

Material Safety Data Sheet

N,N-Dimethyl-p-phenylenediamine sulfate

ACC# 47183

Section 1 - Chemical Product and Company Identification

MSDS Name: N,N-Dimethyl-p-phenylenediamine sulfate

Catalog Numbers: AC181430250, AC181431000

Synonyms: 1,4-Benzenediamine, N,N-dimethyl-, sulfate (1:1).

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
536-47-0	1,4-Benzenediamine, N,N-dimethyl-, sulfate (1:1)	>98	208-636-2

Section 3 - Hazards Identification

EMERGENCY OVERVIEW

Appearance: orange to brown crystalline powder.

Danger! May be fatal if absorbed through the skin or swallowed. Harmful if inhaled. Causes eye, skin, and respiratory tract irritation.

May cause allergic skin reaction. Light sensitive.

Target Organs: Respiratory system, eyes, skin.

Potential Health Effects

Eye: Causes eye irritation.

Skin: Causes skin irritation. Harmful if absorbed through the skin. May cause skin sensitization, an allergic reaction, which becomes evident upon re-exposure to this material. Substance is readily absorbed through the skin.

Ingestion: May be fatal if swallowed. 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. May cause tremors and convulsions. May form methemoglobin which in sufficient concentration causes cyanosis (bluish discoloration of skin due to deficient oxygenation of the blood).

Inhalation: Dust is irritating to the respiratory tract. Harmful if inhaled.

Chronic: 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).

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: POISON material. In case of contact, get medical aid immediately. Immediately flush eyes or skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse. Destroy contaminated shoes.

Ingestion: POISON material. If swallowed, get medical aid immediately. Only induce vomiting if directed to do so by medical personnel. Never give anything by mouth to an unconscious person.

Inhalation: If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical aid.

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. During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion. This material in sufficient quantity and reduced particle size is capable of creating a dust explosion.

Extinguishing Media: Use carbon dioxide, water spray, or dry chemical.

Flash Point: Not applicable.

Autoignition Temperature: Not applicable.

Explosion Limits, Lower: Not available.

Upper: Not available.

NFPA Rating: (estimated) Health: 3; Flammability: 1; 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. Clean up spills immediately, observing

precautions in the Protective Equipment section. Avoid generating dusty conditions. Provide ventilation.

Section 7 - Handling and Storage

Handling: Wash thoroughly after handling. Remove contaminated clothing and wash before reuse. Minimize dust generation and accumulation. Do not breathe dust, vapor, mist, or gas. Do not get in eyes, on skin, or on clothing. Keep container tightly closed. Do not ingest or inhale. Use only with adequate ventilation.

Storage: Store in a tightly closed container. Store in a cool, dry, well-ventilated area away from incompatible substances. Storage under a nitrogen blanket has been recommended. Store protected from light.

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 only under a chemical fume hood.

Exposure Limits

Chemical Name	ACGIH	NIOSH	OSHA - Final PELs
1,4-Benzenediamine, N,N-dimethyl-, sulfate (1:1)	none listed	none listed	none listed
N,N-Dimethyl-p-phenylenediamine	none listed	none listed	none listed
1,4-Benzenediamine, N,N-dimethyl-, sulfate (C ₈ H ₁₂ N ₂ .xH ₂ SO ₄) Not just (1:1).	none listed	none listed	none listed

OSHA Vacated PELs: 1,4-Benzenediamine, N,N-dimethyl-, sulfate (1:1): No OSHA Vacated PELs are listed for this chemical. N,N-Dimethyl-p-phenylenediamine: No OSHA Vacated PELs are listed for this chemical. 1,4-Benzenediamine, N,N-dimethyl-, sulfate (C₈H₁₂N₂.xH₂SO₄) Not just (1:1): No OSHA Vacated PELs are listed for this chemical.

Personal Protective Equipment

Eyes: Wear chemical splash goggles.

Skin: Wear appropriate protective gloves to prevent skin exposure.

Clothing: Wear appropriate protective clothing to prevent skin exposure.

Respirators: A respiratory protection program that meets OSHA's 29 CFR 1910.134 and ANSI Z88.2 requirements or European Standard EN 149 must be followed whenever workplace conditions warrant respirator use.

Section 9 - Physical and Chemical Properties

Physical State: Crystalline powder

Appearance: beige to gray - orange to brown

Odor: none reported

pH: Not available.

Vapor Pressure: Not available.

Vapor Density: Not available.

Evaporation Rate: Not available.

Viscosity: Not available.

Boiling Point: 495 deg C @ 760 mm Hg

Freezing/Melting Point: 234-236 deg C (dec)

Decomposition Temperature: 234 deg C

Solubility: Not available.

Specific Gravity/Density: Not available.

Molecular Formula: C₈H₁₂N₂.H₂SO₄

Molecular Weight: 234.28

Section 10 - Stability and Reactivity

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

Conditions to Avoid: Light, dust generation, prolonged exposure to air.

Incompatibilities with Other Materials: Strong oxidizing agents.

Hazardous Decomposition Products: Carbon monoxide, oxides of nitrogen, oxides of sulfur, carbon dioxide.

Hazardous Polymerization: Has not been reported

Section 11 - Toxicological Information

RTECS#:

CAS# 536-47-0 unlisted.

CAS# 99-98-9: ST0874000

CAS# 6219-73-4 unlisted.

LD50/LC50:

Not available.

CAS# 99-98-9:

Dermal, guinea pig: LD50 = 500 uL/kg;

Oral, mouse: LD50 = 30 mg/kg;

Oral, rat: LD50 = 50 mg/kg;

CAS# 6219-73-4:

CAS 99-98-9 is parent compound N,N-dimethyl-p-phenylenediamine. CAS 106-50-3 is p-phenylenediamine, a known sensitizer.

Carcinogenicity:

CAS# 536-47-0: Not listed by ACGIH, IARC, NTP, or CA Prop 65.

CAS# 99-98-9: Not listed by ACGIH, IARC, NTP, or CA Prop 65.

CAS# 6219-73-4: Not listed by ACGIH, IARC, NTP, or CA Prop 65.

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

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:	TOXIC SOLIDS, ORGANIC, N.O.S.	Toxic Solid, Organic, N.O.S.
Hazard Class:	6.1	6.1
UN Number:	UN2811	UN2811
Packing Group:	II	II

Section 15 - Regulatory Information

US FEDERAL

TSCA

CAS# 536-47-0 is listed on the TSCA inventory.

CAS# 99-98-9 is listed on the TSCA inventory.

CAS# 6219-73-4 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

CAS# 99-98-9: 10 lb TPQ (lower threshold); 10000 lb TPQ (upper threshold)

SARA Codes

CAS # 99-98-9: immediate.

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 depleters.

This material does not contain any Class 2 Ozone depleters.

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# 536-47-0 is not present on state lists from CA, PA, MN, MA, FL, or NJ.

CAS# 99-98-9 can be found on the following state right to know lists: New Jersey, Pennsylvania, Massachusetts.

CAS# 6219-73-4 is not present on state lists from CA, PA, MN, MA, FL, or NJ.

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

Risk Phrases:

R 23/24/25 Toxic by inhalation, in contact with skin and if swallowed.
R 36/37/38 Irritating to eyes, respiratory system and skin.

Safety Phrases:

S 26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
S 36/37/39 Wear suitable protective clothing, gloves and eye/face protection.
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# 536-47-0: No information available.
CAS# 99-98-9: No information available.
CAS# 6219-73-4: No information available.

Canada - DSL/NDSL

CAS# 536-47-0 is listed on Canada's DSL List.
CAS# 99-98-9 is listed on Canada's DSL List.
CAS# 6219-73-4 is listed on Canada's DSL List.

Canada - WHMIS

This product has a WHMIS classification of 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

Section 16 - Additional Information

MSDS Creation Date: 9/02/1997

Revision #7 Date: 9/14/2005

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.