



SAFETY DATA SHEET

Issue date: 6 November 2016

1. Identification of the substance or mixture and of the supplier

Product: Pendimethalin 330 g/L (EC)
Product name: **SPIRIT**
Recommended use: Herbicide
Supplier: Luxembourg Industries Ltd.
27 Hamered St. Tel Aviv 6812509
ISRAEL Tel: +972 3 796 4300
Emergency phone number: +972 3 796 4300

2. Hazards identification

Classification of the product according to the Global Harmonized System of Classification and Labelling of Chemicals (GHS).

Hazard classification: Flammable liquid Category 3
Acute toxicity-Oral Category 5
Eye irritation: Category 2B
Hazardous to the aquatic environment
Acute aquatic toxicity: Category 2
Chronic aquatic toxicity: Category 1

Label elements: Pictogram:  Signal word: Warning

Hazard statement(s): H226 Flammable liquid and vapour.
H303 May be harmful if swallowed.
H320 Causes eye irritation.
H410 Very toxic to aquatic life with long lasting effects.

Precautionary statement(s):

Prevention: P210 Keep away from heat/sparks/open flames/hot surfaces.-No smoking.
P233 Keep container tightly closed.
P242 Use only non-sparking tools.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P264 Wash hands and face thoroughly after handling.
P273 Avoid release to the environment.

SPIRIT SDS
Page 1 of 7

LUXEMBOURG INDUSTRIES LTD

27 Hamered St. Tel Aviv 6812509, P.O. Box 13 Tel Aviv 6100001, ISRAEL
Tel: +972 3 796 4300 ■ Fax: +972 3 510 0474 ■ E-mail: main@luxembourg.co.il ■ www.luxpam.com

Response:	P303+P361+P353	IF ON SKIN: Take off immediately all contaminated clothing. Rinse skin with water/shower.
	P370 + P378	In case of fire: Use foam, water spray or fog for extinction.
	P312	Call a POISON CENTER or doctor/ physician if you feel unwell.
	P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
	P337 + P313	If eye irritation persists: Get medical advice/attention.
	P391	Collect spillage.
Storage:	P403 + P235	Store in a well-ventilated place. Keep cool.
Disposal:	P501	Dispose of contents/container in accordance with national/ international regulations.

Other hazards: No data available

3. Composition/information on ingredients

Common name of the a.i.:	Pendimethalin
Chemical name of the a.i. (IUPAC):	<i>N</i> -(1-ethylpropyl)-2,6-dinitro-3,4-xylidine
Chemical formula:	C ₁₃ H ₁₉ N ₃ O ₄
CAS No.:	40487-42-1
Content:	330 g/L
	Contains ~ 57% Aromatic solvents

4. First-aid measures

IF exposed or concerned: Get medical advice/attention.

Ingestion: IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. Call a POISON CENTER or doctor/ physician if you feel unwell.

Inhalation: IF INHALED; Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/ physician if you feel unwell.

Eyes: IF IN EYES: rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.

Skin: IF ON SKIN: Wash with plenty of soap and water. If skin irritation or rash occurs: Get medical advice/attention.

Most important symptoms and effects, both acute and delayed.

No data available

Indication of any immediate medical attention and special treatment needed.

There is no specific antidote. Treat symptomatically.

5. Fire-fighting measures

Suitable extinguishing media:	Use foam, water spray or fog. Dry chemical powder, carbon dioxide (CO ₂), sand or earth may be used for small fires only. Move containers from fire area if you can do it without risk. Dike fire-control water for later disposal; do not scatter the material.
Specific hazards arising from the chemical:	During a fire, irritating and possibly toxic gases may be generated by thermal decomposition or combustion.
Special protective equipment and precautions for fire-fighters:	Wear positive pressure self-contained breathing apparatus (SCBA) and chemical protective clothing.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures:	Use personal protective equipment. Avoid breathing vapors, mist or gas. Ensure adequate ventilation.
Environmental precautions:	Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.
Methods and materials for containment and cleaning up:	Absorb or cover with dry earth, sand or other non-combustible material and transfer to containers.

7. Handling and storage

Precautions for safe handling:	Do not handle until all safety precautions have been read and understood. Wear protective gloves/protective clothing/eye protection/face protection. Do not breathe mists/vapours/spray. Use only outdoors or in a well-ventilated area. Wear respiratory protection. Contaminated work clothing should not be allowed out of the workplace. Avoid release to the environment.
Conditions for safe storage, including any incompatibilities:	Keep locked up and out of the reach of children. Store in a well ventilated place. Keep container tightly closed.

8. Exposure controls / personal protection

Occupational exposure limits:	TLV (ACGIH):	Pendimethalin: Not established Aromatic solvent: 25 ppm
Appropriate engineering controls:	Provide exhaust ventilation or other engineering controls to keep the airborne concentrations low. Ensure that eyewash stations and safety showers are in proximity to the work-station location.	
Personal protective equipment:	Wear respiratory, eye/face protection. Wear protective gloves.	

9. Physical and chemical properties

Appearance:	Liquid
Colour:	Yellow
Odour:	Aromatic
pH-value (1%):	5-7
Melting point/freezing point:	No data available
Boiling point:	No data available
Evaporation rate:	No data available
Flash point:	> 40 °C
Flammability:	Flammable
Vapour pressure:	No data available
Vapour density:	No data available
Bulk density:	0.96-0.98 g/mL
Solubility in water:	No data available
Partition coefficient n-octanol/water:	$K_{ow} \log P = 5.2$
Ignition temperature:	No data available
Decomposition temperature:	No data available
Viscosity:	No data available

10. Stability and reactivity

Reactivity:	Technical pendimethalin decomposes with exothermic reaction at around 200°C. Avoid heating the product to high temperatures.
Chemical stability:	Material is stable under normal conditions of use and storage.
Possibility of hazardous reactions:	May react strongly with oxidizing agents.
Conditions to avoid:	Avoid heat and open flame.
Incompatible materials:	Strong oxidizers

Hazardous decomposition products: On fire emits toxic and irritating fumes.

11. Toxicological information

Acute toxicity

Oral LD₅₀ (rat): 4781 mg/kg

Dermal LD₅₀ (rabbit): > 5000 mg/kg

Skin corrosion/irritation

Skin irritation (rabbit): Not irritant

Serious eye damage/irritation

Eye irritation (rabbit): Mildly irritant

Respiratory or skin sensitization

Dermal sensitization: Not a skin sensitizer

Germ cell mutagenicity: Non mutagenic
Carcinogenicity: Not classified by IARC
Reproductive toxicity: No data available
STOT* single exposure: No data available
STOT repeated exposure: No data available
Aspiration hazard: No data available

*Specific Target Organ Toxicity

12. Ecological information

Ecotoxicity:

Birds* RED

Mallard duck LD₅₀: 1421 mg/kg

Northern Bobwhite quail LC₅₀: 4187 mg/kg

Mallard duck LC₅₀: 4640 mg/kg

Fish

Poecillia reticulata LC₅₀ (96h): 17.43 mg/L

Cyprinus carpio LC₅₀ (96h): 4.9 mg/L

Daphnia

Daphnia magna EC₅₀ (48 hr): 3.62 mg/L

Daphnia magna NOEC 1 mg/L

Algae

Scenedesmus subspicatus ErC₅₀: 3.44 mg/L

NOEC 0.05

Bees

LD₅₀ (48h, oral): >20 µg a.i./bee

LD₅₀ (48h, contact): >20 µg a.i./bee

Persistence and degradability:	Persistent in soil. DT ₉₀ >100 days
Bioaccumulative potential: RED	High potential of bioaccumulate in fish BCF 5100 (whole fish)
Mobility in soil: RED	Immobile
Other adverse effects:	No data available

13. Disposal considerations

Do not reuse empty containers. Dispose of in accordance with local regulations.

14. Transport information

UN No.:	1993
Proper shipping name:	FLAMMABLE LIQUID, N.O.S. (aromatic solvents)
Transport hazard class:	3
Packaging group:	III
Marine pollutant:	Yes

15. Regulatory information

This data sheet complies with the requirements of the Global Harmonized System of Classification and Labelling of chemicals (GHS).

16. Other information

The information contained herein is applicable solely to the indicated product, and does not relate to any other use of this product as described. Its use is intended by persons having technical skill and at their own discretion and risk. The information has been developed from sources reliable. This information is furnished without warranty, expressed or implied, including the warranties of merchantability and fitness for a particular purpose is made with respect to the information contained herein.

Issue date: 06/11/2016 (EA)
Version: 2
Replace version: 1 from 30/12/2004