# Material Safety Data Sheet
## 2,4-Dimethylaniline, 99%

ACC# 94645

## Section 1 - Chemical Product and Company Identification

**MSDS Name:** 2,4-Dimethylaniline, 99%
**Catalog Numbers:** AC148570010, AC148570050, AC148571000, AC148572500, AC148575000
**Synonyms:** 2,4-Xylidine.
**Company Identification:**

Acros Organics N.V.
One Reagent Lane
Fair Lawn, NJ 07410

**For information in North America, call:** 800-ACROS-01
**For emergencies in the US, call CHEMTREC:** 800-424-9300

## Section 2 - Composition, Information on Ingredients

| CAS# | Chemical Name | Percent | EINECS/ELINCS |
|---|---|---|---|
| 95-68-1 | 2,4-Dimethylaniline | 99 | 202-440-0 |

## Section 3 - Hazards Identification

**EMERGENCY OVERVIEW**

Appearance: colorless to tan liquid. Flash Point: 90 deg C.
**Warning!** Harmful if swallowed. **Combustible liquid and vapor.** May cause eye and skin irritation. May cause respiratory tract irritation. May cause methemoglobinemia.
**Target Organs:** None.

**Potential Health Effects**
**Eye:** May cause eye irritation.
**Skin:** May cause skin irritation. May be absorbed through the skin.
**Ingestion:** Harmful if swallowed. Causes gastrointestinal irritation with nausea, vomiting and diarrhea. May cause methemoglobinemia, cyanosis (bluish discoloration of skin due to deficient oxygenation of the blood), convulsions, and death. Methemoglobinemia is characterized by dizziness, drowsiness, headache, shortness of breath, cyanosis (bluish discoloration of skin due to deficient oxygenation of the blood), rapid heart rate and chocolate-brown colored blood.
**Inhalation:** May cause respiratory tract irritation. May cause methemoglobinemia, cyanosis (bluish discoloration of skin due to deficient oxygenation of the blood), convulsions, tachycardia, dyspnea (labored breathing), and death. Methemoglobinemia is characterized by dizziness, drowsiness, headache, shortness of breath, cyanosis (bluish discoloration of skin due to deficient oxygenation of the blood), rapid heart rate and chocolate-brown blood.
**Chronic:** Effects may be delayed.

## Section 4 - First Aid Measures

**Eyes:** 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. Flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes.
**Ingestion:** If victim is conscious and alert, give 2-4 cupfuls of milk or water. Never give anything by mouth to an unconscious person. Get medical aid immediately.
**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:** Treat symptomatically and supportively.

## 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. Vapors can travel to a source of ignition and flash back. Combustible liquid. Vapors may be heavier than air. They can spread along the ground and collect in low or confined areas. Vapors may form an explosive mixture with air.
**Extinguishing Media:** Use water fog, dry chemical, carbon dioxide, or regular foam. Do NOT get water inside containers.
**Flash Point:** 90 deg C ( 194.00 deg F)
**Autoignition Temperature:** 460 deg C ( 860.00 deg F)
**Explosion Limits, Lower:**1.10 vol %
**Upper:** 7.00 vol %
**NFPA Rating:** (estimated) Health: ; Flammability: 2; Instability:

## Section 6 - Accidental Release Measures

**General Information:** Use proper personal protective equipment as indicated in Section 8.

**Spills/Leaks:** Sweep up or absorb material, then place into a suitable clean, dry, closed container for disposal. Provide ventilation.

## Section 7 - Handling and Storage

**Handling:** Wash thoroughly after handling. Remove contaminated clothing and wash before reuse. Use only in a well-ventilated area. Avoid contact with eyes, skin, and clothing. Avoid ingestion and inhalation.
**Storage:** Store in a tightly closed container. Store in a cool, dry, well-ventilated area away from incompatible substances.

## Section 8 - Exposure Controls, Personal Protection

**Engineering Controls:** Use adequate ventilation to keep airborne concentrations low.
**Exposure Limits**

| Chemical Name | ACGIH | NIOSH | OSHA - Final PELs |
|---|---|---|---|
| 2,4-Dimethylaniline | 0.5 ppm TWA (inhalable fraction and vapor) (listed under Xylidine).Skin - potential significant contribution to overall exposure by the cutaneous r oute (listed under Xylidine). | 2 ppm TWA; 10 mg/m3 TWA (listed under Xylidine).50 ppm IDLH (listed under Xylidine). | 5 ppm TWA; 25 mg/m3 TWA (listed under Xylidine). |

**OSHA Vacated PELs:** 2,4-Dimethylaniline: No OSHA Vacated PELs are listed for this chemical.
**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:** Liquid
**Appearance:** colorless to tan
**Odor:** None reported.
**pH:** Not available.
**Vapor Pressure:** 0.16 mm Hg @ 25 deg C
**Vapor Density:** 4.2 (air=1)
**Evaporation Rate:**Not available.
**Viscosity:** Not available.
**Boiling Point:** 218 deg C @ 760 mm Hg
**Freezing/Melting Point:**16 deg C
**Decomposition Temperature:**> 350 deg C
**Solubility:** Slightly soluble.
**Specific Gravity/Density:**.9800 g/ml
**Molecular Formula:**C8H11N
**Molecular Weight:**121.18

## Section 10 - Stability and Reactivity

**Chemical Stability:** Stable under normal temperatures and pressures.
**Conditions to Avoid:** Excess heat.
**Incompatibilities with Other Materials:** Strong oxidizing agents, acids, acid chlorides, halogens, acid anhydrides, hypochlorite, chloroformates.
**Hazardous Decomposition Products:** Nitrogen oxides, carbon monoxide, carbon dioxide.
**Hazardous Polymerization:** Has not been reported.

## Section 11 - Toxicological Information

**RTECS#:**
**CAS#** 95-68-1: ZE8925000
**LD50/LC50:**
CAS# 95-68-1:
Inhalation, mouse: LC50 = 149 ppm/7H;
Oral, mouse: LD50 = 250 mg/kg;
Oral, rat: LD50 = 467 mg/kg;
.

**Carcinogenicity:**
CAS# 95-68-1:

- **ACGIH:** A3 - Confirmed animal carcinogen with unknown relevance to humans (listed as 'Xylidine').
- **California:** Not listed.
- **NTP:** Not listed.
- **IARC:** Not listed.

**Epidemiology:** No data available.
**Teratogenicity:** No data available.
**Reproductive Effects:** No data available.
**Mutagenicity:** No data available.
**Neurotoxicity:** No data available.
**Other Studies:**

## Section 12 - Ecological Information

**Ecotoxicity:** No data available. No information available.
**Environmental:** High mobility in soil, however anilines are expected to bind strongly to humus or soil organic matter in soils due to high reactivity of aromatic amine groups. In the atmospheree it should exist solely as vapor in ambient air. Vapor phase is degraded in atmosphere by reaction with photochemically produced hydroxyl radicals. Half life in air is estimated to be 2 hours.
**Physical:** No information available.
**Other:** No information available.

## Section 13 - Disposal Considerations

Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. US EPA guidelines for the classification determination are listed in 40 CFR Parts 261.3. Additionally, waste generators must consult state and local hazardous waste regulations to ensure complete and accurate classification.
**RCRA P-Series:** None listed.
**RCRA U-Series:** None listed.

## Section 14 - Transport Information

| | US DOT | Canada TDG |
|---|---|---|
| **Shipping Name:** | XYLIDINES, LIQUID | XYLIDINES |
| **Hazard Class:** | 6.1 | 6.1 |
| **UN Number:** | UN1711 | UN1711 |
| **Packing Group:** | II | II |

## Section 15 - Regulatory Information

### US FEDERAL

**TSCA**
CAS# 95-68-1 is listed on the TSCA inventory.
**Health & Safety Reporting List**
None of the chemicals are on the Health & Safety Reporting List.
**Chemical Test Rules**
None of the chemicals in this product are under a Chemical Test Rule.
**Section 12b**
None of the chemicals are listed under TSCA Section 12b.
**TSCA Significant New Use Rule**
None of the chemicals in this material have a SNUR under TSCA.
**CERCLA Hazardous Substances and corresponding RQs**
None of the chemicals in this material have an RQ.
**SARA Section 302 Extremely Hazardous Substances**
None of the chemicals in this product have a TPQ.
**Section 313** No chemicals are reportable under Section 313.
**Clean Air Act:**
This material does not contain any hazardous air pollutants.
This material does not contain any Class 1 Ozone depletors.
This material does not contain any Class 2 Ozone depletors.
**Clean Water Act:**
None of the chemicals in this product are listed as Hazardous Substances under the CWA.
None of the chemicals in this product are listed as Priority Pollutants under the CWA.
None of the chemicals in this product are listed as Toxic Pollutants under the CWA.
**OSHA:**
None of the chemicals in this product are considered highly hazardous by OSHA.
**STATE**
CAS# 95-68-1 can be found on the following state right to know lists: California, (listed as Xylidine), New Jersey, (listed as Xylidine), Pennsylvania, (listed as Xylidine), Minnesota, (listed as Xylidine), Massachusetts, (listed as Xylidine).

**California Prop 65**

California No Significant Risk Level: None of the chemicals in this product are listed.

### 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 33 Danger of cumulative effects.
R 51/53 Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

**Safety Phrases:**

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 28A After contact with skin, wash immediately with plenty of water .
S 61 Avoid release to the environment. Refer to special instructions /safety data sheets.

**WGK (Water Danger/Protection)**

CAS# 95-68-1: 2

**Canada - DSL/NDSL**

CAS# 95-68-1 is listed on Canada's NDSL List.

**Canada - WHMIS**

This product has a WHMIS classification of B3, D1A, D2B.

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.

**Canadian Ingredient Disclosure List**

CAS# 95-68-1 is listed on the Canadian Ingredient Disclosure List.

## Section 16 - Additional Information

**MSDS Creation Date:** 4/17/1998
**Revision #4 Date:** 1/04/2006