

### MATERIAL SAFETY DATA SHEET

PRODUCT : Pendimethalin 38.7 % EC

PRODUCT DESIGNATION : Herbicide

#### Section 1. Product & Company Identification

Common Name : Pendimethalin

Grade : Formulation

Active Ingredient : Pendimethalin

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

Chemical Family of A. I. : Herbicide

Molecular Formula of A. I. : C<sub>13</sub>H<sub>19</sub>N<sub>3</sub>O<sub>4</sub>

Molecular Mass of A. I. : 281.31g/mol

Manufacturer & Supplier : M/s United Chemicals

**Head office:** B-371, 1<sup>st</sup> Floor, Meera Bagh, New Delhi,

**Factory:** 15/1, 15/2, 15/3, industrial Estate, Vidisha,  
(M.P)

Telephone Number : +91-11-25258770

#### Section 2. Composition / Information on Ingredients

<u>Name of Components</u>	<u>Concentration% w/w</u>
Pendimethalin a.i.	38.70% w/w
Inert Ingredients	61.30% w/w
<b>TOTAL</b>	<b>100.00% w/w</b>

#### Section 3. Hazards Identification

**Main hazard:** Pendimethalin is highly toxic to aquatic organisms.

**Biological hazards:**

Eye contact: May cause irritation.

Skin contact: Not a skin irritant.

Ingestion: May cause nausea, vomiting, and diarrhoea.

Inhalation: May cause irritation.

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### Section 4. First Aid Measures

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**General advice :** Never give anything by mouth to an unconscious person.

**Inhalation :** Move to fresh air. Consult a physician after significant exposure. Artificial respiration and/or oxygen may be necessary.

**Skin contact :** Take off contaminated clothing and shoes immediately. Wash off immediately with soap and plenty of water. In the case of skin irritation or allergic reactions see a physician. Wash contaminated clothing before re-use.

**Eye contact :** If easy to do, remove contact lens, if worn. Hold eye open and rinse slowly and gently with water for 15-20 minutes. If eye irritation persists, consult a specialist..

**Ingestion :** Obtain medical attention. DO NOT induce vomiting unless directed to do so by a physician or poison control center. If victim is conscious: Rinse mouth with water.

#### Notes to physician

Treatment : Treat symptomatically

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### Section 5. Fire Fighting Measures

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#### Extinguishing Media :

Foam, carbon dioxide, dry chemical, and water spray.

**Fires:** Use as little water as possible. Dike area of fire to prevent pesticide run-off. Do not contaminate personnel or equipment, or handle broken packages or container without protective equipment. Avoid breathing vapours or fumes from burning materials, Control run-off water. If water enters drainage system advise authorities downstream.

**Hazardous decomposition products:** Combustion may produce carbon and nitrogen oxides.

**Protective clothing:** Wear chemical goggles, rubber gloves and impermeable clothing. Wear a pesticide cartridge respirator.

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### Section 6. Accidental Release Measures

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**Personal Precautions:** Keep unnecessary people away. Isolate hazard area and deny entry. Do not smoke; avoid contact and inhalation of closed splices before entering.

**Precautions for the environment:** Avoid dispersion. Isolate discharged material and keep material out of water sources. Prevent product from entering drains.

**Personal Protection:** Wear suitable chemical protective clothing, boots, natural rubber gloves, goggles and respiratory protective mask.

**Clean-up Methods:** Wear protective equipment.

**Spillage/Disposal:** Absorb on inert absorbing material. Shovel up into covered containers for disposal.

**Large spillage:** Should be dammed-off and pumped into containers, soak up remainder with absorbent material and dispose of in accordance with local regulations.

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### Section 7. Handling & Storage

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**General Precautions:** Do not smoke, drink, or eat during handling. Wash hands using liquid detergent. Wear protective clothing to avoid contact and/or inhalation with the product. Eliminate all sources of ignition from areas where the material is handled or used. Good personal hygiene procedures must be practiced.

**Specific Conditions:** Good local exhaust ventilation. Full face protective mask.

**Storage:** Place in cool and ventilated areas. Store in area designated specifically for pesticides and keep away from excessive heat. Properly keep away from food and drink. Fire fighting measures in storage areas. Incompatible materials: Avoid from Strong oxidizers and extremely acidic and alkaline conditions.

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### Section 8. Exposure Control, Personal Protection

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**Respiratory Protection:** Full face protective mask.

**Eye Protection:** Safety goggles or face shield is recommended.

**Skin Protection:** Natural rubber gloves and appropriate protective clothing necessary to prevent skin contact with the product.

**Protective clothing:** Chemical resistant gloves, coveralls, apron and foot coverings. User safety recommendations: Safety showers and eye wash should be easily accessible.

**Exposure Limits:** No occupational Exposure Limits Established by OSHA, ACGIH, or NIOSH.

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### Section 9. Physical and Chemical Properties

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<b>Appearance / state</b>	: Yellow to brown, liquid
<b>Colour</b>	: Yellow to brown
<b>Odour</b>	: Faint odour, nutty
<b>Ignition temperature</b>	: 354 <sup>0</sup> C
<b>Vapour Pressure</b>	: 23 hPa (20 <sup>0</sup> C)
<b>Flammability</b>	: Not highly flammable
<b>Density</b>	: 1.18 g/cm <sup>3</sup>
<b>Water solubility</b>	: Dispersible
<b>Boiling point</b>	: 100 <sup>0</sup> C

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### Section 10. Stability & Reactivity

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Exposure to flames and temperature above 35<sup>0</sup>C.

**Storage stability:** Stable in a secure, dry, well-ventilated separate area, away from children, livestock and food products. Avoid excessive heat and direct sunlight.

**Incompatibility:** Strong alkaline material, acid or oxidizing materials.

**Hazardous decomposition products:** None under normal storage conditions. Combustion may produce oxides of carbon, nitrogen and hydrochloric acid.

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### Section 11. Toxicological Information

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**Acute Oral Toxicity** LD<sub>50</sub> for rats : >5,000 mg/kg

**Acute Dermal Toxicity** LD<sub>50</sub> Rabbit : >2,000 mg /kg

**Acute Inhalation** LC<sub>50</sub> Rat : >5.23 mg /l

**Eye Irritation** Rabbit : mild eye irritant

**Skin Irritant** Rabbit : Not a skin irritant

**Skin sensitization** Guinea pig : Not a skin sensitizer



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### Section 12. Ecological Information

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#### Toxicity to fish:

LC50 (96 h) 1.01 mg/l, Oncorhynchus mykiss

#### Aquatic invertebrates:

EC50 (48 h) 46.8 mg/l, Daphnia magna

#### Aquatic plants:

EC50 (72 h) 0.158 mg/l, Pseudokirchneriella subcapitata

EC50 (72 h) 0.023 mg/l, Scenedesmus subsp

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### Section 13. Disposal Consideration

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To avoid disposal, all attempts should be made to utilize the product completely, in accordance with its intended and/or registered use. If this is not possible, handle with care, and dispose in a safe manner.

#### Controlled incineration:

**Recommended disposal method for this product is:** Incineration. Residues and waste must be disposed of according to local regulations. Do not contaminate ponds, waterways or ditches with chemical or used container.

**Package product wastes:** Triple rinse containers and pour rinse into spray tank for further use. Container and waste must be disposed of in accordance with local regulations. Do not use empty container for any other purpose.

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### Section 14. Transport Information

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#### IMDG Classification

**Shipping name** : ENVIRONMENTALLY HAZARDOUS SUBSTANCE,  
LIQUID, N.O.S. (Pendimethalin)

**Class** : 9

**Packing group** : III

**UN number** : 3082

**Marine pollutant** : Yes

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### Section 15. Regulatory Information

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#### R phrases :

**R10** Flammable

**R50/53** Very toxic to aquatic organisms; may cause long term adverse effects in the aquatic environment.

**65** Harmful; may cause lung damage if swallowed.

**67** Vapours may cause drowsiness and dizziness.

#### S phrases :

**S2** Keep out of the reach of children

**S23** Do not breathe vapour/spray

**S26** In case of contact with eyes, rinse immediately with plenty of water and seek medical advice

**S29/35** Do not empty into drains; dispose of this material and its container in a safe way.

**S37** Wear suitable gloves

**S57** Use appropriate containment to avoid environmental contamination

**S62** If swallowed, do not induce vomiting. Seek medical advice immediately and show the container label or this MSDS

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### Section 16. Other Information

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All information and instructions provided in this Material Safety Data Sheet (MSDS) are based on the current state of scientific and technical knowledge at the date indicated on the present MSDS and are presented in good faith and believed to be correct. This information applies to the PRODUCT AS SUCH. In case of new formulations or mixes, it is necessary to ascertain that a new danger will not appear. It is the responsibility of persons in receipt of this MSDS to ensure that the information contained herein is properly read and understood by all people who may use, handle, dispose or in any way come in contact with the product. If the recipient subsequently produces formulations(s) containing this product, it is the recipient's sole responsibility to ensure the transfer of all relevant information from this MSDS to their own MSDS.

**Safety Division : UNITED CHEMICALS, SAFETY DIVISION**