

SAFETY DATA SHEET

Drexel PENDIMETHALIN TECHNICAL

Section 1: Material Identification

Product Name: Drexel Pendimethalin Technical

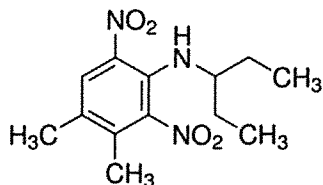
EPA Reg. #: 19713-600

Company: Drexel Chemical Company
1700 Channel Avenue
Memphis, TN 38106

CAS NO: 40487-42-1

Formula: C₁₃H₁₉N₃O₄

Structure:



Synonyms: Pendimethalin, N-(1-ethylpropyl)-3,4-dimethyl-2,6-dinitrobenzenamine, Pendulum Tech

Identifiers:

- **EINECS-No.:** 254-938-2
- **DOT UN:** 3077
- **DOT Label:** UN-3077, Environmentally hazardous substance, Solid, n.o.s. (Pendimethalin), 9, PG-III, RQ-100 lbs.

Emergency Telephone Number:

ChemTrec
Tel: 1-800-424-9300

Drexel Chemical Company
901-774-4370

This document is prepared pursuant to the OSHA Hazard Communication Standard (29 CFR 1910.1200). In addition other substances not "Hazardous" per this OSHA Standard may be listed. Where proprietary ingredient shows, the identity may be made available as provided in this standard.

Section 2: Hazard Identification

Emergency Overview: Warning
Physical state/Color: Yellow to beige powder or solid
Odor: Nutty odor

Hazards of product:

1. Harmful if swallowed



2. Toxic to aquatic organisms
3. Causes slight to moderate eye irritation
4. Inhalation irritant

OSHA Hazard Communication Standard:

This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

Health Hazard information: This section includes possible adverse effects which could occur if this material is not handled in the recommended manner.

Potential Health Effects:

- Ingestion:** Harmful if swallowed
- Eye Contact:** May cause eye irritation. Solid or dust may cause moderate eye irritation due to mechanical action.
- Skin Contact:** Brief contact is essentially nonirritating to skin. Prolonged contact may cause skin irritation with local redness. Repeated contact may cause skin irritation with local redness.
- Skin Absorption:** Prolonged or widespread skin contact unlikely to result in absorption of harmful amounts.
- Inhalation:** At room temperature, exposures to vapors are minimal due to physical properties; higher temperatures may generate vapor levels sufficient to cause irritation and other effects. Prolonged excessive exposure to dust may cause irritation to upper respiratory.

Section 3: Composition Information

Material:	% By WT.	OSHA PEL:	ACGIHTLV:
Active Ingredient			
Pendimethalin: N-(1-ethylpropyl)-3 4-dimethyl-2,6-dinitrobenzeneamine	min 96.0	3 mg/m(3)	10 mg/M ³ - A4
Inerts Ingredients	4.0	N/A	N/A

*nitrosamines may be present at up to 29 ppm

Section 4: First-Aid measures

- Ingestion:** If swallowed, seek medical attention. Call a poison control center or doctor immediately for treatment advice. Have a person sip a glass of water if able to swallow. Do not induce vomiting unless instructed to do so by a poison control center or a doctor. Do not give anything by mouth to an unconscious person.
- Eye Contact:** Immediately flush eyes with water; remove contact lenses, if present, after the first 5 minutes, then continue flushing eyes for at least 15 minutes. Obtain medical attention without delay, preferably from an ophthalmologist.
- Skin Contact:** Immediately flush skin with water while removing contaminated clothing and shoes. Get medical attention if symptoms occur. Wash clothing before reuse. Destroy contaminated leather items such as shoes, belts, and watchbands.

Inhalation: Move person to fresh air; If not breathing give artificial respiration. If breathing is difficult, oxygen should be administered by a qualified personnel. Call a physician or transport to medical facility.

Notes to Physician:

If amount ingested was small, if effective emesis has already occurred, or if treatment is delayed, consider administration of activated charcoal and sorbitol by mouth. If large amounts have been ingested and the patient is seen within an hour of ingestion, gastrointestinal decontamination should be considered. There is not specific antidote. Treatment of overexposure should be directed at the control of symptoms and the clinical condition. Pendimethalin is a strongly orange-red- yellowish compound- virtually an aniline dye. Cases have been described of orange-yellow coloration of urine following heavy exposure of workers to the dust of Pendimethalin. Exposure to Pendimethalin is NOT associated with methemoglobinemia.

Section 5: Fire Fighting Measures

Flash Point: Not determined

Flammable limits: May burn, but not readily flammable.

Extinguishing Media: Water fog or fine spray. Dry chemical fire extinguishers. Carbon dioxide fire extinguishers.

Fire Fighting Procedures:

Keep people away. Isolate fire and deny unnecessary entry. Consider feasibility of a controlled burn to minimize environment damage. Foam fire extinguishing system is preferred because uncontrolled water can spread possible contamination. Soak thoroughly with water to cool and prevent re-ignition. If material is molten, do not apply direct water stream. Use fine water spray or foam. Use water spray to cool fire exposed containers and fire affected zone until fire is out and danger of re-ignition has passed. Fight fire from protected location or safe distance. Consider the use of unmanned hose holders or monitor nozzles. Immediately withdraw all personnel from the area in case of rising sound from venting safety device or discoloration of the container. Hand held dry chemical or carbon dioxide extinguishers may be used for small fires. Move container from fire area if this is possible without hazard. Contain fire water run-off if possible. Fire water run-off, if not contained, may cause environmental damage. Review the "Accidental Release Measures" and the "Ecological Information" sections of this MSDS.

Special Protective Equipment for Firefighters:

Wear positive-pressure self-contained breathing apparatus (SCBA) and protective firefighting clothing (includes firefighting helmet, coat, trousers, boots, and gloves). Avoid contact with this material during firefighting operations. If contact is likely, change to full chemical resistant firefighting clothing with self-contained breathing apparatus. If this is not available, wear full chemical resistant clothing with self-contained breathing apparatus and fight fire from a remote location. For protective equipment in post-fire or non-fire clean-up situations, refer to the relevant sections.

Unusual Fire and Explosion Hazards:

None known

Hazardous Combustion Products:

Organic dust may form an explosive dust. Air mixture. Decomposed above 220°C

Section 6: Accidental Release Measures

Steps to be taken if Material is Released or Spilled:

- **Contain spilled material if possible.**
- **Small spills:** Sweep up. Collect in suitable and properly labeled containers. Wear personal protective equipment as specified on label.
- **Large spills:** Contact Chemtrec (800-424-9300) for clean-up assistance. See Section 13, Disposal Considerations, for additional information.

Personal Precautions:

- Isolate area. Keep unnecessary and unprotected personnel from entering the area. Refer to Section 7, Handling, for additional precautionary measures. Keep upwind of spill. Spilled material may cause a slipping hazard. Ventilate area of leak or spill. Use appropriate safety equipment. For additional information, refer to Section 8, Exposure Controls and Personal Protection.

Environmental Precautions: Prevent from entering into soil, ditches, sewers, waterways and/or groundwater. See Section 12, Ecological Information.

Section 7: Handling and Storage

Handling:

- **General Handling:** Avoid contact with eyes, skin, and clothing. Wash thoroughly after handling. Do not swallow. Avoid breathing vapor. Avoid breathing dust. Use with adequate ventilation. Keep container closed. Good housekeeping and controlling of dusts are necessary for safe handling of product. Keep away from heat, sparks and flame. Keep out of reach of children. **Use appropriate (impervious) clothing, gloves, and footwear. See Section 8, EXPOSURE CONTROLS AND PERSONAL PROTECTION.**
- **Storage:** Store in a dry place. Store in original container. Do not store near food, foodstuffs, drugs or potable water supplies.

Section 8: Exposure Controls/ Personal Protection

Exposure Limits:

<u>Component</u>	<u>List</u>	<u>Type</u>	<u>Value</u>
Pendimethalin	ACGIH	TWA	10 mg/m ³
	OSHA Table	PEL	10 mg/m ³

Excursion Limit Recommendation: Excursions in worker exposure levels may exceed 3 times the TLV-TWA for no more than a total of 30 minutes during a work day, and under no circumstances should they exceed 5 times the TLV-TWA, provided that the TLV-TWA is not exceeded.

THIS SECTION IS FOR MANUFACTURING, COMMERCIAL BLENDING AND PACKAGING WORKERS. APPLICATORS AND HANDLERS SHOULD SEE THE PRODUCT LABEL FOR PROPER PERSONAL PROTECTIVE EQUIPMENT AND CLOTHING.

Personal Protection:

Eye/Face Protection: Use chemical goggles.

Skin Protection: Use protective clothing chemically resistant to this material. Selection of specific items such as face shield, boots, apron, or full body suit will depend on the task. Safety shower should be located in immediate work area. Remove contaminated clothing immediately, wash skin area with soap and water, and launder clothing before reuse or dispose of properly. Items which cannot be decontaminated, such as shoes, belts and watchbands, should be removed and disposed of properly.

Hand protection: Use gloves chemically resistant to this material. Examples of preferred glove barrier materials include: Neoprene, Nitrile/butadiene rubber (“nitrile” or “NBR”) or Polyvinyl chloride (“PVC” or “vinyl”).

NOTICE: The selection of a specific glove for a particular application and duration of use in a workplace should also take into account all relevant workplace factors such as, but not limited to: Other chemicals which may be handled, physical requirements (cut/puncture protection, dexterity, thermal protection), potential body reactions to glove materials, as well as the instructions/specifications provided by the glove supplier.

Respiratory Protection: Respiratory protection should be worn when there is a potential to exceed the exposure limit requirements or guidelines. If there are no applicable exposure limit requirements or guidelines, use an approved respirator. Selection of air-purifying or positive-pressure supplied-air will depend on the specific operation and the potential airborne concentration of the material. For emergency conditions, use an approved positive-pressure self-contained breathing apparatus. The following should be effective types of air-purifying respirators: Organic vapor cartridge with a particulate pre-filter.

Ingestion: Avoid ingestion of even very small amounts; do not consume or store food or tobacco in the work area; wash hands and face before smoking or eating.

Engineering Controls:
Ventilation: Use engineering controls to maintain airborne level below exposure limit requirements or guidelines. If there are no applicable exposure limit requirements or guidelines, use only with adequate ventilation. Local exhaust ventilation may be necessary for some operations.

Section 9: Physical and Chemical Properties

Physical State:	Powder/granules
Color:	Yellow-beige
Odor:	Slight nutty odor
Flash Point:	N/A
Vapor Pressure:	9.4X10 ⁻⁶ mm Hg at 20°C
Boiling Point (760 mmHg):	45-57°C
Bulk Density (H₂O = 1):	1.17 g/cm ³
Solubility in water (by weight):	0.275 mg/L at 20°C
pH:	6-8
IR Spectral:	2327 (Coblentz Society Spectral Collection)
Decomposition:	Decomposes at >220°C
Temperature:	Very stable in Normal to elevated temperatures

Section 10: Stability and Reactivity

Stability/Instability: Thermally stable at typical use temperatures

Conditions to Avoid: Avoid temperatures above 130°C (302°F). Generation of oxides of carbon and nitrogen.

Incompatible Materials: **Avoid contact with:** Strong oxidizing agents and strong alkali.

Hazardous Polymerization: Will not occur

Thermal Decomposition: Pendimethalin, stable under normal conditions, decomposed on heating above 220°C

Section 11: Toxicological Information

Acute Toxicity:

Ingestion: LD₅₀, Rat: 4,665 mg/kg

Eye Irritation: Slight to moderate irritation

Dermal: LD₅₀, Rat: >5,000 mg/kg

Inhalation: LC₅₀, Aerosol, Rat: >26.92 mg/l (1 hr.)
LC₅₀, Aerosol, Rat: >6.73 mg/l (4 hr.)

Skin Irritation: No skin irritation (rabbit)

Sensitization:
Skin: Did not cause allergic skin reactions when tested on (guinea pig). Non-sensitizing.

Carcinogenicity Classifications:

Component	List	Classification
Pendimethalin	ACGIH	Group 2B Possible carcinogen effects at high does in animal studies

Section 12: Ecological Information

ENVIRONMENTAL FATE:

ECOTOXICITY:

Material is very toxic to fish, aquatic organisms, aquatic invertebrates, and algae, toxic to birds and practically non-toxic to honeybees.

Rainbow Trout, 96h LC ₅₀ :	0.89 mg/L
Bluegill sunfish, 96h LC ₅₀ :	0.2 mg/L
Sheepshead minnow, 96h LC ₅₀ :	0.707 mg/l
Daphnia magna, 48h EC ₅₀ :	0.977 mg/L
Mallard Duck, Oral LD ₅₀ :	1,425 mg/kg
Bobwhite Quail, LC ₅₀ :	4,187 ppm
Honeybee, 48h Contact LD ₅₀ :	>100 ug/bee

Section 13: Disposal Considerations

If wastes and/or containers cannot be disposed of according to the product label directions, disposal of this material must be in accordance with your local or area regulatory authorities. This information presented below only applies to the material as supplied. The identification based on characteristic(s) or listing may not apply if the material has been used or otherwise contaminated. It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste identification and disposal methods in compliance with applicable regulations. If the material as supplied becomes a waste, follow all applicable regional, national and local laws.

Section 14: Transport Information

DOT Non-Bulk (not regulated in packages under 100 lbs.):

Description: NOT REGULATED
Proper Shipping Name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID (Pendimethalin), N.O.S.
Technical Name: Pendimethalin: N-(1-ethylpropyl)-3,4-dimethyl-2,6-dinitrobenzene amine
Hazard Class: 9 ID Number: UN 3077 Packing Group: PG III

DOT Bulk:

Description: UN 3077 Environmentally hazardous substance, solid, n.o.s. (Pendimethalin), 9, PG-III, RQ 100 lbs.
Proper Shipping Name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.

Technical Name: Pendimethalin: N-(1-ethylpropyl)-3,4-dimehthyl-2,6 dinitrobenzene amine
Hazard Class: 9 **ID Number:** UN 3077 **Packing Group:** PG III **RQ:** 100 lbs.

IMDG:

Proper Shipping Name: Environmentally hazardous substance, solid, n.o.s. (Pendimethalin)
Technical Name: Pendimethalin: N-(1-ethylpropyl)-3,4-dimehthyl-2,6-dinitrobenzene amine
Hazard Class: 9 **ID Number:** UN 3077 **Packing Group:** PG III **Marine pollutant:** Yes

ICAO/IATA:

UN No.: 3077
Hazard Class: 9 **ID Number:** UN 3077 **Packing Group:** PG III
Description: Environmentally hazardous substance, solid, n.o.s. (Pendimethalin)

MARINE POLLUTANT:

This information is not intended to convey all specific regulatory or operational requirements/information relating to this product. Additional transportation system information can be obtained through an authorized sales or customer service representative. It is the responsibility of the transporting organization to follow all applicable laws, regulations and rules relating to the transportation of the material.

Section 15: Regulatory Information

OSHA Hazard Communication Standard:

- This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

Superfund Amendments and Reauthorization Act of 1986 Title III (Emergency Planning and Community Right-to-Know Act of 1986) Sections 311 and 312:

Immediate (Acute) Health Hazard: Yes
Delayed (Chronic) Health Hazard: Yes
Fire Hazard: No
Reactive Hazard: No
Sudden Release of Pressure Hazard: No

Superfund Amendments and Reauthorization Act of 1986 Title III (Emergency Planning and Community Right-to-Know Act of 1986) Section 313:

- This product contains the following substances which are subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and which are listed in 40 CFR 372.

Component	CAS #	Amount
Pendimethalin	40487-42-1	min 96%

Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) Section 103:

- This product contains the following substances which are subject to CERCLA Section 103 reporting requirements and which are listed in 40 CFR 302.4.

Component	CAS #	Amount
Pendimethalin	40487-42-1	min 96%

Toxic Substances Control Act (TSCA):

- All components of this product are on the TSCA Inventory or are exempt from TSCA Inventory requirements under 40 CFR 720.30

Section 16: Other Information

Hazard Rating System:

<u>NFPA</u>	<u>Health</u>	<u>Fire</u>	<u>Reactivity</u>
	1	0	0

ISSUE DATE: JULY 15, 2012

KEY**

N/A	Not available
W/W	Weight/Weight
OEL	Occupational Exposure Limit
STEL	Short Term Exposure Limit
TWA	Time Weighted Average
ACGIH	American Conference of Governmental Industrial Hygienists, Inc.
OSHA PEL	Permissible Exposure Limit
WEEL	Workplace Environmental Exposure Level
HAZ_DES	Hazard Designation
Action Level	A value set by OSHA that is lower than the PEL which will trigger the need for activities such as exposure monitoring and medical surveillance if exceeded.

Disclaimer:

Drexel Chemical Company recommends that each customer or recipient of this SDS to study it carefully and consult appropriate expertise, as necessary or appropriate, to become aware of and understand the data contained in this SDS and any hazards associated with the product. The information herein is provided in good faith and believed to be accurate as of the effective date shown below. However, no warranty, express or implied, is given. Regulatory requirements are subject to change and may differ between various locations. It is the buyer's/user's responsibility to ensure that his activities comply with all federal, state, provincial or local laws. The information presented here pertains only to the product as shipped. Since conditions for use of the product are not under the control of the manufacturer, it is the buyer's/user's duty to determine the conditions necessary for the safe use of this product. Due to the proliferation of sources for information such as manufacturer-specific SDSs, we are not and cannot be responsible for SDSs obtained from any source other than ourselves. If you have obtained an SDS from another source or if you are not sure that the SDS you have is current, please contact us for the most current version.

Revised:

November 20, 2014