to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen.
Notes to Physician:	If cyanosis is severe, intravenous injection of Methylene Blue, 1mg/kg of body weight may be of value. For methemoglobinemia, administer oxygen alone or with Methylene Blue depending on the methemoglobin concentration in the blood.

Section 5 - Fire Fighting Measures

General Information:	As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. Use water spray to keep fire-exposed containers cool. Combustible solid.
Extinguishing Media:	Use water spray, dry chemical, carbon dioxide, or appropriate foam.
Autoignition Temperature:	482 deg C (899.60 deg F)
Flash Point:	87 deg C (188.60 deg F)
Explosion Limits: Lower:	Not available
Explosion Limits: Upper:	Not available
NFPA Rating:	health: 3; flammability: 2; instability: 0;

Section 6 - Accidental Release Measures

General Information:	Use proper personal protective equipment as indicated in Section 8.
Spills/Leaks:	Vacuum or sweep up material and place into a suitable disposal container. Avoid generating dusty conditions. Remove all sources of ignition. Approach spill from upwind. Use water spray to cool and disperse vapors and protect personnel.

Section 7 - Handling and Storage

Handling:	Wash thoroughly after handling. Remove contaminated clothing and wash before reuse. Minimize dust generation and accumulation. Do not get in eyes, on skin, or on clothing. Empty containers retain product residue, (liquid and/or vapor), and can be dangerous. Keep container tightly closed. Keep away from heat, sparks and flame. Do not ingest or inhale. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose empty containers to heat, sparks or open flames. Use only with adequate ventilation.
Storage:	Keep away from heat, sparks, and flame. Keep away from sources of ignition. Store in a tightly closed container. Store in a cool, dry, well-ventilated area away from incompatible substances. Poison room locked. Store away from heat, oxidizing agents, acids, alkalies, and sunlight.

Section 8 - Exposure Controls, Personal Protection

Chemical Name	ACGIH	NIOSH	OSHA - Final PELs
p-Toluidine	2 ppm; Skin - potential significant	none listed	none listed

	contribution to overall exposure by the cutaneous r oute			

OSHA Vacated PELs: p-Toluidine: 2 ppm TWA; 9 mg/m3 TWA

Engineering Controls:

Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use adequate general or local exhaust ventilation to keep airborne concentrations below the permissible exposure limits.

Exposure Limits

Personal Protective Equipment

Eyes: 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: Wear appropriate protective gloves to prevent skin exposure.

Clothing: Wear appropriate protective clothing to prevent skin exposure.

Respirators: 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.

Section 9 - Physical and Chemical Properties

Physical State: Solid
Color: white to light brown
Odor: aromatic odor
pH: Not available
Vapor Pressure: < 1 mm Hg @ 20 deg C
Vapor Density: 3.9 (air=1)
Evaporation Rate: Not available
Viscosity: Not available
Boiling Point: 201 deg C (393.80°F)
Freezing/Melting Point: 44 deg C (111.20°F)
Decomposition Temperature: Not available
Solubility in water: Insoluble
Specific Gravity/Density: 1.05
Molecular Formula: C7H9N
Molecular Weight: 107.15

Section 10 - Stability and Reactivity

Chemical Stability: Stable under normal temperatures and pressures. May discolor on exposure to light.

Conditions to Avoid: Ignition sources, dust generation, excess heat, excess light.

Incompatibilities with Other Materials: Strong oxidizing agents, acids, bases, aromatic amines.

Hazardous Decomposition Products: Nitrogen oxides, carbon monoxide, carbon dioxide.

Hazardous Polymerization: Has not been reported.

Section 11 - Toxicological Information

RTECS#: CAS# 106-49-0: XU3150000

RTECS:
CAS# 106-49-0: Draize test, rabbit, eye: 100 mg Severe;
Draize test, rabbit, eye: 20 mg/24H Moderate;
Draize test, rabbit, skin: 500 mg/24H Severe;
Draize test, rabbit, skin: 500 mg/24H Mild;

LD50/LC50: Inhalation, rat: LC50 = >640 mg/m3/1H;
Oral, mouse: LD50 = 330 mg/kg;
Oral, rabbit: LD50 = 270 mg/kg;

Oral, rat: LD50 = 336 mg/kg;
Skin, rabbit: LD50 = 890 mg/kg;
.

Carcinogenicity: p-Toluidine - ACGIH: A3 - Confirmed Animal Carcinogen with Unknown Relevance to Humans

Other: See actual entry in RTECS for complete information.

Section 12 - Ecological Information

Not available

Section 13 - Disposal Considerations

Dispose of in a manner consistent with federal, state, and local regulations.

Section 14 - Transport Information

US DOT
Shipping Name: TOLUIDINES, SOLID
Hazard Class: 6.1
UN Number: UN3451
Packing Group: II
Canada TDG
Shipping Name: TOLUIDINES, SOLID
Hazard Class: 6.1
UN Number: UN3451
Packing Group: II

USA RQ: CAS# 106-49-0: 100 lb final RQ; 45.4 kg final RQ

Section 15 - Regulatory Information

European/International Regulations

European Labeling in Accordance with EC Directives

Hazard Symbols: T N

Risk Phrases:

R 23/24/25 Toxic by inhalation, in contact with skin and if swallowed.

R 36 Irritating to eyes.

R 40 Limited evidence of a carcinogenic effect.

R 43 May cause sensitization by skin contact.

R 50 Very toxic to aquatic organisms.

Safety Phrases:

S 28A After contact with skin, wash immediately with plenty of water.

S 36/37 Wear suitable protective clothing and gloves.

S 45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

S 61 Avoid release to the environment. Refer to special instructions/safety data sheets.

WGK (Water Danger/Protection)

CAS# 106-49-0: 2

Canada

CAS# 106-49-0 is listed on Canada's DSL List

Canadian WHMIS Classifications: B3, D1A, D2A

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all of the information required by those regulations.

CAS# 106-49-0 is listed on Canada's Ingredient Disclosure List

US Federal

TSCA

CAS# 106-49-0 is listed on the TSCA

Inventory.

Section 16 - Other Information

MSDS Creation Date: 10/24/1997

Revision #8 Date 7/20/2009

The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantibility or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no event shall the company be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential, or exemplary damages howsoever arising, even if the company has been advised of the possibility of such damages.
