Material Safety Data Sheet
p-Toluidine

Section 1 - Chemical Product and Company Identification

MSDS Name: p-Toluidine
Catalog Numbers: 13909-0000, 13909-0010, 13909-0025, 13909-2500, 37635-0000, 37635-0010, 37635-2500
Synonyms: 4-Aminotoluene; 4-Methylaniline

Company Identification:
Acros Organics BVBA
Janssen Pharmaceuticaal 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# Chemical Name: % EINECS#
106-49-0 p-Toluidine 99% 203-403-1

Hazard Symbols: T N

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

Section 3 - Hazards Identification

EMERGENCY OVERVIEW

Toxic by inhalation, in contact with skin and if swallowed. Irritating to eyes. Limited evidence of a carcinogenic effect. May cause sensitization by skin contact. Very toxic to aquatic organisms. Light sensitive.

Potential Health Effects
Eye: Causes severe eye irritation.

Skin: May be absorbed through the skin. Causes symptoms similar to those of inhalation. Toxic in contact with skin. May cause sensitization by skin contact.

Ingestion: Poison by ingestion. May cause effects similar to those for inhalation exposure. May cause headache. May cause nausea and vomiting. Causes cyanosis (bluish discoloration of skin due to deficient oxygenation of the blood). May cause dizziness, incoordination, and unconsciousness. Toxic if inhaled.

Chronic: May cause liver and kidney damage. Absorption into the body leads to the formation of methemoglobin which in sufficient concentrations causes cyanosis (bluish discoloration of skin due to deficient oxygenation of the blood). Limited evidence of a carcinogenic effect.

Section 4 - First Aid Measures

Eyes: Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid immediately.

Skin: Get medical aid immediately. Immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes.

Ingestion: Get medical aid immediately. Wash mouth out with water.

Inhalation: Get medical aid immediately. Remove from exposure and move to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen.

Notes to Physician:

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. Will burn if involved in a fire. Combustible liquid.

Extinguishing Media: Do NOT use water directly on fire. Use water spray to cool fire-exposed containers. Use water spray, dry chemical, carbon dioxide, or chemical foam.

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. Provide ventilation.

Section 7 - Handling and Storage

Handling: Use only in a well-ventilated area. Minimize dust generation and accumulation. Do not breathe dust, vapor, mist, or gas. Do not get in eyes, on skin, or on clothing. Take precautionary measures against static discharges. Use only in a chemical fume hood.

Storage: Keep away from sources of ignition. Store in a cool, dry place. Do not store in
Section 8 - Exposure Controls, Personal Protection

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
CAS# 106-49-0:

Belgium - TWA: 2 ppm VLE; 8.9 mg/m3 VLE

Germany: 0.2 ppm TWA; 1 mg/m3 TWA Germany: skin notation

Malaysia: 2 ppm TWA; 8.8 mg/m3 TWA
Netherlands: 2 ppm MAC; 9 mg/m3 MAC

Spain: 2 ppm VLA-ED; 8.9 mg/m3 VLA-ED

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: light brown
Odor: characteristic odor
pH: 7.8 (7 g/l aq.sol.)
Vapor Pressure: 1.3mbar @43 deg C
Viscosity: Not available
Boiling Point: 200 deg C @760mmHg (392.00°F)
Freezing/Melting Point: 41 - 46 deg C
Autoignition Temperature: 480 deg C (896.00 deg F)
Flash Point: 87 deg C (188.60 deg F)
Explosion Limits: Lower: 1.1 Vol %
Explosion Limits: Upper: 6.6 Vol %
Decomposition Temperature: Not available
Solubility in water: 1.1 g/100ml
Specific Gravity/Density:
Molecular Formula: C7H9N
Molecular Weight: 107.15

Section 10 - Stability and Reactivity
Chemical Stability: Not available
Conditions to Avoid: Incompatible materials, light, temperatures above 220°C.
Incompatibilities with Other Materials
Strong oxidizing agents, acids, acid chlorides, acid anhydrides, chloroformates.
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;
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;
Other:
p-Toluidine - ACGIH: A3 - Confirmed animal carcinogen with unknown Carcinogenicity: relevance to humans

Other:
See actual entry in RTECS for complete information.

Section 12 - Ecological Information
Other: Readily biodegradable.

Section 13 - Disposal Considerations
Dispose of in a manner consistent with federal, state, and local regulations.

Section 14 - Transport Information

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Shipping Name: TOLUIDINES, SOLID
Hazard Class: 6.1
UN Number: 3451
Packing Group: II

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

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).

WGK (Water Danger/Protection)

CAS# 106-49-0: 2

Canada

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

US Federal

TSCA

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

Section 16 - Other Information

MSDS Creation Date: 11/06/1996
Revision #3 Date 3/21/2005
Revisions were made in Sections: General revision.

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.

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