

Material Safety Data Sheet

2,4-Diaminotoluene, 98%

ACC# 49160

Section 1 - Chemical Product and Company Identification

MSDS Name: 2,4-Diaminotoluene, 98%

Catalog Numbers: AC146600000, AC146600010, AC146600250, AC146602500

Synonyms: 2,4-Toluenediamine

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
95-80-7	2,4-Diaminotoluene	98.0	202-453-1

Section 3 - Hazards Identification

EMERGENCY OVERVIEW

Appearance: brown crystals.

Warning! May cause skin sensitization by skin contact. Causes eye and skin irritation. May cause respiratory and digestive tract irritation. May cause central nervous system effects. May cause cancer in humans. Potential cancer hazard. May cause liver damage. May cause methemoglobinemia. May cause adverse reproductive effects.

Target Organs: Blood, central nervous system, liver.

Potential Health Effects

Eye: Causes eye irritation. May cause blepharitis (inflammation of the eyelids), keratoconjunctivitis and corneal opacity. May cause severe inflammation and edema of the eye and conjunctiva or deeper structures of the eye. May produce tearing and permanent blindness.

Skin: Causes skin irritation. May cause skin sensitization, an allergic reaction, which becomes evident upon re-exposure to this material. If absorbed, may cause symptoms similar to those for ingestion. May cause a deep staining of the skin. May cause severe dermatitis and urticaria(hives).

Ingestion: May cause irritation of the digestive tract. 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. Ingestion may cause gastritis, vertigo, tremors, convulsions, and possible coma.

Inhalation: May cause effects similar to those described for ingestion. May cause asthma and shortness of breath.

Chronic: Chronic inhalation and ingestion may cause effects similar to those of acute inhalation and ingestion.

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

Notes to Physician: Treat symptomatically.

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. During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion.

Extinguishing Media: Use water spray to cool fire-exposed containers. For small fires, use dry chemical, carbon dioxide, or water spray. Cool containers with flooding quantities of water until well after fire is out. For large fires, use water spray, fog or regular foam.

Flash Point: Not available.

Autoignition Temperature: 365 deg C (689.00 deg F)

Explosion Limits, Lower:Not available.

Upper: Not available.

NFPA Rating: (estimated) Health: 2; Flammability: 0; Instability: 0

Section 6 - Accidental Release Measures

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

Spills/Leaks: Sweep up, then place into a suitable container for disposal. Avoid generating dusty conditions. Provide ventilation.

Section 7 - Handling and Storage

Handling: Wash thoroughly after handling. Use with adequate ventilation. Minimize dust generation and accumulation. Avoid contact with eyes, skin, and clothing. Keep container tightly closed. 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-Diaminotoluene	none listed	none listed	none listed

OSHA Vacated PELs: 2,4-Diaminotoluene: 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: Crystals

Appearance: brown

Odor: None reported.

pH: Not available.

Vapor Pressure: 1 mm Hg @106.5C

Vapor Density: Not available.

Evaporation Rate: Not available.

Viscosity: Not available.

Boiling Point: 292 deg C

Freezing/Melting Point: 99 deg C

Decomposition Temperature: Not available.

Solubility: 50 g/l (25 c)

Specific Gravity/Density: Not available.

Molecular Formula: C7H10N2

Molecular Weight: 122.17

Section 10 - Stability and Reactivity

Chemical Stability: Stable under normal temperatures and pressures.

Conditions to Avoid: Incompatible materials, dust generation.

Incompatibilities with Other Materials: Acids - acid chlorides - acid anhydrides - chloroformates - strong oxidizing agents.

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

Hazardous Polymerization: Has not been reported.

Section 11 - Toxicological Information

RTECS#:

CAS# 95-80-7: XS9625000

LD50/LC50:

CAS# 95-80-7:

Draize test, rabbit, eye: 100 mg/24H Moderate;

Draize test, rabbit, eye: 100 mg/24H;

Draize test, rabbit, skin: 500 mg/24H Mild;

Draize test, rabbit, skin: 500 mg/24H;

Oral, rat: LD50 = 590 mg/kg/24H;

Skin, rabbit: LD50 = 650 mg/kg/24H;

Carcinogenicity:

CAS# 95-80-7:

- **ACGIH:** Not listed.
- **California:** carcinogen, initial date 1/1/88

- **NTP:** Suspect carcinogen
- **IARC:** Group 2B carcinogen

Epidemiology: Human mutation data has been reported for 2,4-diaminotoluene. Experimental reproductive effects have been reported.

Teratogenicity: No data available.

Reproductive Effects: No data available.

Mutagenicity: No data available.

Neurotoxicity: No data available.

Other Studies:

Section 12 - Ecological Information

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:	2,4-TOLUYLENEDIAMINE	2,4-TOLUYLENEDIAMINE
Hazard Class:	6.1	6.1
UN Number:	UN1709	UN1709
Packing Group:	III	III

Section 15 - Regulatory Information

US FEDERAL

TSCA

CAS# 95-80-7 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

CAS# 95-80-7: 10 lb final RQ (Listed under Toluenediamine); 4.54 kg final RQ (Listed under Tol

SARA Section 302 Extremely Hazardous Substances

None of the chemicals in this product have a TPQ.

Section 313

This material contains 2,4-Diaminotoluene (CAS# 95-80-7, 98.0%), which is subject to the reporting requirements of Section 313 of SARA Title III and 40 CFR

Clean Air Act:

CAS# 95-80-7 is listed as a hazardous air pollutant (HAP).

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# 95-80-7 can be found on the following state right to know lists: California, New Jersey, Pennsylvania, Minnesota, Massachusetts.

California Prop 65

The following statement(s) is(are) made in order to comply with the California Safe Drinking Water Act:

WARNING: This product contains 2,4-Diaminotoluene, a chemical known to the state of California to cause cancer.

California No Significant Risk Level: CAS# 95-80-7: 0.2 æg/day NSRL

European/International Regulations

European Labeling in Accordance with EC Directives

Hazard Symbols:

T N

Risk Phrases:

R 21 Harmful in contact with skin.

R 25 Toxic if swallowed.
R 36 Irritating to eyes.
R 43 May cause sensitization by skin contact.
R 45 May cause cancer.
R 50/53 Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Safety Phrases:

S 45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).
S 53 Avoid exposure - obtain special instructions before use.
S 60 This material and its container must be disposed of as hazardous waste.
S 61 Avoid release to the environment. Refer to special instructions /safety data sheets.

WGK (Water Danger/Protection)

CAS# 95-80-7: 3

Canada - DSL/NDSL

CAS# 95-80-7 is listed on Canada's DSL List.

Canada - WHMIS

not available.

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# 95-80-7 is listed on the Canadian Ingredient Disclosure List.

Section 16 - Additional Information

MSDS Creation Date: 5/11/1998

Revision #4 Date: 10/03/2005

The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability 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 Fisher 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 Fisher has been advised of the possibility of such damages.