

Safety Data Sheet

PENDULUM AQUACAP HERBICIDE

Revision date : 2015/02/10

Version: 6.0

Page: 1/12

(30255964/SDS_CPA_US/EN)

1. Identification

Product identifier used on the label

PENDULUM AQUACAP HERBICIDE

Recommended use of the chemical and restriction on use

Recommended use*: herbicide

* The "Recommended use" identified for this product is provided solely to comply with a US Federal requirement and is not part of the seller's published specification. The terms of this Safety Data Sheet (SDS) do not create or infer any warranty, express or implied, including by incorporation into or reference in the seller's sales agreement.

Details of the supplier of the safety data sheet

Company:

BASF CORPORATION

100 Park Avenue

Florham Park, NJ 07932, USA

Telephone: +1 973 245-6000

Emergency telephone number

CHEMTREC: 1-800-424-9300

BASF HOTLINE: 1-800-832-HELP (4357)

Other means of identification

Substance number: 171005

EPA Register number: 241-416

Molecular formula: C₁₃ H₁₉ N₃ O₄

Chemical family: aniline derivative

Synonyms: pendimethalin

2. Hazards Identification

According to Regulation 2012 OSHA Hazard Communication Standard; 29 CFR Part 1910.1200

Classification of the product

Skin Sens.

1B

Skin sensitization

Label elements

Pictogram:

Safety Data Sheet

PENDULUM AQUACAP HERBICIDE

Revision date : 2015/02/10
Version: 6.0

Page: 2/12
(30255964/SDS_CPA_US/EN)



Signal Word:
Warning

Hazard Statement:
H317 May cause an allergic skin reaction.

Precautionary Statements (Prevention):
P280 Wear protective gloves.
P261 Avoid breathing dust/fume/gas/mist/vapours/spray.
P272 Contaminated work clothing should not be allowed out of the workplace.

Precautionary Statements (Response):
P333 + P311 If skin irritation or rash occurs: Call a POISON CENTER or doctor/physician.
P303 + P362 IF ON SKIN (or hair): Wash with plenty of soap and water.
P362 + P364 Take off contaminated clothing and wash before reuse.

Precautionary Statements (Disposal):
P501 Dispose of contents/container to hazardous or special waste collection point.

Hazards not otherwise classified

Labeling of special preparations (GHS):

The following percentage of the mixture consists of components(s) with unknown hazards regarding the acute toxicity: 28 % dermal

The following percentage of the mixture consists of components(s) with unknown hazards regarding the acute toxicity: 21 % oral

The following percentage of the mixture consists of components(s) with unknown hazards regarding the acute toxicity: 27 % Inhalation - vapour

The following percentage of the mixture consists of components(s) with unknown hazards regarding the acute toxicity: 27 % Inhalation - mist

Product contains the following components and may cause an allergic skin reaction: Preparation based on isothiazolone

According to Regulation 1994 OSHA Hazard Communication Standard; 29 CFR Part 1910.1200

Emergency overview

CAUTION:
Causes eye irritation.
HARMFUL IF ABSORBED THROUGH SKIN.
HARMFUL IF SWALLOWED.
KEEP OUT OF REACH OF CHILDREN.
KEEP OUT OF REACH OF DOMESTIC ANIMALS.
Avoid contact with the skin, eyes and clothing.

3. Composition / Information on Ingredients

According to Regulation 2012 OSHA Hazard Communication Standard; 29 CFR Part 1910.1200

<u>CAS Number</u>	<u>Content (W/W)</u>	<u>Chemical name</u>
-------------------	----------------------	----------------------

Safety Data Sheet

PENDULUM AQUACAP HERBICIDE

Revision date : 2015/02/10

Page: 3/12

Version: 6.0

(30255964/SDS_CPA_US/EN)

40487-42-1 38.7 % pendimethalin

According to Regulation 1994 OSHA Hazard Communication Standard; 29 CFR Part 1910.1200

<u>CAS Number</u>	<u>Content (W/W)</u>	<u>Chemical name</u>
40487-42-1	38.7 %	pendimethalin
	61.3 %	Proprietary ingredients

4. First-Aid Measures

Description of first aid measures

General advice:

First aid providers should wear personal protective equipment to prevent exposure. Remove contaminated clothing. Move person to fresh air. If person is not breathing, call 911 or ambulance, then give artificial respiration, preferably mouth-to-mouth if possible. Call a poison control center or physician for treatment advice. Have the product container or label with you when calling a poison control center or doctor or going for treatment.

If inhaled:

Keep patient calm, remove to fresh air, seek medical attention.

If on skin:

Wash thoroughly with soap and water.

If in eyes:

Wash affected eyes for at least 15 minutes under running water with eyelids held open, consult an eye specialist.

Most important symptoms and effects, both acute and delayed

Symptoms: orange-red coloured urine caused by dye (not associated with methemoglobinemia)
The most important known symptoms and effects are described in the labelling (see section 2) and/or in section 11., Further important symptoms and effects are so far not known.

Indication of any immediate medical attention and special treatment needed

Note to physician

Antidote: No known specific antidote.

Treatment: Treat symptomatically.

5. Fire-Fighting Measures

Extinguishing media

Suitable extinguishing media:

foam, dry powder, carbon dioxide, water spray

Special hazards arising from the substance or mixture

Hazards during fire-fighting:

carbon monoxide, carbon dioxide, nitrogen dioxide, nitrogen oxide, Hydrocarbons,

If product is heated above decomposition temperature, toxic vapours will be released. The substances/groups of substances mentioned can be released in case of fire.

Safety Data Sheet

PENDULUM AQUACAP HERBICIDE

Revision date : 2015/02/10
Version: 6.0

Page: 4/12
(30255964/SDS_CPA_US/EN)

Advice for fire-fighters

Protective equipment for fire-fighting:

Firefighters should be equipped with self-contained breathing apparatus and turn-out gear.

Further information:

Evacuate area of all unnecessary personnel. Contain contaminated water/firefighting water. Do not allow to enter drains or waterways.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Take appropriate protective measures. Clear area. Shut off source of leak only under safe conditions. Extinguish sources of ignition nearby and downwind. Ensure adequate ventilation. Wear suitable personal protective clothing and equipment.

Environmental precautions

Do not discharge into the subsoil/soil. Do not discharge into drains/surface waters/groundwater. Contain contaminated water/firefighting water.

Methods and material for containment and cleaning up

Dike spillage. Pick up with suitable absorbent material. Place into suitable containers for reuse or disposal in a licensed facility. Spilled substance/product should be recovered and applied according to label rates whenever possible. If application of spilled substance/product is not possible, then spills should be contained, solidified, and placed in suitable containers for disposal. After decontamination, spill area can be washed with water. Collect wash water for approved disposal.

7. Handling and Storage

Precautions for safe handling

RECOMMENDATIONS ARE FOR MANUFACTURING, COMMERCIAL BLENDING, AND PACKAGING WORKERS. PESTICIDE APPLICATORS & WORKERS must refer to the Product Label and Directions for Use attached to the product for Agricultural Use Requirements in accordance with the EPA Worker Protection Standard 40 CFR part 170. Ensure adequate ventilation. Provide good ventilation of working area (local exhaust ventilation if necessary). Keep away from sources of ignition - No smoking. Keep container tightly sealed. Protect contents from the effects of light. Protect against heat. Protect from air. Handle and open container with care. Do not open until ready to use. Once container is opened, content should be used as soon as possible. Avoid aerosol formation. Avoid dust formation. Provide means for controlling leaks and spills. Do not return residues to the storage containers. Follow label warnings even after container is emptied. The substance/ product may be handled only by appropriately trained personnel. Avoid all direct contact with the substance/product. Avoid contact with the skin, eyes and clothing. Avoid inhalation of dusts/mists/vapours. Wear suitable personal protective clothing and equipment.

Protection against fire and explosion:

The relevant fire protection measures should be noted. Fire extinguishers should be kept handy. Avoid all sources of ignition: heat, sparks, open flame. Sources of ignition should be kept well clear. Avoid extreme heat. Keep away from oxidizable substances. Electrical equipment should conform to national electric code. Ground all transfer equipment properly to prevent electrostatic discharge. Electrostatic discharge may cause ignition.

Conditions for safe storage, including any incompatibilities

Segregate from incompatible substances. Segregate from foods and animal feeds. Segregate from textiles and similar materials.

Safety Data Sheet

PENDULUM AQUACAP HERBICIDE

Revision date : 2015/02/10
Version: 6.0

Page: 5/12
(30255964/SDS_CPA_US/EN)

Further information on storage conditions: Keep only in the original container in a cool, dry, well-ventilated place away from ignition sources, heat or flame. Protect containers from physical damage. Protect against contamination. The authority permits and storage regulations must be observed. Protect from temperatures below: -5 °C
Changes in the properties of the product may occur if substance/product is stored below indicated temperature for extended periods of time.
Protect from temperatures above: 40 °C
Changes in the properties of the product may occur if substance/product is stored above indicated temperature for extended periods of time.

8. Exposure Controls/Personal Protection

Users of a pesticidal product should refer to the product label for personal protective equipment requirements.

Advice on system design:

Whenever possible, engineering controls should be used to minimize the need for personal protective equipment.

Personal protective equipment

RECOMMENDATIONS FOR MANUFACTURING, COMMERCIAL BLENDING, AND PACKAGING WORKERS:

Respiratory protection:

Wear respiratory protection if ventilation is inadequate. Wear a NIOSH-certified (or equivalent) TC23C Chemical/Mechanical type filter system to remove a combination of particles, gas and vapours. For situations where the airborne concentrations may exceed the level for which an air purifying respirator is effective, or where the levels are unknown or Immediately Dangerous to Life or Health (IDLH), use NIOSH-certified full facepiece pressure demand self-contained breathing apparatus (SCBA) or a full facepiece pressure demand supplied-air respirator (SAR) with escape provisions.

Hand protection:

Chemical resistant protective gloves, Protective glove selection must be based on the user's assessment of the workplace hazards.

Eye protection:

Safety glasses with side-shields. Tightly fitting safety goggles (chemical goggles). Wear face shield if splashing hazard exists.

Body protection:

Body protection must be chosen depending on activity and possible exposure, e.g. head protection, apron, protective boots, chemical-protection suit.

General safety and hygiene measures:

Wear long sleeved work shirt and long work pants in addition to other stated personal protective equipment. Work place should be equipped with a shower and an eye wash. Handle in accordance with good industrial hygiene and safety practice. Personal protective equipment should be decontaminated prior to reuse. Gloves must be inspected regularly and prior to each use. Replace if necessary (e.g. pinhole leaks). Take off immediately all contaminated clothing. Store work clothing separately. Hands and/or face should be washed before breaks and at the end of the shift. No eating, drinking, smoking or tobacco use at the place of work. Keep away from food, drink and animal feeding stuffs.

Safety Data Sheet

PENDULUM AQUACAP HERBICIDE

Revision date : 2015/02/10

Version: 6.0

Page: 6/12

(30255964/SDS_CPA_US/EN)

9. Physical and Chemical Properties

Form:	microencapsulated, suspension	
Odour:	faint odour, nutty	
Odour threshold:		Not determined due to breath way sensitizing properties.
Colour:	yellow to brown	
pH value:	approx. 8 - 10	(1 %(m), 21 °C)
Melting point:	approx. 0 °C	Information applies to the solvent.
Flash point:	> 230 °F	
Flammability:	not highly flammable	
Lower explosion limit:		As a result of our experience with this product and our knowledge of its composition we do not expect any hazard as long as the product is used appropriately and in accordance with the intended use.
Upper explosion limit:		As a result of our experience with this product and our knowledge of its composition we do not expect any hazard as long as the product is used appropriately and in accordance with the intended use.
Autoignition:	354 °C	(DIN EN 14522)
Density:	approx. 9.79 lb/USg	(68 °F)
Vapour density:		not applicable
Partitioning coefficient n-octanol/water (log Pow):		not applicable
Thermal decomposition:	carbon monoxide, carbon dioxide, nitrogen dioxide, nitrogen oxide, Hydrocarbons Stable at ambient temperature. If product is heated above decomposition temperature toxic vapours may be released.	
Viscosity, dynamic:	128 mPa.s	(20 °C) (OECD 114)
Solubility in water:		dispersible
Molar mass:	281.31 g/mol	
Evaporation rate:		not applicable
Other Information:	If necessary, information on other physical and chemical parameters is indicated in this section.	

10. Stability and Reactivity

Reactivity

No hazardous reactions if stored and handled as prescribed/indicated.

Oxidizing properties:
not fire-propagating

Chemical stability

The product is stable if stored and handled as prescribed/indicated.

Possibility of hazardous reactions

The product is chemically stable.

Hazardous polymerization will not occur. No hazardous reactions if stored and handled as prescribed/indicated.

Safety Data Sheet

PENDULUM AQUACAP HERBICIDE

Revision date : 2015/02/10

Version: 6.0

Page: 7/12

(30255964/SDS_CPA_US/EN)

Conditions to avoid

Avoid all sources of ignition: heat, sparks, open flame. Avoid prolonged storage. Avoid electro-static discharge. Avoid contamination. Avoid prolonged exposure to extreme heat. Avoid extreme temperatures.

Incompatible materials

strong acids, strong bases, strong oxidizing agents

Hazardous decomposition products

Decomposition products:

No hazardous decomposition products if stored and handled as prescribed/indicated., Prolonged thermal loading can result in products of degradation being given off.

Thermal decomposition:

Possible thermal decomposition products:

carbon monoxide, carbon dioxide, nitrogen dioxide, nitrogen oxide, Hydrocarbons

Stable at ambient temperature. If product is heated above decomposition temperature toxic vapours may be released.

11. Toxicological information

Primary routes of exposure

Routes of entry for solids and liquids are ingestion and inhalation, but may include eye or skin contact. Routes of entry for gases include inhalation and eye contact. Skin contact may be a route of entry for liquefied gases.

Acute Toxicity/Effects

Acute toxicity

Assessment of acute toxicity: Relatively nontoxic after single ingestion. Relatively nontoxic after short-term inhalation. Relatively nontoxic after short-term skin contact.

Oral

Type of value: LD50

Species: rat (male/female)

Value: > 5,000 mg/kg (OECD Guideline 401)

Inhalation

Type of value: LC50

Species: rat (male/female)

Value: > 5.23 mg/l (OECD Guideline 403)

Exposure time: 4 h

An aerosol was tested.

No mortality was observed.

Dermal

Type of value: LD50

Species: rat (male/female)

Value: > 5,000 mg/kg (OECD Guideline 402)

Irritation / corrosion

Assessment of irritating effects: May cause slight but temporary irritation to the eyes. May cause slight irritation to the skin.

Skin

Safety Data Sheet

PENDULUM AQUACAP HERBICIDE

Revision date : 2015/02/10

Version: 6.0

Page: 8/12

(30255964/SDS_CPA_US/EN)

Species: rabbit
Result: Slightly irritating.

Eye

Species: rabbit
Result: Slightly irritating.

Sensitization

Assessment of sensitization: Skin sensitizing effects were not observed in animal studies.

Mouse Local Lymph Node Assay (LLNA)

Species: guinea pig
Result: sensitizing
Method: OECD Guideline 406

Chronic Toxicity/Effects

Repeated dose toxicity

Assessment of repeated dose toxicity: The product has not been tested. The statement has been derived from the properties of the individual components.

Information on: pendimethalin

Assessment of repeated dose toxicity: No substance-specific organotoxicity was observed after repeated administration to animals. Adaptive effects were observed after repeated exposure in animal studies.

Genetic toxicity

Assessment of mutagenicity: The product has not been tested. The statement has been derived from the properties of the individual components. Mutagenicity tests revealed no genotoxic potential.

Carcinogenicity

Assessment of carcinogenicity: The product has not been tested. The statement has been derived from the properties of the individual components.

Information on: pendimethalin

Assessment of carcinogenicity: In long-term studies in rats the substance induced thyroid tumors. The effect is caused by an animal specific mechanism that has no human counter part. In long-term studies in mice in which the substance was given by feed, a carcinogenic effect was not observed.

Reproductive toxicity

Assessment of reproduction toxicity: The product has not been tested. The statement has been derived from the properties of the individual components. The results of animal studies gave no indication of a fertility impairing effect.

Teratogenicity

Assessment of teratogenicity: The product has not been tested. The statement has been derived from the properties of the individual components.

Experiences in humans

Pendimethalin is a strongly orange-red compound - virtually an aniline dye. Cases have been described of orange-yellow colouration of urine following heavy exposure of workers to the dust of pendimethalin. Despite its structure as both a nitro-compound and aromatic amine, exposure to pendimethalin is NOT associated with methemoglobinemia.

Safety Data Sheet

PENDULUM AQUACAP HERBICIDE

Revision date : 2015/02/10
Version: 6.0

Page: 9/12
(30255964/SDS_CPA_US/EN)

Other Information

Misuse can be harmful to health.

Symptoms of Exposure

orange-red coloured urine caused by dye (not associated with methemoglobinemia)
The most important known symptoms and effects are described in the labelling (see section 2) and/or in section 11., Further important symptoms and effects are so far not known.

Medical conditions aggravated by overexposure

Individuals with pre-existing diseases of the respiratory system, skin or eyes may have increased susceptibility to excessive exposures.

12. Ecological Information

Toxicity

Aquatic toxicity
Assessment of aquatic toxicity:
Very toxic (acute effect) to aquatic organisms.

Toxicity to fish

LC50 (96 h) 20.36 mg/l, *Oncorhynchus mykiss* (OECD Guideline 203, static)

LC50 (96 h) 88.4 mg/l, *Cyprinus carpio* (OECD Guideline 203, static)

Aquatic invertebrates

EC50 (48 h) > 100 mg/l, *Daphnia magna* (OECD Guideline 202, part 1, static)

Aquatic plants

EC50 (72 h) 1.49 mg/l (growth rate), *Pseudokirchneriella subcapitata* (OECD Guideline 201)

EC50 (72 h) 19.25 mg/l (growth rate), *Lemna gibba* (OECD guideline 221)

Assessment of terrestrial toxicity

Acutely harmful to terrestrial organisms.

Other terrestrial non-mammals

Information on: pendimethalin

LD50 1,421 mg/kg, *Anas platyrhynchos*

Acutely harmful to terrestrial organisms.

LD50 49.8 ug/bee, *Apis mellifera*

Acutely harmful to terrestrial organisms.

Mobility in soil

Assessment transport between environmental compartments

The product has not been tested. The statement has been derived from the properties of the individual components.

Information on: pendimethalin

The substance will slowly evaporate into the atmosphere from the water surface.

Safety Data Sheet

PENDULUM AQUACAP HERBICIDE

Revision date : 2015/02/10

Page: 10/12

Version: 6.0

(30255964/SDS_CPA_US/EN)

Following exposure to soil, adsorption to solid soil particles is probable, therefore contamination of groundwater is not expected.

Additional information

Other ecotoxicological advice:

The ecological data given are those of the active ingredient. Do not release untreated into natural waters.

13. Disposal considerations

Waste disposal of substance:

Pesticide wastes are regulated. Improper disposal of excess pesticide, spray mix or rinsate is a violation of federal law. If pesticide wastes cannot be disposed of according to label instructions, contact the State Pesticide or Environmental Control Agency or the Hazardous Waste representative at the nearest EPA Regional Office for guidance.

Container disposal:

Rinse thoroughly at least three times (triple rinse) in accordance with EPA recommendations. Consult state or local disposal authorities for approved alternative procedures such as container recycling. Recommend crushing, puncturing or other means to prevent unauthorized use of used containers.

RCRA: D028

The waste codes are manufacturer's recommendations based on the designated use of the product. Other use and special waste disposal treatment on customer's location may require different waste-code assignments.

14. Transport Information

Land transport

USDOT

Not classified as a dangerous good under transport regulations

Sea transport

IMDG

Hazard class:	9
Packing group:	III
ID number:	UN 3082
Hazard label:	9, EHSM
Marine pollutant:	YES
Proper shipping name:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (contains PENDIMETHALIN)

Air transport

IATA/ICAO

Hazard class:	9
Packing group:	III
ID number:	UN 3082
Hazard label:	9, EHSM
Proper shipping name:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (contains PENDIMETHALIN)

Safety Data Sheet

PENDULUM AQUACAP HERBICIDE

Revision date : 2015/02/10

Version: 6.0

Page: 11/12

(30255964/SDS_CPA_US/EN)

Further information

DOT: This product is regulated if the amount in a single receptacle exceeds the Reportable Quantity (RQ). Please refer to Section 15 of this MSDS for the RQ for this product.

15. Regulatory Information

Federal Regulations

Registration status:

Crop Protection TSCA, US released / exempt

Chemical TSCA, US blocked / not listed

EPCRA 311/312 (Hazard categories): Acute; Chronic

EPCRA 313:

CAS Number

40487-42-1

Chemical name

pendimethalin

CERCLA RQ

100 LBS

CAS Number

107-06-2

Chemical name

1,2-dichloroethane

State regulations

State RTK

NJ

CAS Number

40487-42-1

Chemical name

pendimethalin

CA Prop. 65:

Risk assessment indicates No Significant Risk Levels for Carcinogens and No Maximum Allowable Dose Levels for Chemicals Causing Reproductive Toxicity are expected when using this product as labeled for agricultural or residential use.

NFPA Hazard codes:

Health : 1 Fire: 1 Reactivity: 1 Special:

Labeling requirements under FIFRA

This chemical is a pesticide product registered by the Environmental Protection Agency and is subject to certain labeling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information required for safety data sheets, and workplace labels of non-pesticide chemicals. Following is the hazard information as required on the pesticide label.

CAUTION:

Causes eye irritation.

HARMFUL IF ABSORBED THROUGH SKIN.

HARMFUL IF SWALLOWED.

KEEP OUT OF REACH OF CHILDREN.

KEEP OUT OF REACH OF DOMESTIC ANIMALS.

Avoid contact with the skin, eyes and clothing.

Safety Data Sheet

PENDULUM AQUACAP HERBICIDE

Revision date : 2015/02/10

Version: 6.0

Page: 12/12

(30255964/SDS_CPA_US/EN)

16. Other Information

SDS Prepared by:

BASF NA Product Regulations

SDS Prepared on: 2015/02/10

We support worldwide Responsible Care® initiatives. We value the health and safety of our employees, customers, suppliers and neighbors, and the protection of the environment. Our commitment to Responsible Care is integral to conducting our business and operating our facilities in a safe and environmentally responsible fashion, supporting our customers and suppliers in ensuring the safe and environmentally sound handling of our products, and minimizing the impact of our operations on society and the environment during production, storage, transport, use and disposal of our products.

IMPORTANT: WHILE THE DESCRIPTIONS, DESIGNS, DATA AND INFORMATION CONTAINED HEREIN ARE PRESENTED IN GOOD FAITH AND BELIEVED TO BE ACCURATE , IT IS PROVIDED FOR YOUR GUIDANCE ONLY. BECAUSE MANY FACTORS MAY AFFECT PROCESSING OR APPLICATION/USE, WE RECOMMEND THAT YOU MAKE TESTS TO DETERMINE THE SUITABILITY OF A PRODUCT FOR YOUR PARTICULAR PURPOSE PRIOR TO USE. NO WARRANTIES OF ANY KIND, EITHER EXPRESSED OR IMPLIED, INCLUDING WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, ARE MADE REGARDING PRODUCTS DESCRIBED OR DESIGNS, DATA OR INFORMATION SET FORTH, OR THAT THE PRODUCTS, DESIGNS, DATA OR INFORMATION MAY BE USED WITHOUT INFRINGING THE INTELLECTUAL PROPERTY RIGHTS OF OTHERS. IN NO CASE SHALL THE DESCRIPTIONS, INFORMATION, DATA OR DESIGNS PROVIDED BE CONSIDERED A PART OF OUR TERMS AND CONDITIONS OF SALE. FURTHER, YOU EXPRESSLY UNDERSTAND AND AGREE THAT THE DESCRIPTIONS, DESIGNS, DATA, AND INFORMATION FURNISHED BY OUR COMPANY HEREUNDER ARE GIVEN GRATIS AND WE ASSUME NO OBLIGATION OR LIABILITY FOR THE DESCRIPTION, DESIGNS, DATA AND INFORMATION GIVEN OR RESULTS OBTAINED, ALL SUCH BEING GIVEN AND ACCEPTED AT YOUR RISK.

END OF DATA SHEET