Material Safety Data Sheet

PENDALIN 330 EC (Pendimethalin 33%W/V)

1. IDENTIFICATION OF SUBSTANCE: Product Name: PENDALIN 330 EC

Chemical Name: N-(1-ethylpropyl)-2,6-dinitro-3,4-xylidine

Molecular Formula: C13H19N3O4

Molecular weight: 281.3

CAS Number: 40487–42–1

2. COMPOSITION/DATA ON COMPONENTS:

Composition	CAS No.	Content
Pendimethalin	40487–42–1	33 W/V
Other ingredients	-	To 100%

3. HAZARDS IDENTIFICATION: Signal Word: Warning

Hazard Statements: Harmful if swallowed

Toxic to aquatic life

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:

If Swallowed: 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.

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.

5. FIRE FIGHTING MEASURES: Flash Point: N/AExtinguishing 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 SDS.

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.

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. 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.

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.

8. EXPOSURE CONTROLS AND PERSONAL PROTECTION: 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.

9. PHYSICAL AND CHEMICAL PROPERTIES:

Appearance: Yellow-brown solid

Molecular weight: 281.3

Vapor pressure: 1.94 mPa (25 °C) Density: 1.19 (25 °C)

Solubility: In water 0.33 mg/l (pH 7, 20 °C). In acetone, xylene and dichloromethane >800, hexane 48.98 (all in g/l, 20 °C). Readily soluble in benzene, toluene and chloroform. Slightly soluble in petroleum ether and petrol.

10. STABILITY AND REACTIVITY:

Stability/Instability: Thermally stable at typical use temperatures

Conditions to Avoid: Avoid temperatures above 100°C (212°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

11. TOXICOLOGICAL INFORMATION: Information on toxicological effects

Acute toxicity: LD50 Oral - rat - >5000 mg/kg LD50 Dermal - rat - >2000 mg/kg LC50 (4 h) for rats >5 mg/l air.

Skin: Not cause skin irritation. Eyes: Not cause eye irritation. Sensitization: Not a sensitizer.

12. ECOLOGICAL INFORMATION: (ACTIVE INGREDIENT)

Birds: Acute LD50 for mallard ducks 1421 mg/kg b.w. Dietary LC50 (8 d) for bobwhite quail 4187 mg/kg.

Fish: LC50 (96 h) for rainbow trout 0.14, bluegill sunfish 0.2, channel catfish 0.42 mg/l.

Daphnia: EC50 (48 h) 0.28 mg/l.

NOEC (30 d) for Chironomus riparius 0.138 mg/l. Bees: LD50 (topical) >101.2 µg/bee.

Worms: EC50 (14 d) >1000 ppm.

13. DISPOSAL CONSIDERATION:

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.

14. TRANSPORT INFORMATION:

UN number: 3077

UN proper shipping name: Environmentally hazardous substances, solid, n.o.s. (Pendimethalin)

Transport hazard class(es): 9

Packaging group: III

15. REGULATIONS:

N: Dangerous for the environment

Risk phases:

R43: May cause sensitization by skin contact

R50/53: Very toxic to aquatic orgaisms, may cause long-term adverse effects in the aquatic environment.

Safety phase:

S2: Keep out of the reach of children. S24: Avoid contact with skin

S29: Do not empty into drains. S37: Wear suitable gloves.

S60: This material and its container must be disposed of as hazardous waste. S61: Avoid release to the environment.

16. OTHER INFORMATION:

The information in this Material Safety Data Sheet intends to help with some general recommendations related to health and safety, based on our knowledge about handling, storage and use of product. The data correspond to current knowledge and do not represent warranty of the properties. The user of product should have observed under his responsibility, the regulations and rulings for local authorities .