



MATERIAL SAFETY DATA SHEET

TWIGAMETHALIN (Pendimethalin 50% EC)

Company Details

Meghmani Industries Ltd.,

Block No. 401, Chharodi, Sanand-Viramgam highway, Dist.-Ahmedabad,India.

Emergency Phone Number: 91-2717-273284, 273204

Identification and Composition of Product

Product Name	:	Pendimethalin 50% EC
Trade Name	:	TWIGAMETHALIN
Chemical Group	:	Dinitroaniline herbicide
(CAS #)	:	40487-42-1
Chemical Name	:	N-(1-ethylpropyl)-2,6-dinitro-3,4-xylydine.
Molecular Weight	:	281.3
Uses	:	Agricultural herbicide.
Pendimethalin	:	50 %
Other non hazardous ingredients	:	8 to 9 %
Solvent C - 9	:	to 100 %

Physical Data of Active Ingredient

Appearance and Odor	:	Orange odorless molten crystals.
Boiling Point	:	Decomposes on distillation.
Melting Point	:	Approximately 54-58°C.
Evaporation Rate	:	N/A
Solubility In Water	:	0.3 mg/l (20 °C)
Solubility In Solvents	:	Acetone: 700, Methanol: 150, Toluene: 600, Hexane: 50 (all in g/l 25°C)
Specific Gravity	:	1.19 at 20 °C
Vapor Pressure	:	4.0 mPa at 25 °C
Stability	:	Very stable in storage; store above 5 °C and below 130 °C. Stable to acids and alkalis. Slowly decomposed by light.
Flash Point	:	N.A.

Physical Data of Product

Appearance And Odor	:	Brown liquid having aromatic odor.
Boiling Point	:	150°C at 100kPa.
Melting Point	:	Approximately 0°C.
Evaporation Rate	:	Not known but volatile
Freezing Point	:	< 0°C.
Solubility In Water	:	Emulsion
Solubility In Solvents	:	Very good solubility in most organic solvents
Specific Gravity	:	1.00 at 20 °C



Vapor Pressure	:	8 mm Hg at 20 °C
Stability	:	Stable for at least 2 y below 50 °C.
Flash Point	:	> 30 °C
Formulation	:	Emulsifiable concentrate

Health Hazard Identification

Skin Contact

May irritate skin. The dermal toxicity of this product is low. However, skin contact should be avoided. This product is not a skin sensitiser.

Eye Contact

This product may be mildly irritating to eyes. However, it is unlikely to cause any more than mild transient discomfort. It is also unlikely to cause any lasting effects.

Inhalation

May be a slight respiratory irritant.

Ingestion

The acute toxicity of this product is low, but it may be harmful if a large amount is swallowed.

Environmental

Slight toxic to aquatic organisms.

Fire and Explosion

Flammable and explosive at high temperature

First Aid

Skin Contact

Flush with soap and water, remove contaminated clothing, seek medical attention.

Eye Contact

Flush with plenty of water for at least 15 minutes. Seek medical attention if irritation begins and/or persists.

Inhalation

Remove to fresh air. If not breathing, follow standard resuscitation practices.

Ingestion

Drink 1-2 glasses of water, induce vomiting, seek medical attention. Do not induce vomiting or give anything by mouth to an unconscious person.

Advice to Doctor

The following symptoms may occur: Local – slight skin and eye irritation. Systemic – none documented over many years' experience. For local contamination treatment should be symptomatic after decontamination. In case of skin or eye contamination, treat as documented under "First Aid". If a large amount of this product is ingested the following measures should be considered: Induction of vomiting if the patient is fully conscious and it is less than 30 minutes since ingestion. Monitor blood count, Gastric lavage, Charcoal administration. Treat symptomically.

Fire-Fighting Measures

Flammability

: Flammable at high temperature

Extinguishing Media

: Foam, dry agent, carbon dioxide

Special Fire Fighting Procedures

: Wear self-contained breathing apparatus. If area is heavily exposed to fire and if conditions permit, let fire burn itself out since water may cause increase contamination hazard.

Unusual Fire and Explosion Hazards

: Toxic and flammable fumes.

Special exposure hazards

: Do not release chemically contaminated water into drains, Soil and surface waters.



Explosion Data

Sensitivity to mechanical impact : Not Available
 Sensitivity to static discharge : Not Available

Reactivity Data

Stability : Stable under normal conditions of use. Incompatible with alkaline materials. Oxides of carbon and nitrogen may be given off when exposed to extreme heat or fire.

Conditions To Avoid : Open flames, sparks, ignition sources, dampness.

Incompatibility : Strong acids, oxidizers, dampness (in storage).

Hazardous Polymerization : N/A

Hazardous Decomposition Products : Toxic and flammable fumes produced: oxides of nitrogen, and carbon.

Toxicology

<i>Acute Oral LD50</i>	<i>Rat</i>	>2250 mg/kg
	<i>Mice</i>	>2800 mg/kg
<i>Acute Dermal LD50</i>	<i>Rat</i>	>3500 mg/kg
	<i>Rabbit</i>	>8000 mg/kg
<i>Acute Inhalation LC50 (Rat)</i>		5.2 mg/l (4h)
<i>Eye Irritation</i>		Non - irritant
<i>Skin Irritation</i>		Non - irritant
<i>Skin Sensitization</i>		Non sensitization in Guinea pigs
<i>Carcinogen Status</i>		Non-carcinogenic
<i>Mutagenicity</i>		Non- mutagenic
<i>Reproductive toxicity</i>		Non-teratogenic

Ecotoxicology

<i>Birds</i>	<i>Mallard duck</i>	>15000 mg/kg
	<i>Bobwhite quail</i>	>7300 mg/kg
<i>Fish</i>	<i>Rainbow trout</i>	0.20 mg/l.
	<i>Bluegill sunfish</i>	0.30 mg/l
	<i>Channel catfish</i>	0.62 mg/l
<i>Honey bees LC50 (Topical)</i>		>60 µg/bee (Non toxic to bees)
<i>Daphnia LC50 (24 h)</i>		18.0 mg/l
<i>Worms</i>		Non toxic to <i>Lumbicus rebellus</i>



Preventive Measures

Storage and Handling

Store in a cool, dry location. Do not store near food, feed or fertilizers. Do not store above 35 °C. Do not contaminate ponds, lakes, streams or any source of water. Keep out of reach of children. Handle in a well ventilated area. Local exhaust recommended. Use personal protective equipment to prevent contact with skin and eyes. Do not drink, eat or smoke while handling. Wash hands before eating, drinking or smoking.

<i>Protective Gloves</i>	:	Impervious rubber.
<i>Eye Protection</i>	:	Chemical safety goggles.
<i>Ventilation</i>	:	Local exhaust strongly recommended. Wear respiratory protection in the absence of adequate ventilation
<i>Respiratory Protection</i>	:	NIOSH/MSHA approved for organic vapours and dust/mist/fume.

Steps to be Taken if Material is Released or Spilled

Clean up personnel should wear personal protective equipment. Absorb with an inert, non-combustible absorbent. Put into containers for disposal.

Waste Disposal Method

In accordance with local, provincial and federal regulations. Packaging should be disposed off at a specialized chemical waste. Contact regional environmental agency.

Transportation Information

<i>UN No.</i>	:	3082
<i>IMDG Page no.</i>	:	9028
<i>Class</i>	:	9
<i>Packaging group</i>	:	III
<i>Proper shipping name</i>	:	Environmentally Hazardous Substance liquid, n.o.s. (Pendimethalin)
<i>Environmental risk</i>	:	Marine pollutant
<i>Risk phrases</i>	:	R 22 Harmful if swallowed.; R 50 very toxic to aquatic organism
<i>Hazard symbol</i>	:	Xn
<i>Safety phrases</i>	:	S36 : Wear suitable protective clothing S2 : Keep out of reach of children S13 : Keep away from food, drink or feeding stuffs.

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