



PENFOX

Safety Data Sheet

according to Regulation (EU) 2015/830
Issue date: 16/08/2021

Version: 1.1/UK

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Trade name : PENFOX
Name : Pendimethalin 40% SC
Product code : SHA 2600 B
MAPP number : 18342

1.2. Relevant identified uses of the substance or mixture and uses advised against

1.2.1. Relevant identified uses

Main use category : Herbicide

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

Sharda Cropchem Ltd.
2nd Floor, Prime Business Park, Dashrathlal Joshi Road, Vile Parle (West)
400056 Mumbai - India
T + 91 22 6261 5615 - F + 91 22 6678 2828
regn@shardaintl.com

1.4. Emergency telephone number

Emergency number : 112

Country	Organisation/Company	Emergency number
United Kingdom	Transportation Emergency, CARECHEM (24 HOUR)	+ 44 (0) 1865 407333

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Hazardous to the aquatic environment — Acute Hazard, Category 1 H400

Hazardous to the aquatic environment — Chronic Hazard, Category 1 H410

Full text of H-statements: see section 16

Adverse physicochemical, human health and environmental effects

No additional information available

2.2. Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms (CLP) :



GHS09

Signal word (CLP) :

Warning

Hazard statements (CLP) :

H410 - Very toxic to aquatic life with long lasting effects.

Precautionary statements (CLP) :

P273 - Avoid release to the environment.

P363 - Wash contaminated clothing before reuse.

P391 - Collect spillage.

P405 - Store locked up.

P501 - Dispose of contents and container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.

EUH-statements :

EUH208 - Contains pendimethalin (ISO); N-(1-ethylpropyl)-2,6-dinitro-3,4-xylidine(40487-42-1), 1,2-benzisothiazol-3(2H)-one; 1,2-benzisothiazolin-3-one(2634-33-5). May produce an allergic reaction.

EUH401 - To avoid risks to human health and the environment, comply with the instructions for use.

2.3. Other hazards

No additional information available

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SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]	Specific concentration limits
pendimethalin (ISO); N-(1-ethylpropyl)-2,6-dinitro-3,4-xylidine	(CAS-No.) 40487-42-1 (EC-No.) 254-938-2 (EC Index-No.) 609-042-00-X	38.04	Skin Sens. 1, H317 Aquatic Acute 1, H400 Aquatic Chronic 1, H410	-
Polyoxyethylene isodecyl ether	(CAS-No.) 61827-42-7	1 – 5	Eye Dam. 1, H318	-
Poly(oxy-1,2-ethanediyl), .alpha.-[tris(1-phenylethyl)phenyl]-.omega.-hydroxy-	(CAS-No.) 99734-09-5 (EC-No.) 619-457-8	1 – 5	Aquatic Chronic 3, H412	-
Fuller's earth (Hydrated aluminium magnesium silicate)	(CAS-No.) 8031-18-3 (EC-No.) 617-052-0	1 – 5	Acute Tox. 4 (Inhalation), H332 Eye Irrit. 2, H319 STOT SE 3, H335	-
1,2-benzisothiazol-3(2H)-one; 1,2-benzisothiazolin-3-one	(CAS-No.) 2634-33-5 (EC-No.) 220-120-9 (EC Index-No.) 613-088-00-6	< 0.1	Acute Tox. 4 (Oral), H302 Skin Irrit. 2, H315 Eye Dam. 1, H318 Skin Sens. 1, H317 Aquatic Acute 1, H400	(0.05 ≤C < 100) Skin Sens. 1, H317

Full text of H- and EUH-statements: see section 16

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general	: Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).
First-aid measures after inhalation	: Move the affected person away from the contaminated area and into the fresh air. If not breathing, give artificial respiration. Call a doctor.
First-aid measures after skin contact	: Remove contaminated clothes. After contact with skin, wash immediately and thoroughly with water and soap.
First-aid measures after eye contact	: Wash with plenty of water (during 20 minutes minimum) with eyes wide open after taking off soft contact lenses and immediately take medical advice.
First-aid measures after ingestion	: Rinse mouth. Immediately call a POISON CENTER/doctor.

4.2. Most important symptoms and effects, both acute and delayed

No additional information available

4.3. Indication of any immediate medical attention and special treatment needed

No additional information available

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media : Water spray. Dry powder. Foam. Carbon dioxide.

5.2. Special hazards arising from the substance or mixture

Fire hazard	: In case of fire and/or explosion do not breathe fumes.
Reactivity in case of fire	: Product is not explosive.
Hazardous decomposition products in case of fire	: Carbon monoxide. Nitrogen oxides. Carbon dioxide. Toxic fumes may be released.

5.3. Advice for firefighters

Precautionary measures fire	: Keep container tightly closed and away from heat, sparks and flame. Keep away from combustible materials.
Firefighting instructions	: Appropriate self-contained breathing apparatus may be required. Get the package away from the fire if this can be done without risk. Prevent fire fighting water from entering the environment.

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- Protection during firefighting : Wear fire/flare resistant/retardant clothing. Do not enter fire area without proper protective equipment, including respiratory protection.
- Other information : Do not allow material to contaminate surface water system.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

- Protective equipment : Wear suitable protective clothing, gloves and eye or face protection. Chemical resistant gloves (according to European standard NF EN 374 or equivalent). EN 166. Wear eye protection. Personal protective equipment. EN ISO 20345.
- Emergency procedures : Evacuate personnel to a safe area.

6.1.2. For emergency responders

- Protective equipment : Wear suitable hand, body and head protection.

6.2. Environmental precautions

Danger of pollution of drinking water when product enters the soil. Do not allow run-off from fire fighting to enter drains or water courses. Notify authorities if liquid enters sewers or public waters.

6.3. Methods and material for containment and cleaning up

- For containment : Label the container and provide warning statements to prevent any contact.
- Methods for cleaning up : Soak up with inert absorbent material (for example sand, sawdust, a universal binder, silica gel). Clean spills promptly. Wash contaminated area with large amounts of water.

6.4. Reference to other sections

No additional information available

SECTION 7: Handling and storage

7.1. Precautions for safe handling

- Additional hazards when processed : Do not allow run-off from fire fighting to enter drains or water courses. Do not contaminate water with the product or its container (Do not clean application equipment near surface water/Avoid contamination via drains from farmyards and roads).
- Precautions for safe handling : Avoid contact with skin and eyes. Do not eat, drink or smoke in areas where product is used. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Remove contaminated clothing and shoes. Wash clothing and equipment after handling.

7.2. Conditions for safe storage, including any incompatibilities

- Technical measures : Ensure adequate ventilation, especially in confined areas. Store locked up.
- Storage conditions : Keep only in original container. Store in a dry place. Store in a closed container. Store in a well-ventilated place. Protect from sunlight.
- Storage temperature : 0 – 30 °C
- Packaging materials : Keep only in the original container in a cool, well-ventilated place away from combustible materials.

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

8.1.1 National occupational exposure and biological limit values

sodium hydroxide; caustic soda (1310-73-2)

United Kingdom - Occupational Exposure Limits

Local name	Sodium hydroxide
WEL STEL (OEL STEL)	2 mg/m ³
Regulatory reference	EH40/2005 (Fourth edition, 2020). HSE

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Propane-1,2-diol (57-55-6)

United Kingdom - Occupational Exposure Limits

Local name	Propane-1,2-diol
WEL TWA (OEL TWA) [1]	10 mg/m ³ particulates 474 mg/m ³ total vapour and particulates
WEL TWA (OEL TWA) [2]	150 ppm total vapour and particulates
Regulatory reference	EH40/2005 (Fourth edition, 2020). HSE

8.1.2. Recommended monitoring procedures

No additional information available

8.1.3. Air contaminants formed

No additional information available

8.1.4. DNEL and PNEC

No additional information available

8.1.5. Control banding

No additional information available

8.2. Exposure controls

8.2.1. Appropriate engineering controls

No additional information available

8.2.2. Personal protection equipment

8.2.2.1. Eye and face protection

Eye protection:

EN 166. Eye protection, including both chemical splash goggles and face shield, must be worn when possibility exists for eye contact due to spraying liquid or airborne particles

8.2.2.2. Skin protection

Skin and body protection:

Long sleeved protective clothing

Hand protection:

Chemical resistant gloves (according to European standard NF EN 374 or equivalent)

8.2.2.3. Respiratory protection

Respiratory protection:

Extra personal protection: P2 filter respirator for harmful particles. Extra personal protection: P3 filter respirator for toxic particles

8.2.2.4. Thermal hazards

No additional information available

8.2.3. Environmental exposure controls

No additional information available

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Colour	: dark brown.
Odour	: aromatic. Solvent.
Odour threshold	: No data available
pH	: No data available
pH solution	: 7 – 9
Relative evaporation rate (butylacetate=1)	: No data available
Melting point	: No data available
Freezing point	: No data available
Boiling point	: No data available

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Flash point	: No data available
Auto-ignition temperature	: 388 °C
Decomposition temperature	: No data available
Flammability (solid, gas)	: No data available
Vapour pressure	: No data available
Relative vapour density at 20 °C	: No data available
Relative density	: 1.0514 (20 °C)
Solubility	: No data available
Partition coefficient n-octanol/water (Log Pow)	: No data available
Viscosity, kinematic	: 275.4 mm ² /s (40 °C)
Viscosity, dynamic	: 289.5 mPa·s (40 °C)
Explosive properties	: Not explosive.
Oxidising properties	: Not oxidising.
Explosive limits	: No data available

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

Stable under normal conditions of use.

10.2. Chemical stability

The product is stable at normal handling and storage conditions.

10.3. Possibility of hazardous reactions

Stable under normal conditions of use.

10.4. Conditions to avoid

Heat. High temperature. Open flame. Direct sunlight.

10.5. Incompatible materials

No additional information available

10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity (oral)	: Not classified
Acute toxicity (dermal)	: Not classified
Acute toxicity (inhalation)	: Not classified.

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LD50 oral rat	> 2000 mg/kg bodyweight (data on formulated product, OECD guideline 423)
LD50 dermal rat	> 2000 mg/kg bodyweight (data on formulated product, OECD guideline 402)
LC50 Inhalation - Rat	> 1.52 mg/l/4h Maximum use concentration (data on formulated product, OECD guideline 403)

Skin corrosion/irritation	: Not irritating
Serious eye damage/irritation	: Not irritating
Respiratory or skin sensitisation	: This product does not cause skin sensitization
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified
Reproductive toxicity	: Not classified
STOT-single exposure	: Not classified
STOT-repeated exposure	: Not classified
Aspiration hazard	: Not classified

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Viscosity, kinematic	275.4 mm ² /s (40 °C)
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SECTION 12: Ecological information

12.1. Toxicity

Hazardous to the aquatic environment, short-term (acute) : Very toxic to aquatic life.

Hazardous to the aquatic environment, long-term (chronic) : Very toxic to aquatic life with long lasting effects.

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LC50 - Fish [1]	2.72 mg/l (96 h; C. carpio)
EC50 - Crustacea [1]	0.42 mg/l (48 h; Daphnia magna)
ErC50 algae	0.00074 mg/l (72 h; Pseudokirchneriella subcapitata)

12.2. Persistence and degradability

pendimethalin (ISO); N-(1-ethylpropyl)-2,6-dinitro-3,4-xylylidine (40487-42-1)

Persistence and degradability : Not readily biodegradable.

12.3. Bioaccumulative potential

pendimethalin (ISO); N-(1-ethylpropyl)-2,6-dinitro-3,4-xylylidine (40487-42-1)

BCF - Fish [1]	5100
Partition coefficient n-octanol/water (Log Pow)	5.4 (pH 6.5, 20 °C)

12.4. Mobility in soil

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Surface tension : 36.9 mN/m

12.5. Results of PBT and vPvB assessment

No additional information available

12.6. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Regional legislation (waste) : Disposal must be done according to official regulations.
Product/Packaging disposal recommendations : Avoid release to the environment. Disposal must be done according to official regulations. Do not dispose of the packaging without first carrying out the necessary cleaning. Refer to manufacturer/supplier for information on recovery/recycling.
European List of Waste (LoW) code : 02 01 08* - agrochemical waste containing dangerous substances

SECTION 14: Transport information






In accordance with ADR / IMDG / IATA / ADN / RID

ADR	IMDG	IATA	ADN	RID
14.1. UN number				
UN 3082	UN 3082	UN 3082	UN 3082	UN 3082
14.2. UN proper shipping name				
ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (pendimethalin (ISO), N-(1-ethylpropyl)-2,6-dinitro-3,4-xylylidine)	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (pendimethalin (ISO), N-(1-ethylpropyl)-2,6-dinitro-3,4-xylylidine)	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (pendimethalin (ISO), N-(1-ethylpropyl)-2,6-dinitro-3,4-xylylidine)	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (pendimethalin (ISO), N-(1-ethylpropyl)-2,6-dinitro-3,4-xylylidine)	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (pendimethalin (ISO), N-(1-ethylpropyl)-2,6-dinitro-3,4-xylylidine)

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Transport document description				
UN 3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (pendimethalin (ISO), N-(1-ethylpropyl)- 2,6-dinitro-3,4-xylydine), 9, III, (-)	UN 3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (pendimethalin (ISO), N-(1-ethylpropyl)- 2,6-dinitro-3,4-xylydine), 9, III, MARINE POLLUTANT	UN 3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (pendimethalin (ISO), N-(1-ethylpropyl)- 2,6-dinitro-3,4-xylydine), 9, III	UN 3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (pendimethalin (ISO), N-(1-ethylpropyl)- 2,6-dinitro-3,4-xylydine), 9, III	UN 3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (pendimethalin (ISO), N-(1-ethylpropyl)-2,6- dinitro-3,4-xylydine), 9, III
14.3. Transport hazard class(es)				
9	9	9	9	9
				
14.4. Packing group				
III	III	III	III	III
14.5. Environmental hazards				
Dangerous for the environment : Yes	Dangerous for the environment : Yes Marine pollutant : Yes	Dangerous for the environment : Yes	Dangerous for the environment : Yes	Dangerous for the environment : Yes
No supplementary information available				

14.6. Special precautions for user

Overland transport

Classification code (ADR)	: M6
Special provisions (ADR)	: 274, 335, 375, 601
Limited quantities (ADR)	: 5I
Excepted quantities (ADR)	: E1
Packing instructions (ADR)	: P001, IBC03, LP01, R001
Special packing provisions (ADR)	: PP1
Mixed packing provisions (ADR)	: MP19
Portable tank and bulk container instructions (ADR)	: T4
Portable tank and bulk container special provisions (ADR)	: TP1, TP29
Tank code (ADR)	: LGBV
Vehicle for tank carriage	: AT
Transport category (ADR)	: 3
Special provisions for carriage - Packages (ADR)	: V12
Special provisions for carriage - Loading, unloading and handling (ADR)	: CV13
Hazard identification number (Kemler No.)	: 90
Orange plates	: 

Tunnel restriction code (ADR)	: -
EAC code	: *3Z

Transport by sea

Special provisions (IMDG)	: 274, 335, 969
Packing instructions (IMDG)	: P001, LP01
Special packing provisions (IMDG)	: PP1
IBC packing instructions (IMDG)	: IBC03
Tank instructions (IMDG)	: T4
Tank special provisions (IMDG)	: TP2, TP29
EmS-No. (Fire)	: F-A
EmS-No. (Spillage)	: S-F
Stowage category (IMDG)	: A

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Air transport

PCA Excepted quantities (IATA)	: E1
PCA Limited quantities (IATA)	: Y964
PCA limited quantity max net quantity (IATA)	: 30kgG
PCA packing instructions (IATA)	: 964
PCA max net quantity (IATA)	: 450L
CAO packing instructions (IATA)	: 964
CAO max net quantity (IATA)	: 450L
Special provisions (IATA)	: A97, A158, A197
ERG code (IATA)	: 9L

Inland waterway transport

Classification code (ADN)	: M6
Special provisions (ADN)	: 274, 335, 375, 601
Limited quantities (ADN)	: 5 L
Excepted quantities (ADN)	: E1
Carriage permitted (ADN)	: T
Equipment required (ADN)	: PP
Number of blue cones/lights (ADN)	: 0

Rail transport

Classification code (RID)	: M6
Special provisions (RID)	: 274, 335, 375, 601
Limited quantities (RID)	: 5L
Excepted quantities (RID)	: E1
Packing instructions (RID)	: P001, IBC03, LP01, R001
Special packing provisions (RID)	: PP1
Mixed packing provisions (RID)	: MP19
Portable tank and bulk container instructions (RID)	: T4
Portable tank and bulk container special provisions (RID)	: TP1, TP29
Tank codes for RID tanks (RID)	: LGBV
Transport category (RID)	: 3
Special provisions for carriage – Packages (RID)	: W12
Special provisions for carriage - Loading, unloading and handling (RID)	: CW13, CW31
Colis express (express parcels) (RID)	: CE8
Hazard identification number (RID)	: 90

14.7. Transport in bulk according to Annex II of Marpol and the IBC Code

Not applicable

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

15.1.1. EU-Regulations

Contains no REACH substances with Annex XVII restrictions.

Contains no substance on the REACH candidate list.

Contains no REACH Annex XIV substances.

Contains no substance subject to Regulation (EU) No 649/2012 of the European Parliament and of the Council of 4 July 2012 concerning the export and import of hazardous chemicals.

Contains no substance subject to Regulation (EU) No 2019/1021 of the European Parliament and of the Council of 20 June 2019 on persistent organic pollutants.

Other information, restriction and prohibition regulations : according to Regulation (EU) 2015/830.

15.1.2. National regulations

Refer to protective measures listed in Sections 7 and 8

15.2. Chemical safety assessment

Refer to protective measures listed in Sections 7 and 8

SECTION 16: Other information

Full text of H- and EUH-statements:

Acute Tox. 4 (Inhalation)	Acute toxicity (inhal.), Category 4
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Acute Tox. 4 (Oral)	Acute toxicity (oral), Category 4
Aquatic Acute 1	Hazardous to the aquatic environment — Acute Hazard, Category 1
Aquatic Chronic 1	Hazardous to the aquatic environment — Chronic Hazard, Category 1
Aquatic Chronic 3	Hazardous to the aquatic environment — Chronic Hazard, Category 3
Eye Dam. 1	Serious eye damage/eye irritation, Category 1
Eye Irrit. 2	Serious eye damage/eye irritation, Category 2
Skin Irrit. 2	Skin corrosion/irritation, Category 2
Skin Sens. 1	Skin sensitisation, Category 1
STOT SE 3	Specific target organ toxicity — Single exposure, Category 3, Respiratory tract irritation
H302	Harmful if swallowed.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H332	Harmful if inhaled.
H335	May cause respiratory irritation.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.
EUH208	Contains pendimethalin (ISO); N-(1-ethylpropyl)-2,6-dinitro-3,4-xylidine(40487-42-1), 1,2-benzisothiazol-3(2H)-one; 1,2-benzisothiazolin-3-one(2634-33-5). May produce an allergic reaction.
EUH401	To avoid risks to human health and the environment, comply with the instructions for use.

Other data

Date of issue:	16/08/2021
Version:	1.1/UK
Replaces:	1.0/UK, 22/08/2018
Indication of changes:	Sections: 2, 8, 13, 15.

SDS EU (REACH Annex II)

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product