



## MATERIAL SAFETY DATA SHEET

### **PENMORT<sup>®</sup> 330EC**

ASTRA INDUSTRIAL COMPLEX CO., LTD. (ASTRACHEM)  
P.O. Box 30447, AL-KHOBAR 31952  
KINGDOM OF SAUDI ARABIA

#### 1. PRODUCT IDENTIFICATION

**Product Name:** *PENMORT<sup>®</sup> 330EC*

**Chemical Class:** **dinitroaniline**

**Use:** Penmort<sup>®</sup> 330EC is an emulsifiable concentrate herbicide formulation containing 330 g/L of the active ingredient of *Pendimethalin*. It is used to control most annual grasses and certain broadleaf weeds in corn, potatoes, rice, cotton, soybeans, peanuts, and sunflowers as pre-emergence or early post-emergence. Incorporation into the soil by cultivation or irrigation is recommended within 7 days following application.

**Producer:** **Astra Industrial Complex Co., Ltd.**  
P.O. Box 30447, Al-Khobar 31952  
Kingdom of Saudi Arabia  
Emergency Tel. # (+966) 3 8121 406

#### 2. COMPOSITION / INFORMATION ON INGREDIENTS

Substance	Proportions (% w/w)	Chemical structure
<b><i>Pendimethalin 95% Technical</i></b>		
<b>CAS No.</b> 40487-42-1	35.91	 <chem>CC(C)CNc1c(C)c(C)c([N+](=O)[O-])c1[N+](=O)[O-]</chem>
<b>Chemical Name:</b> <i>N</i> -(1-ethylpropyl)-2,6-dinitro-3,4-xylidine	(330 g/L)	
<b><i>Blend of ionic and non ionic emulsifiers</i></b>	6.20	
<b><i>Aromatic Solvent</i></b>	57.89	



### 3. HAZARD IDENTIFICATION

Harmful if swallowed, harmful in contact with skin, non-irritant to skin and mild irritant to eyes.

Toxicity Class    WHO III  
                              EPA III.

### 4. FIRST AID MEASURES

#### **Ingestion:**

Remove by gastric lavage and catharsis. Maintain blood pressure and airway. Give oxygen if respiration is depressed. Do not perform gastric if victim is unconscious. Get medical attention immediately.

#### **Inhalation:**

Remove the victim from exposure area to fresh air immediately. If breathing stops, apply artificial respiration. Keep person warm and at rest. Call for medical attention immediately.

#### **Eyes:**

Flush eyes immediately with plenty of water during 15 minutes at least. Get medical attention immediately.

#### **Skin:**

In case of contact with product, wash immediately skin area with plenty of water and soap. Remove material from skin. Get medical attention immediately.

### 5. FIRE FIGHTING MEASURES

#### **Extinguishing Media:**

Dry Chemical, CO<sub>2</sub>, Halon, water spray or standard foam.

#### **Hazardous Decomposition Products:**

Oxides of Carbon

#### **Special fire fighting procedures:**

Move containers from fire area if possible. Fight fire from maximum distance. Stay away from storage tank ends. Dike fire control water for later disposal. Do not scatter material. Extinguish using agent suitable for type of surrounding fire. Use water in flooding quantities as fog. Keep sparks flames and other sources of ignition away. Keep material out of water sources and sewers. Do



not touch material and avoid breathing dusts and fumes from burning material.  
Keep upwind.

## 6. ACCIDENTAL RELEASE MEASURES

### **Personal Precautions:**

Keep unnecessary people away. Isolate hazard area and deny entry. Do not smoke, avoid contact and inhalation of closed spaces 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.

### **Cleanup 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.

## 7. HANDLING AND STORAGE

### **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.

## 8. EXPOSURE CONTROLS / PERSONNEL PROTECTION

### Personal Protection:

#### 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.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

Assay	Pendimethalin 330 g/L
Appearance	Brown to dark Yellow liquid
Density	0.969 – 0.981 Kg/L
Flash point	>28°C
Acidity as H <sub>2</sub> SO <sub>4</sub>	< 5.0 g/Kg
Water Contents	< 2.0 g/Kg



## 10. STABILITY AND REACTIVITY

### Conditions to avoid:

Exposure to flames and temperature above 35°C.

### Materials to Avoid:

Strong oxidizing agent causes fire and explosion hazard.

### Hazardous Decomposition Products:

Oxides of Carbon

## 11. TOXICOLOGICAL INFORMATION

### Penmort 330EC:

Acute Oral LD<sub>50</sub> rat < 5000 mg/Kg

### Technical Active ingredient (Pendimethalin)

Acute Oral LD <sub>50</sub>	3616 mg/kg (rats) 2605 mg/kg (mice)
Acute Dermal LD <sub>50</sub>	>6000 mg/Kg (rats)
Inhalation	4 h LC <sub>50</sub> >0.884 mg/l air (rats)
Eye Irritation	Mild Eye Irritant (Rabbit)
Skin Irritation	Non- irritating to skin (Rabbits)
Skin Sensitization	Not a known skin sensitizer
ADI	0 – 0.0125 mg/Kg/day

### Teratogenic Effects

No birth defects and no toxic effects on fetuses occurred when pregnant rats were given 500 mg/kg/day, the highest dose tested. No fetotoxic or teratogenic effects were seen at the highest dose tested (60 mg/kg/day) in a teratology study with rabbits, although maternal toxicity was seen at 30 mg/kg/day . It does not appear that pendimethalin is teratogenic

### Mutagenic Effects

Several mutagenicity studies, including tests on live animals and mammalian and bacterial cell cultures, have all indicated that pendimethalin has no mutagenic activity.



## 12. ECOLOGICAL INFORMATION

### Toxicity to birds:

Eight-day dietary LC<sub>50</sub>

Bobwhite quail	:	4187 mg/Kg diet
Mallard ducks	:	10388 mg/Kg diet

### Toxicity to aquatic Organisms

LC<sub>50</sub> (96) hours in mg/l

Rainbow trout	:	0.14 mg/l
Bluegill Sunfish	:	0.2 mg/l
Channel Catfish	:	0.42 mg/l

### Toxicity to aquatic Organisms

Honey bee LD <sub>50</sub> (Topical)	:	>50 µg/bee
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## 13. DISPOSAL CONSIDERATION

Must be disposed off by special means. Suitable incineration and Chemical treatment, in accordance with local regulations. Do not discharge into drains or the environment.



14. TRANSPORT INFORMATION

<b>Proper Shipping name:</b>	<b>Pesticide, Liquid</b> , toxic, Flammable, N.O.S, flash point $\geq 23^{\circ}\text{C}$ (Pendimethalin)		
<b>UN. No:</b>	<b>UN 2903</b>		
<b>Hazard Class:</b>	<b>6.1</b>		
<b>Classification Code:</b>	TF2		
<b>Packing group:</b>	<b>III</b>		
<b>Subsidiary Risks:</b>	6.1 +3		
<b>Special provisions:</b>	61		
<b>Limited quantities:</b>	LQ19		
<b>Packaging:</b>	Packing instructions		P001 IBC03 R001
	Special packing provisions		-
	Mixed Packaging Provisions		MP15
	Instructions		T7
<b>UN Portable tanks:</b>	Special Provisions		TP2
	Tank Code		L4BH
<b>ADR Tank:</b>	Special Provision		TU15 TE1 TE15 TE19
	Vehicle for tank carriage		FL
	Transport Catogery		2
<b>Special provision carriage:</b>	Packages		-
	Bulk		-
	Loading, unloading & Handling Operation		CV13 CV28 S2 S9
<b>Hazard Identification</b>			<b>63</b>

15. REGULATORY INFORMATION.

**Classification:**      **General Use Pesticide**

**Labeling:**

Symbols: Xn, Xi

**Phrases R:**

R22: Harmful If swallowed

R36: Irritating to eyes



**Phrases S:**

S1/2: Keep Locked up and out of the reach of children

S26: In Case of contact with eyes, rinse immediately with plenty of water and seek medical help.

S28: After contact with skin, wash immediately with plenty of water and soap.

S36/36: Wear suitable protective clothing and gloves.

S45: in case of accident or if you feel unwell, seek medical advice immediately (show the label where is possible)

16. OTHER INFORMATION
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Buyer assumes all responsibility for safety and use not in accordance with the product label instructions.